MaxConfig4 Instruction for Use

February 2024

Contents

1 Introduction to Products

MaxConfig is the PC control software for different LED users. It meets needs of settings and adjustment of LED screens for different groups.

◆ User mode: A general LED screen setting mode for end users, providing common functions for LED screen settings, such as controller settings, input source switching, adjustment of brightness and color temperature, volume adjustment, split screen settings, etc.

◆ Professional mode: Provide users with certain LED professional ability (such as: technical engineers/service providers/engineers) with LED screen related debugging functions. For example: quick dot-matrix display wizard, display screen configuration, display screen monitoring, redundancy backup, adjustment of brightness and color temperature, quick control of display screens, group control settings, etc.;

◆ Product series supported: H19 series, H19 PRO series, H31 series, V27 series, C27 series, F27 series, and Y53 series.

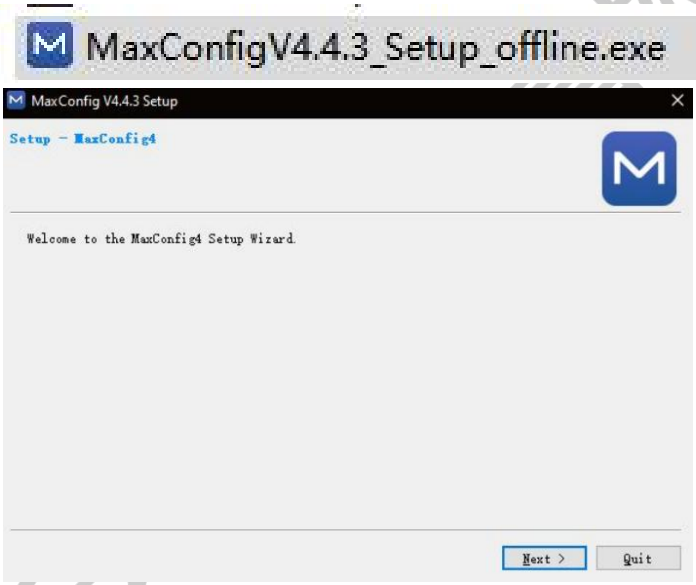
2 Installation and Uninstallation

2.1 Requirements on Computer Configuration

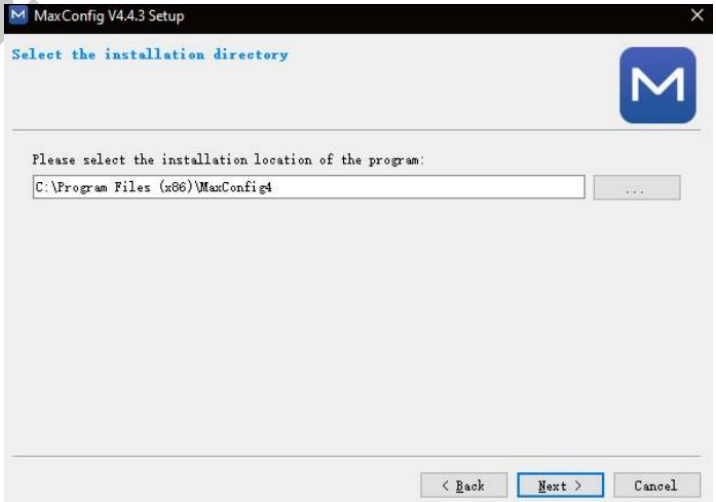
- Computers run on the Windows (operating) system, compatible with Win7, Win10, and Win11
- MaxConfig file name: MaxConfig_Setup_VXXX.exe;
- Recommended computer configuration: ① CPU: above 2.0 GHz; ② Memory: 4GB or more;

2.2 Installation Process

- Double-click the installation file: MaxConfig_Setup_XXX.exe, and follow the prompts to click Next;



- Go to the Select interface at the installation position, set the installation position, and click “Next”;



- Install the drive for the first installation on the PC

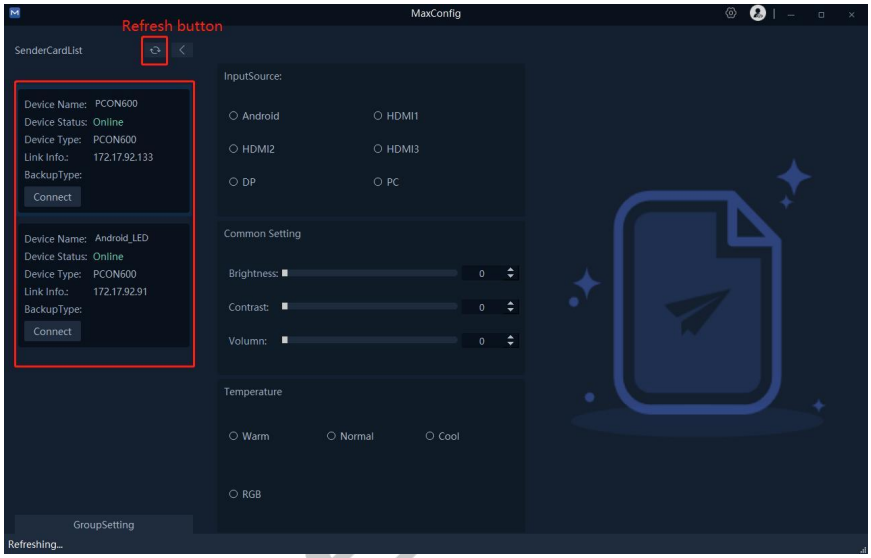
- After the installation is complete, click "Complete" to exit the installation wizard. The shortcut "MaxConfig4" will be automatically created on the PC desktop, and you can start it by double-clicking.

3 Device Connection

MaxConfig4 provides four device connection modes (① Serial port connection; ② Hotspot connection; ③ Network cable connection; ④ LAN connection) to control the LED screen based on different controllers.

After the PC is connected to the controller, click the Refresh Sending Card List to display the controller information. Select the controller to debug and click Connect.

* If the corresponding controller is not displayed by clicking Refresh, click to check the mode when "Software cannot detect a Controller".

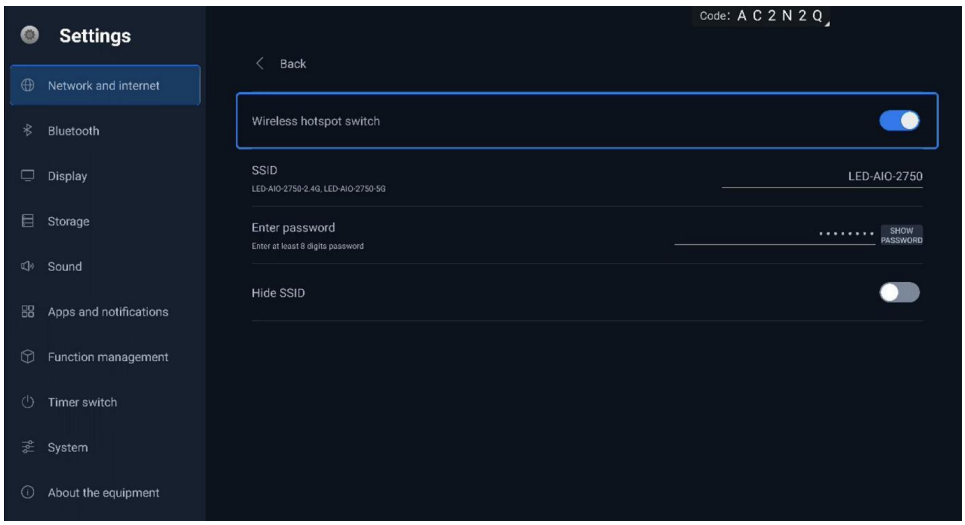


3.1 Connect via Serial Port

Connect the sending card to the computer through the serial cable.

3.2 Hotspot Connection

After the computer wireless network searches for the wireless hotspot of the sending card, you can open the wireless hotspot at [Settings - Network and Internet] in the Android system.



3.3 Direct Connection

The computer network port is directly connected to the controller's LAN network port through a network cable. Refresh the Sending Card List to search for the device.

Note that only static IP can be set when PCON 200 PRO is directly connected. The default IP address is 192.168.100.180

3.4 Connect the Controller to LAN

The controller can be connected to the LAN through a router or WIFI

Mode 1: The controller can be connected to the LAN through the controller connecting router of the WAN port

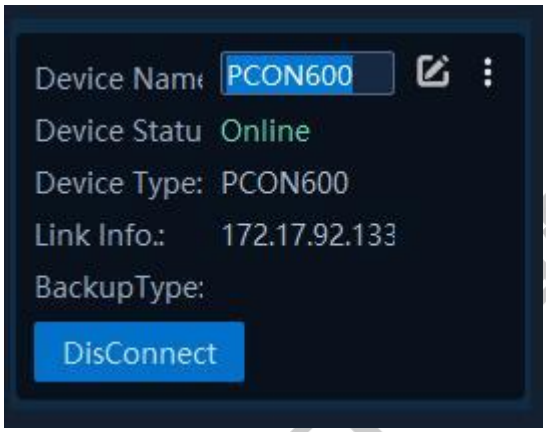
Mode 2: Open WIFI Settings on the Android interface to join an existing LAN

4 Settings of Sending Card Information

Find the device to be debugged in the sending card list of software and click Connect. After connected, you can edit the device name, IP address of the sending card, hotspot information settings, settings of FPGA video resolution, as well as width and height crop.

4.1 Device Name Change

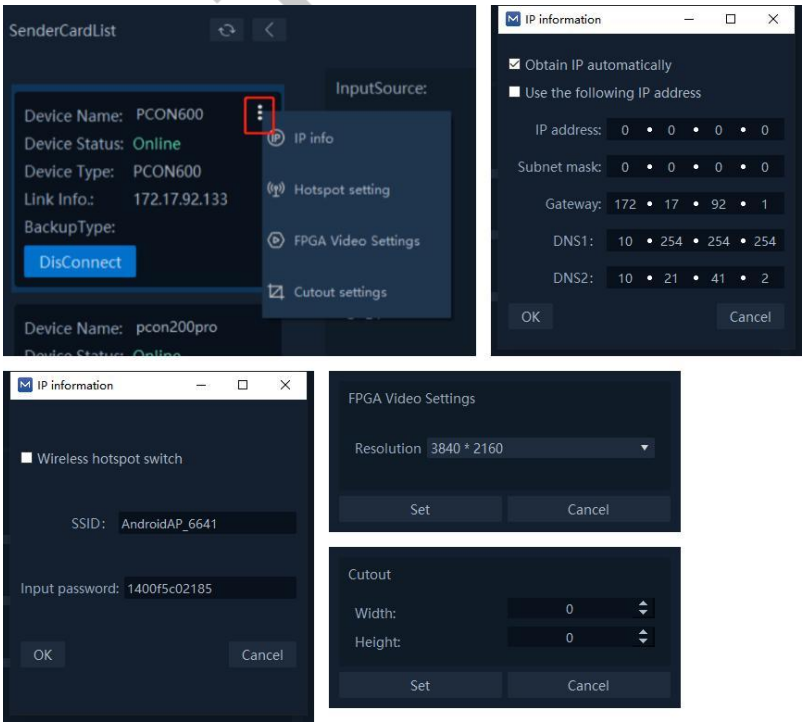
Step: Click Edit to change the name.



4.2 Controller Settings

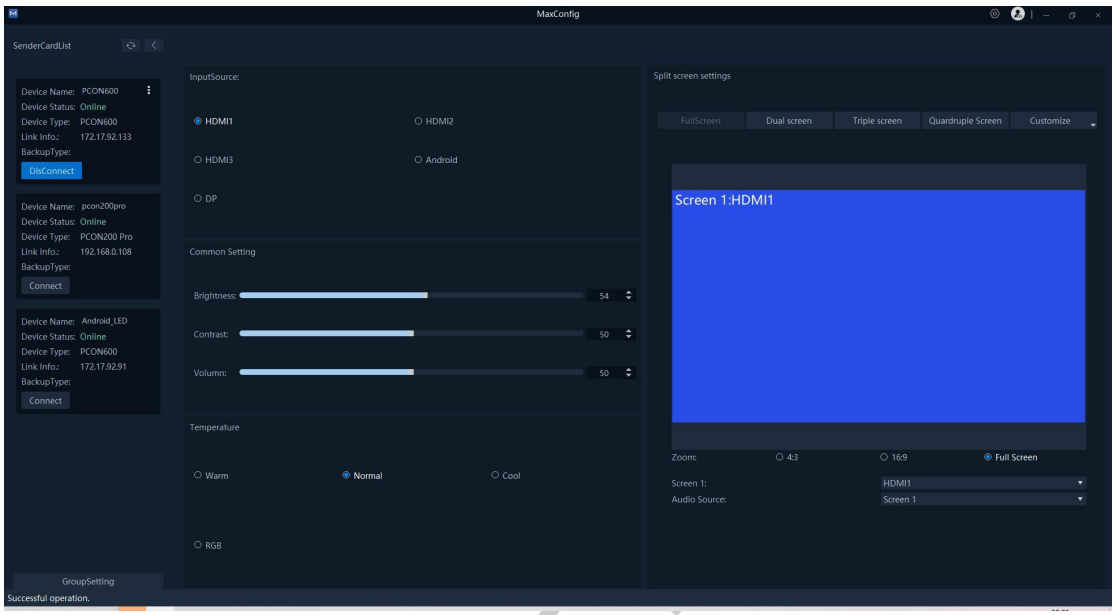
You can set the IP address, hotspot information, FPGA video resolution, width and height crop etc. in the controller settings.

Step: Click More - Select "IP Information" and click OK after setting



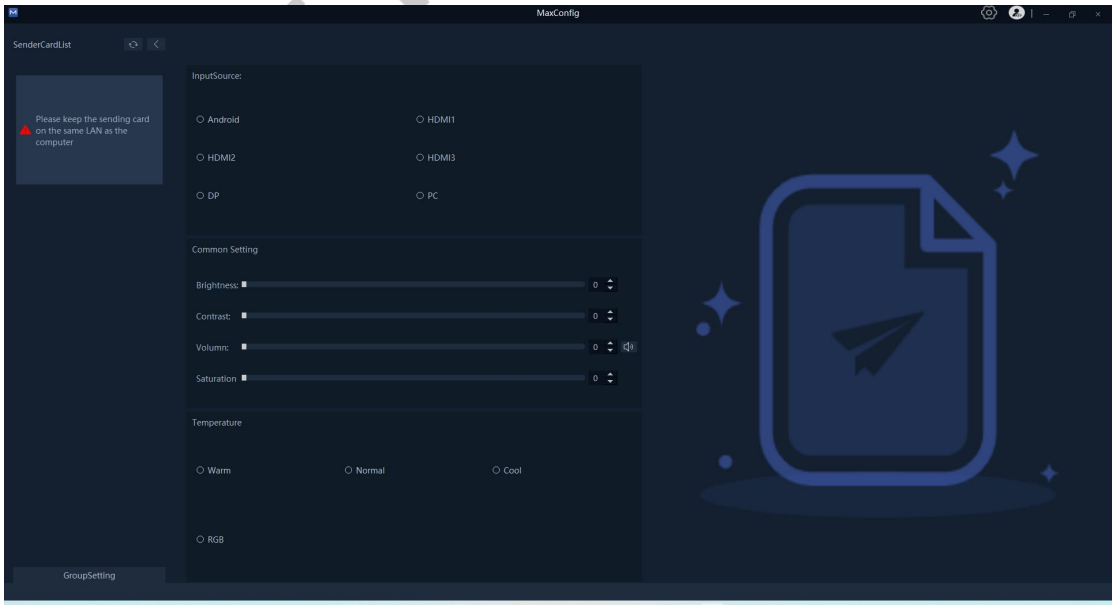
5 User Mode

The user mode can meet the basic adjustment functions of the end user of the LED screen, including input source switching, adjustment of brightness and color temperature, volume adjustment, and split screen mode switching.



5.1 General Operation

Including input source switching, adjustment of brightness and color temperature, and saturation, and volume adjustment. The LED screen is basically adjusted and the adjustment is sent in real time.



- Color temperature adjustment: Adjust the current color temperature of the LED screen, including warm color, standard, cool color, and RGB.

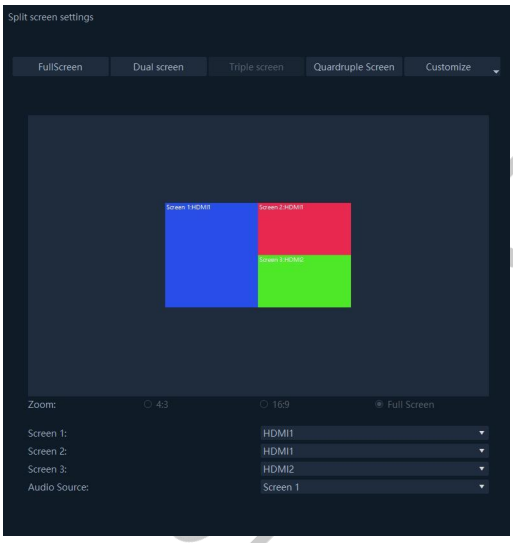
- Saturation adjustment: Adjust the current saturation of the LED screen.
- Volume adjustment: The volume can be adjusted for the current LED screen. For scenarios that require quick mute, such as meetings, click One-Tap to Mute next to the volume for quick mute.

5.2 Split Screen Settings

This function allows the configuration of the display window number, size and output source information of the current LED screen, up to four split screens.

The split screen mode includes the full-screen, dual screens, three screens, four screens and the custom screen, where:

- Support to zoom window size with the mouse under the custom mode;
- Support to adjust the display ratio under the full-screen mode.
- When setting more than 2 screens, select one screen window as the audio source.



6 Professional Mode

This mode is for users with certain LED debugging abilities (such as: technical engineers/service providers/engineers). Considering the complexity of on-site screen configuration, the "Dot-matrix display wizard" and "Professional debugging" modes are available under the professional mode. The dot-matrix display wizard helps users quickly light up the screen.

The approach to enter the professional mode: Under the user mode, click Professional Mode  in the upper right corner to quickly switch.

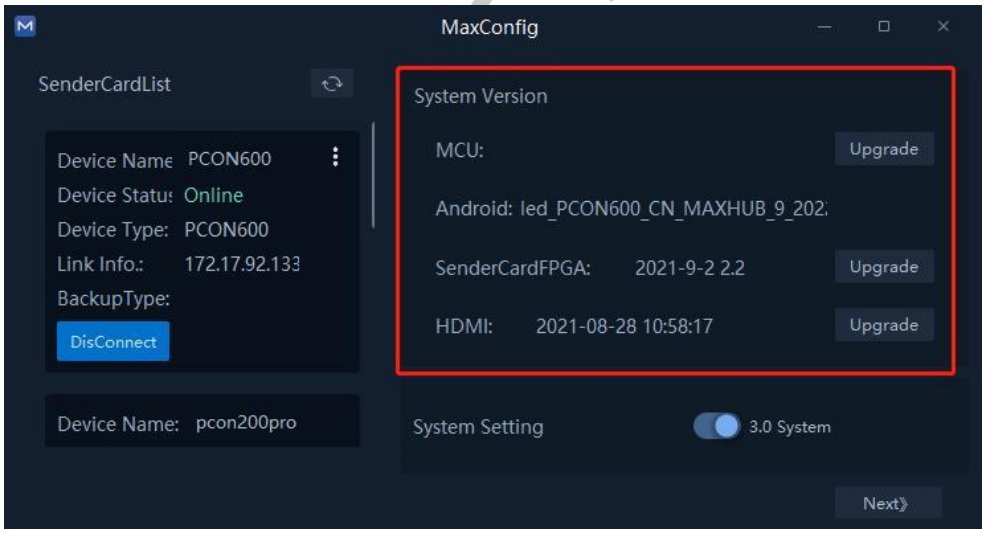
Default login password: qstech

6.1 Dot-matrix display wizard

Quickly light up the screen, and provide an entry for fast firmware upgrade and display screen configuration. (* Note: Upgrade with a U disk for Android APPs)

The dot-matrix display process is as follows:

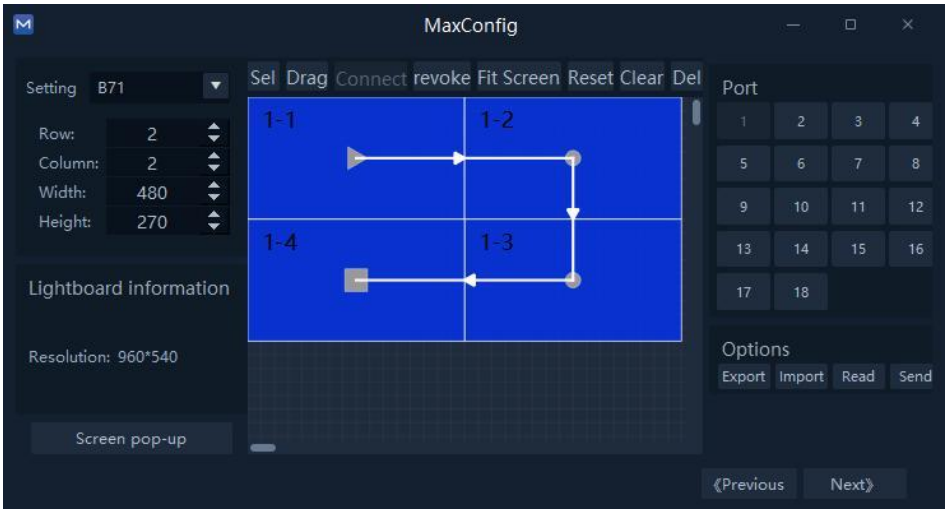
1) Go to the "Dot-matrix display wizard" to connect the device. If you want to upgrade the system version of the sending card, click "Upgrade" at the corresponding position and import the program file. Click “Next” after confirmation. (* Note: Whether the "3.0 system" is turned on depends on the actual situation of the LED screen)



2) Go to the configuration page for the connection relationship, and draw the connection relationship after setting the basic information of the LED screen. The two drawing methods are as follows:

Method 1: Click "Connection relationship" to draw the network;

Method 2: Click "Import" to import an existing cable relationship file



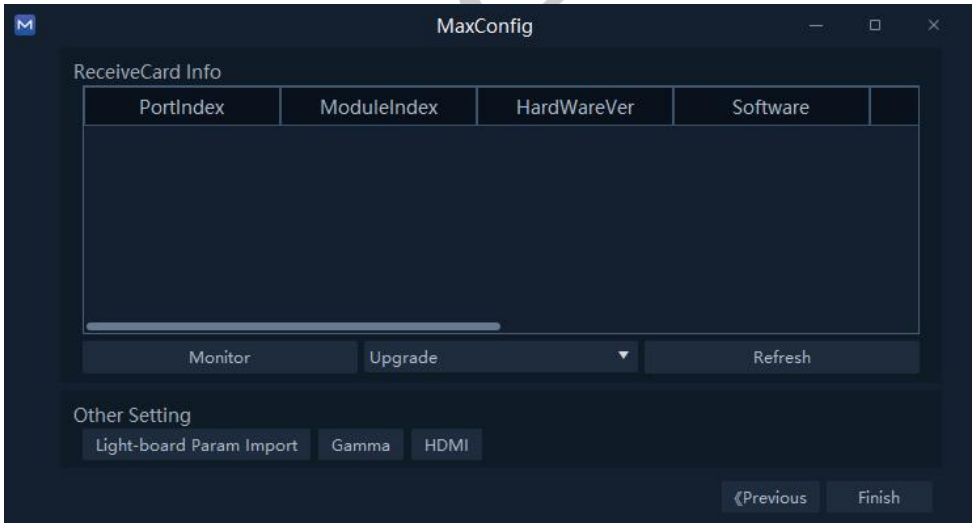
3) Receiver card configuration

a. Import parameters of the receiver card: Click "Import light board parameters" to enter the receiving card parameter;

b. Import Gamma parameters: Click "Gamma" to quickly import parameter information;

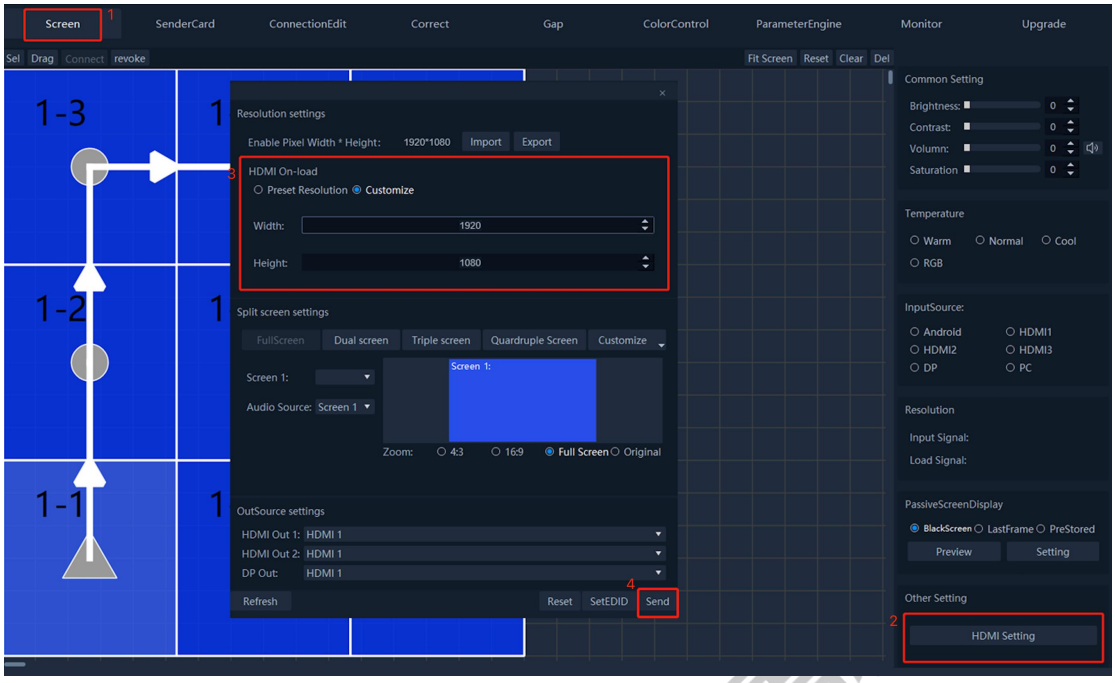
c. Upgrade: If MCU/FPGA program of the receiver card needs upgrade, you can upload the upgrade file to do so.

d. After the above information is configured, click "Complete" to end the dot-matrix display wizard, and go to the professional debugging interface.



6.2 HDMI Settings

Go to the "Screen" function module and click "HDMI Settings" to set the resolution of the LED screen, the output source, the split screen mode, and the zoom ratio, etc., and click "Send" to set after information maintenance.



a. Refresh Settings

Click "Refresh" to read back the LED screen resolution of the device, output source, split screen mode, and zoom ratio information;

b. Reset

Click "Reset" to reset HDMI information

c. Set EDID

Click "Set EDID" to set the default screen resolution to the first priority resolution of the EDID. If you need to make changes, check the desired modification information and edit it. After finishing, click "Set EDID" to distribute it

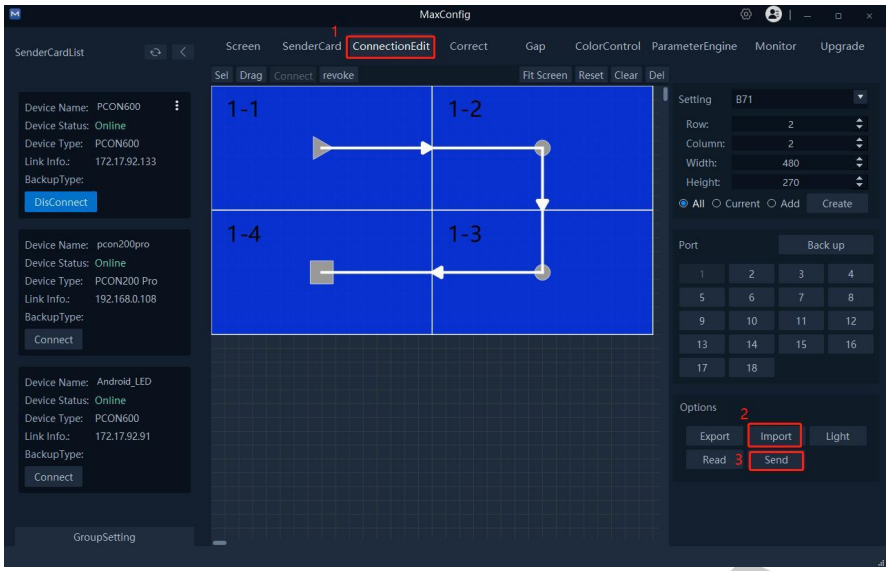
6.3 Screen Configuration

6.3.1 Connection Relationship Editing

The connection relationship editing allows the debugging, design, setting and other functions used by some professional and technical personnel. The use of these functions requires a certain operating technology, as well as the understanding of the product. Go to the function page of "Connection relationship editing" to edit the connection relationship.

Method 1: Import connection

Click "Import" in the right function area and select the connection relationship file to import to rapidly generate the connection relationship.



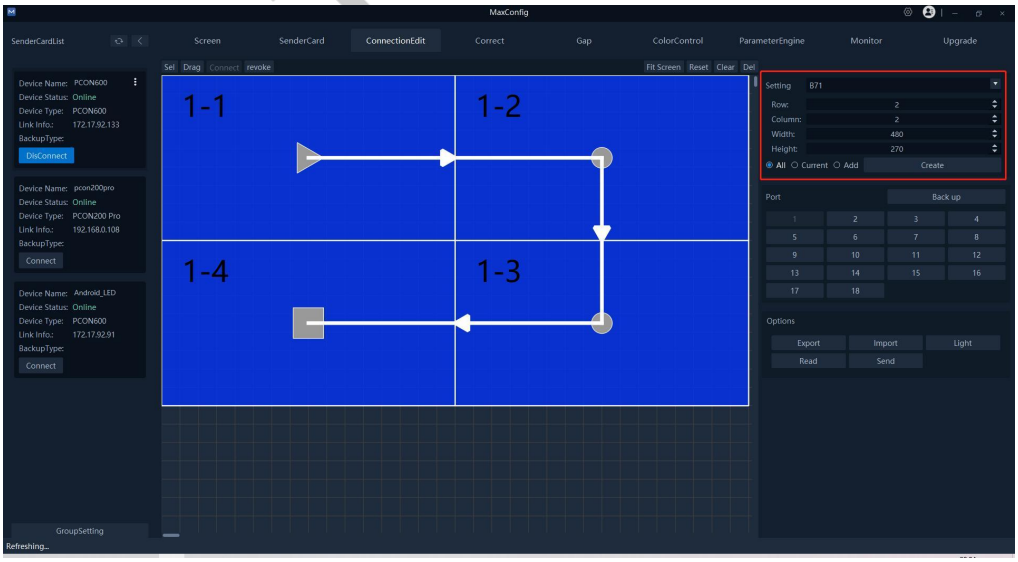
Method 2: Manually edit the connection relationship

Take the following 60 boxes of the H1918 product as an example. The operation steps are as follows:

1. [Connection Relationship Editing] Select the product type "H1918" of boxes in the function area on the right of the interface, so the box width and height information will be automatically displayed on the interface

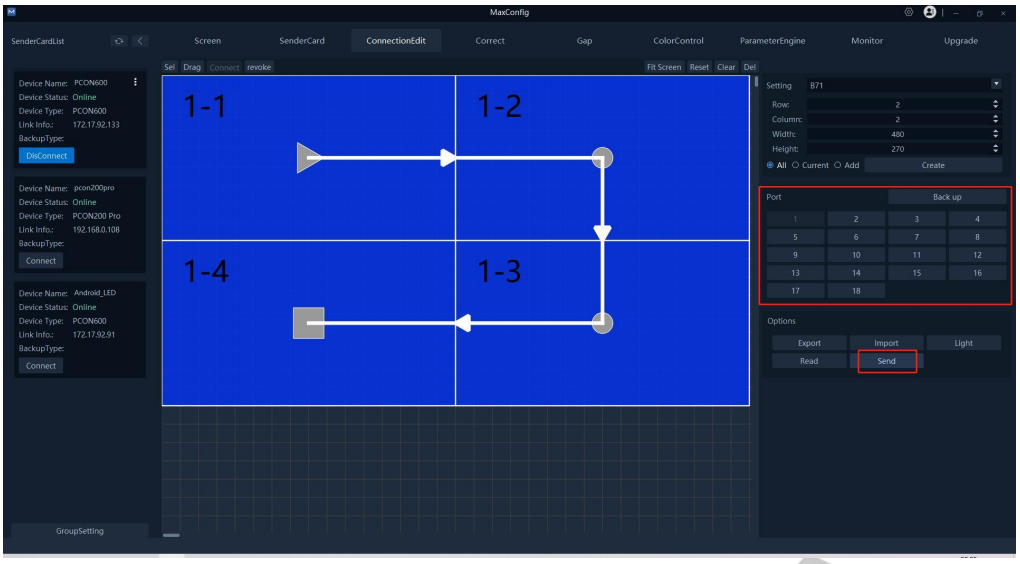
2. To set 6 columns and 10 rows, select "All" and click "Create".

- To add the number of rows and columns, select "Add" and click "Create", where "X" and "Y" indicate the coordinates of the pixels to be added
- To change the size of a single box, select the box on the canvas, select "Current box" in the function area, and then click "Create" to modify

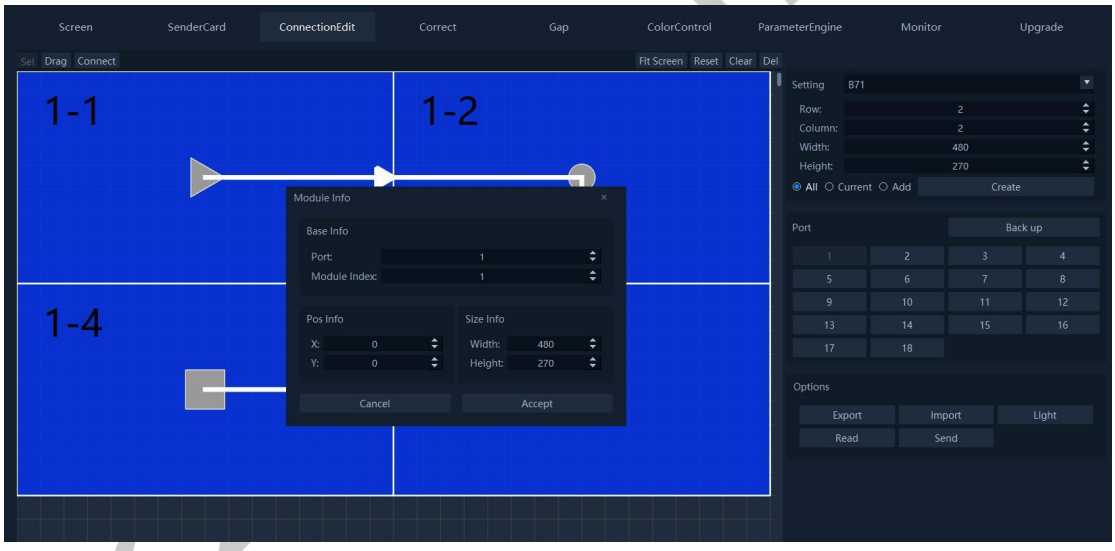


3. Select the output network port; (* Note: The number of network ports varies according to the actual controller)

4. Set the box wiring, click "Send" to set it;



- You can cancel a connecting wire by right clicking during the configuration
- Ctrl + scroll wheel to zoom in and out the work area
- Click "Select" to move the selected box. Double-click the box to view its basic information and modify it



- "Drag and Drop" to move the entire screen of the work area. This is easy to view in case of more boxes
- "Connection relationship" allows to edit the box wiring
- "Fit the screen" is to display the entire wiring diagram on the work area

Method 3: One-tap to light up

At present, only H19 series products can automatically generate the connection relationship through "One-tap to light up" (* Note: The network cables on the field screen must be wired upwards, downwards, and to the right)

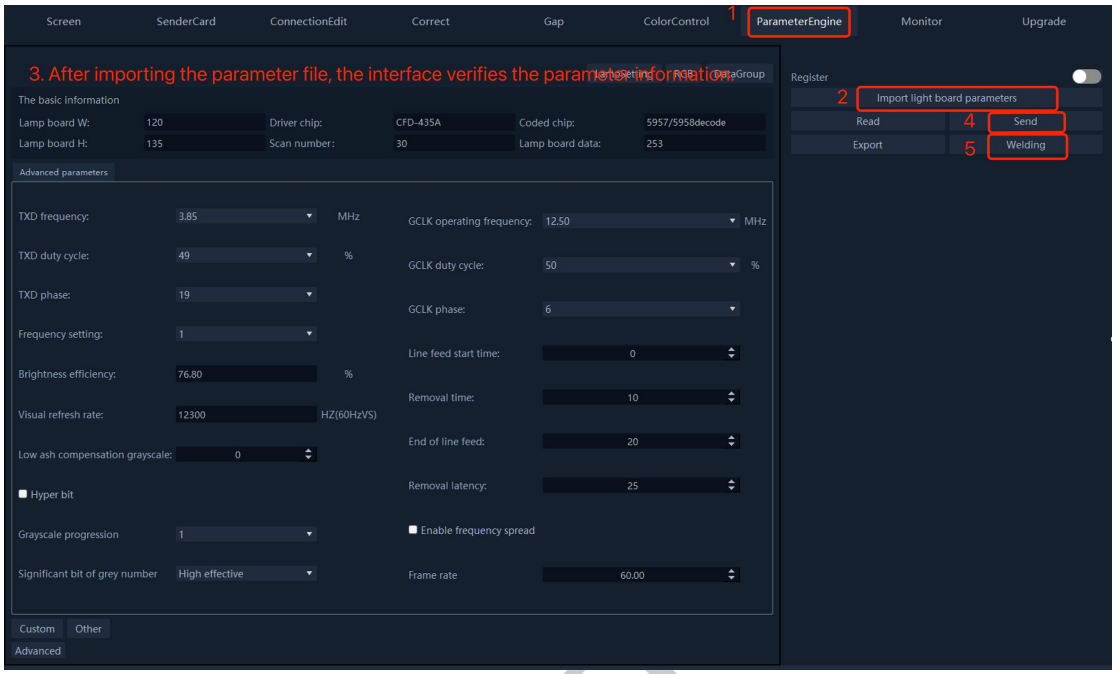
6.3.2 Import of Light Board Parameters

The operation steps are as follows:

1) Go to the function page of [Parameter Engine], click "Import Light Board Parameters" on the right function area, and select the 9K file of light board parameters to confirm the import;

2) Click "Send" to send the parameters to the device

3) Go back to the right function area and click "Save" to freeze the parameters.

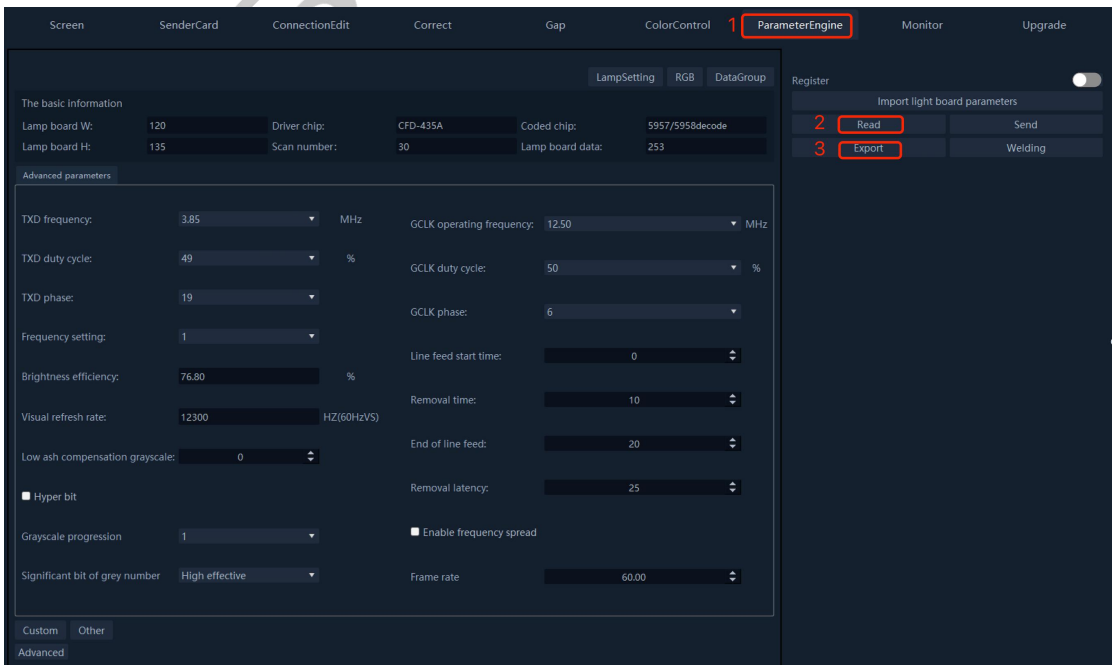


6.3.3 Parameter Export

The operation steps are as follows:

1) Go to the function page of [Parameter Engine], click "Read" to collect parameter information;

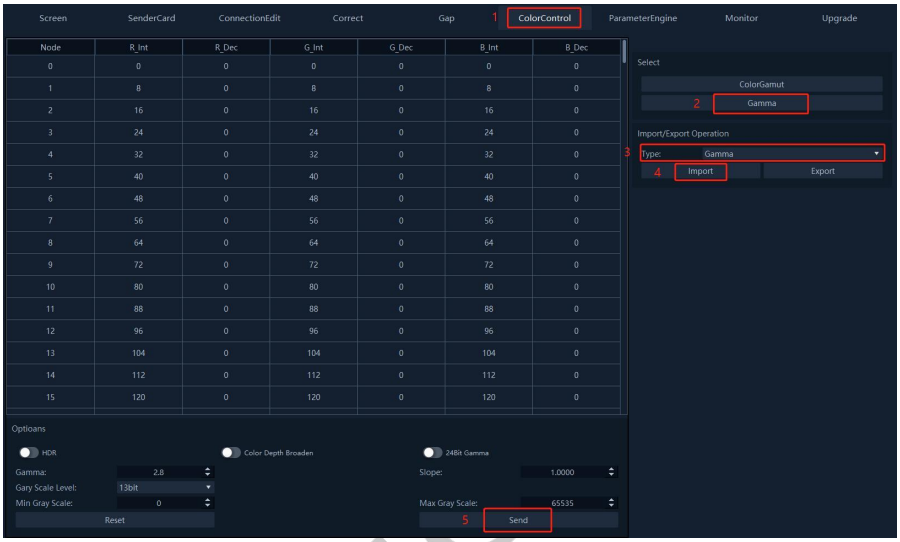
2) Click "Export" on the right function area, select the file saving path, and confirm the export.



6.3.4 GAMMA Table Import

The operation steps are as follows:

1) Go to the function page of the [Color control], select "Gamma" in the right function area;
2) Open "Register operation" and check the "Receiver card" tab.
3) In the type of import/export operation, set the type to Gamma.
4) Click "Import" to select the bin file with Gamma table to import;
5) Click "Send" to send settings.

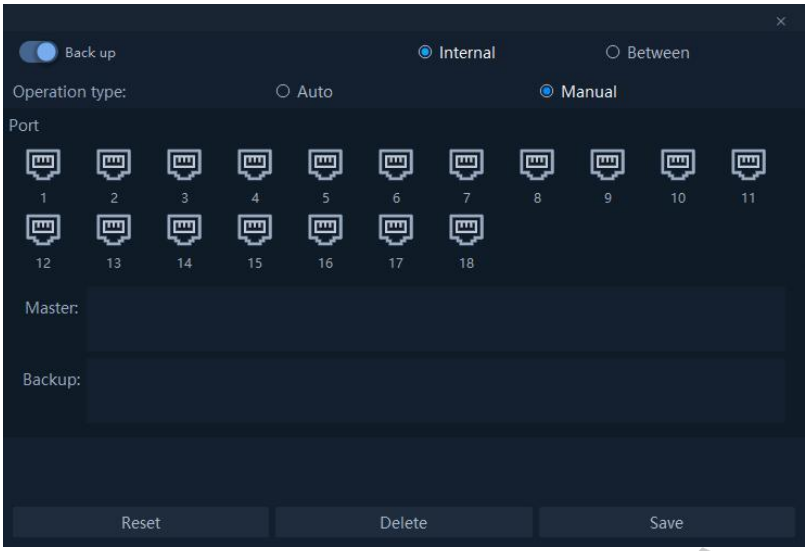


6.4 Network Port Backup

When the communication between the primary and the backup network ports is abnormal under the applicable of primary and the backup network ports, the system will automatically switch to the backup network port to ensure normal screen display.

Mode 1: internal backup

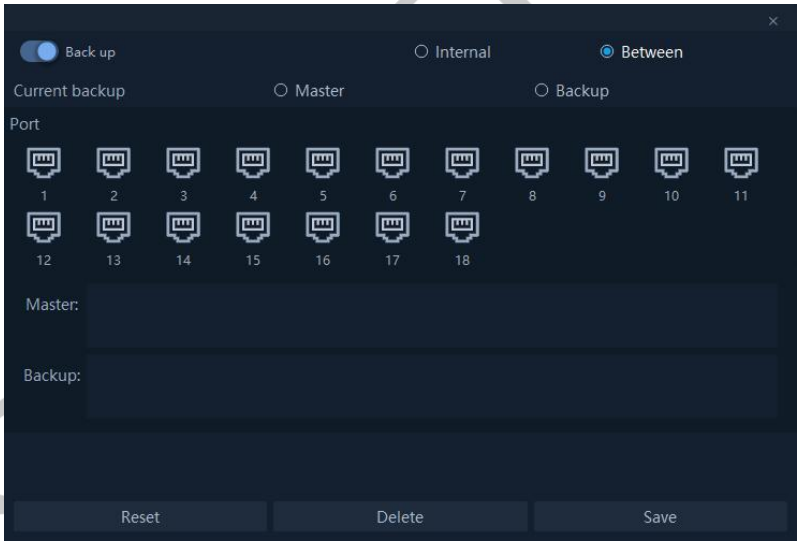
The backup function is realized by different network ports on the same controller. The configuration modes are automatic backup and manual backup.



- Automatic backup. By default, the first half of the network ports are the primary ports while the last half are the backup ports
- For manual backup, you can drag the network port to customize the primary and standby network ports

Mode 2: network port backup

For network port backup among different controllers, set source and backup cards.



6.5 Parameter Configuration

Parameter configuration is only provided for professional and technical personnel for debugging. If necessary, please contact the professional staff for consultation.

You can debug professional parameters of the screen on the [Parameter Engine] interface. Before parameter configuration, you need to manually read back the parameters and modify them. It supports voltage adjustment of 3-in-1 card power supply, parameter settings of driver chips, independent adjustment of RGB current gain, Row Driver IC settings, FLASH settings, gray value fine processing, etc.

The operation steps are as follows:

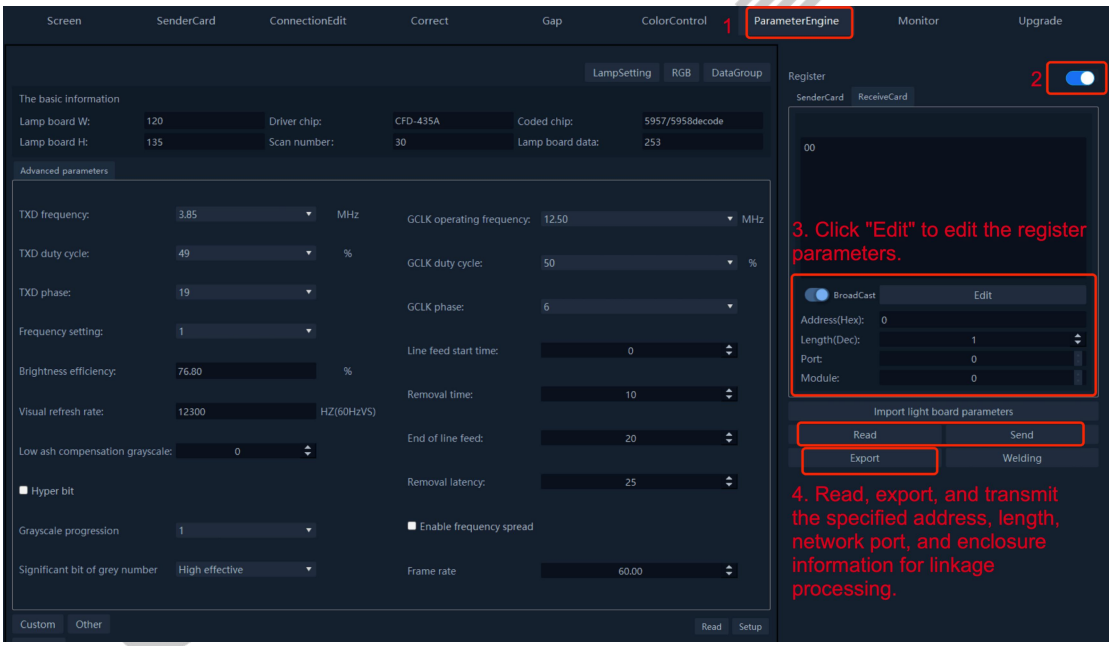
1) Go to the function page of [Parameter Engine], click "Read" on the right function area to update interface parameters/Click "Read back" in the view area to update the parameters of the light board to 3K;

2) If parameters require adjustment during the maintenance, click "Setup" to send the parameters to the LED screen;

3) After confirming that the parameters are correct, click "Freeze" to save the parameters to the screen.

◆ For parameter import and export, please refer to 6.3.3 Parameter Import of Light Board &6.3.4 Parameter Export

* If you need to configure advanced parameters, turn on the "Specify Register" switch to edit the parameters of the receiver card register. At this time, the reading, sending, and export will be processed according to the parameters specified in the register editing box, such as the address, length, network port, and box (If the broadcast is enabled, it means that the global network port and box are operated).



6.6 Gamma Adjustment

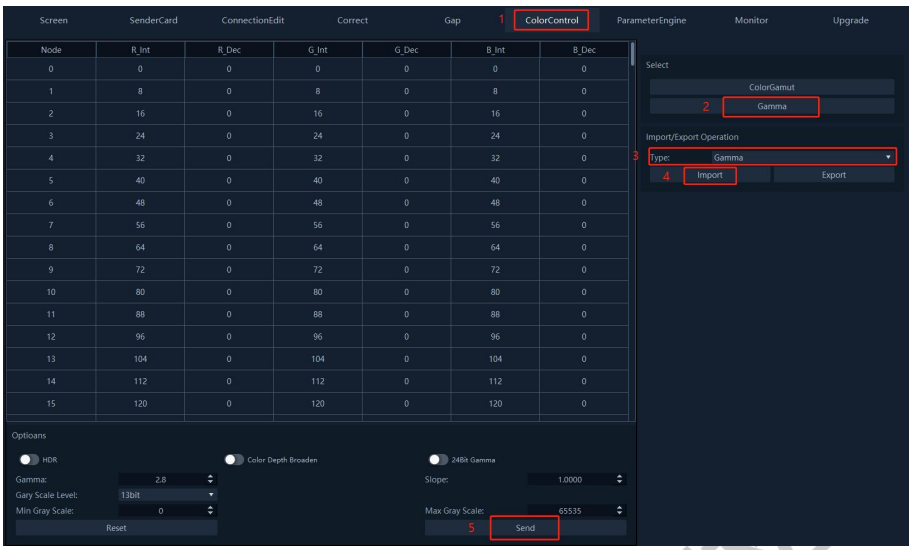
Gamma adjustment is only provided for professional and technical personnel for debugging. If necessary, please contact the professional staff for consultation.

You can modify a level of Gamma separately on the "Gamma" page of the "Color Control" interface. The operations steps are as follows:

1) Go to the function page of the [Color control], select "Gamma" in the right function area;

2) Double-click the parameter to be modified and modify it. After the modification, click "Send" to send it to the screen;

3) If data needs export, select "Gamma" in the type of import/export operation and click "Export".

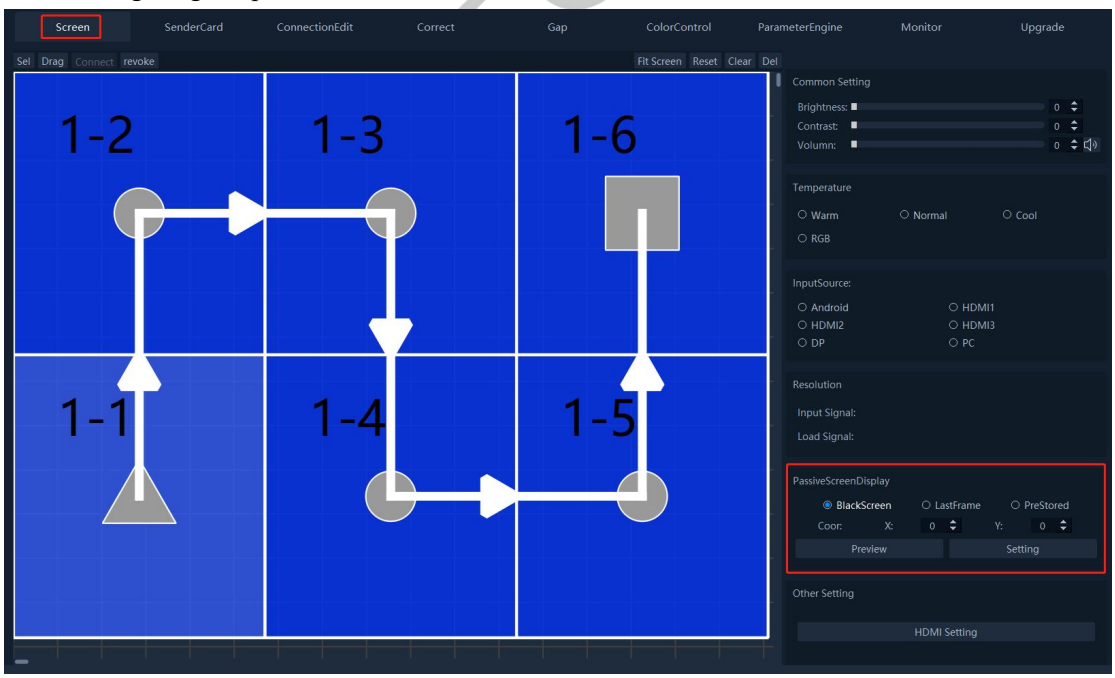


6.7 Set Passive Screen

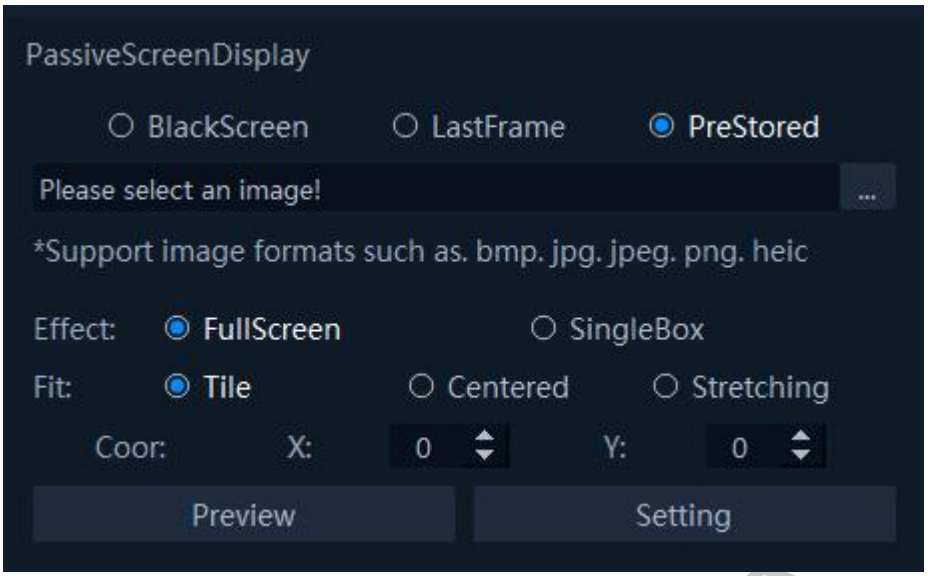
Set the display screen in case of no video source signal.

Supported Product Series: CQ30 series

Operation mode: Configure “Display Settings of Passive Screen” in the function area on the right of the [Screen] interface, supporting black/last frame/stored screen of the display screen while configuring the passive mode.



Settings of the stored screen: Select "Stored screen", upload the local picture, set the screen effect to take effect in the full screen/single box, set Stretch/Tile/Center to fit the screen, and set starting coordinates and other information, click "Preview" to view the screen effect on the screen, and click "Set" to save the stored screen to the device after confirmation.


PassiveScreenDisplay
BlackScreen
LastFrame
PreStored
Please select an image!
...
*Support image formats such as. bmp. jpg. jpeg. png. heic
Effect:
FullScreen
SingleBox
Fit:
Tile
Centered
Stretching
Coor:
X:
0
Y:
0
Preview
Setting

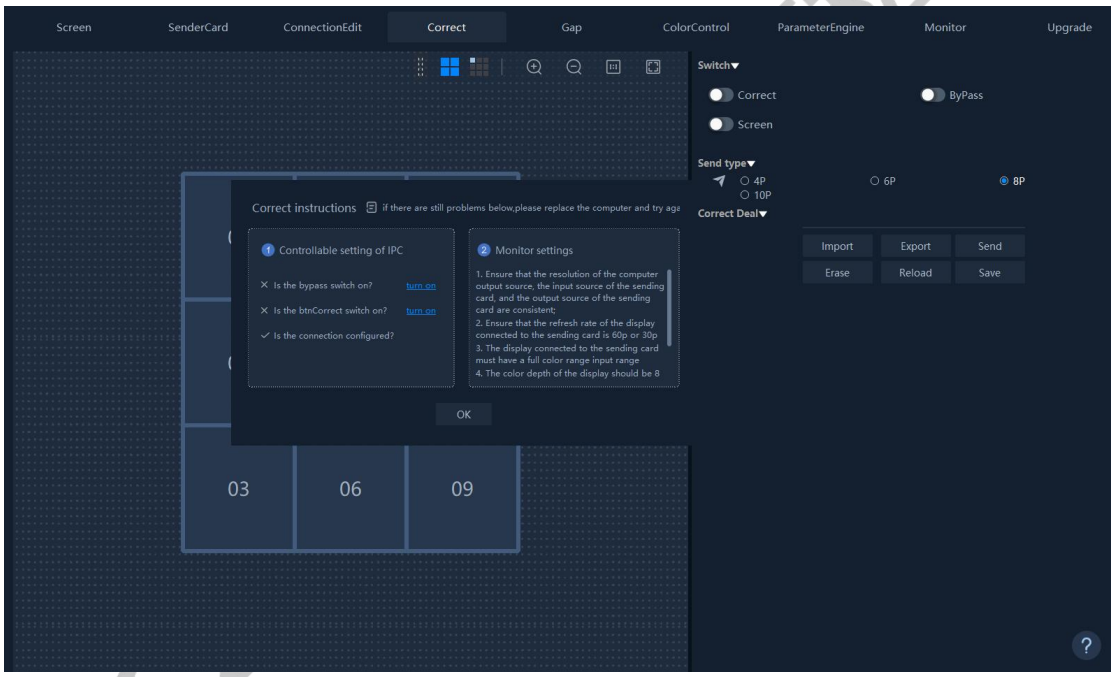
7 Adjustment of Brightness and Color Temperature

By adjusting the key factors of the screen, such as screen calibration, color gamut conversion, brightness, color temperature, saturation, etc., the screen display can be better. The adjustment parameters of this interface are only provided for professional and technical personnel for debugging. If necessary, please contact the professional staff for consultation.

7.1 Screen Correction

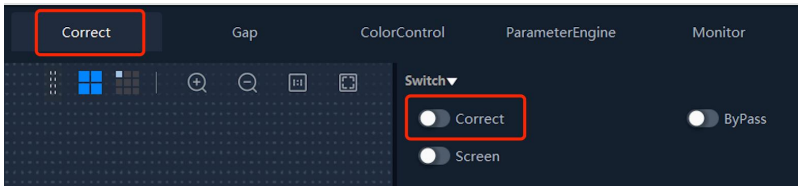
By setting reasonable screen correction data, users' visual experience is improved when watching the screen.

Please check the Correction Guide before correct, and call out the Guide in the Help Center at the lower right of the interface to check the Correction Guide later. Please turn on the Bypass switch and correct switch, and confirm the accurate connection relationship before operation.



7.1.1 Single Box Correct

- Applicable Scenarios: ① Replacement of spare boxes and resending of correct data; ② Re-import is required in case of correct data loss; ③ Replacement of the correct data of existing boxes.
- Operation steps:
  1) Enable "Bypass" and the "Correct" on the [Correct] interface.



2) Select a "Box" mode in the [Correct] view area, and set the "Sending mode";

3) By selecting the corresponding box in the view area, right-click to call out the quick operation of a single box;

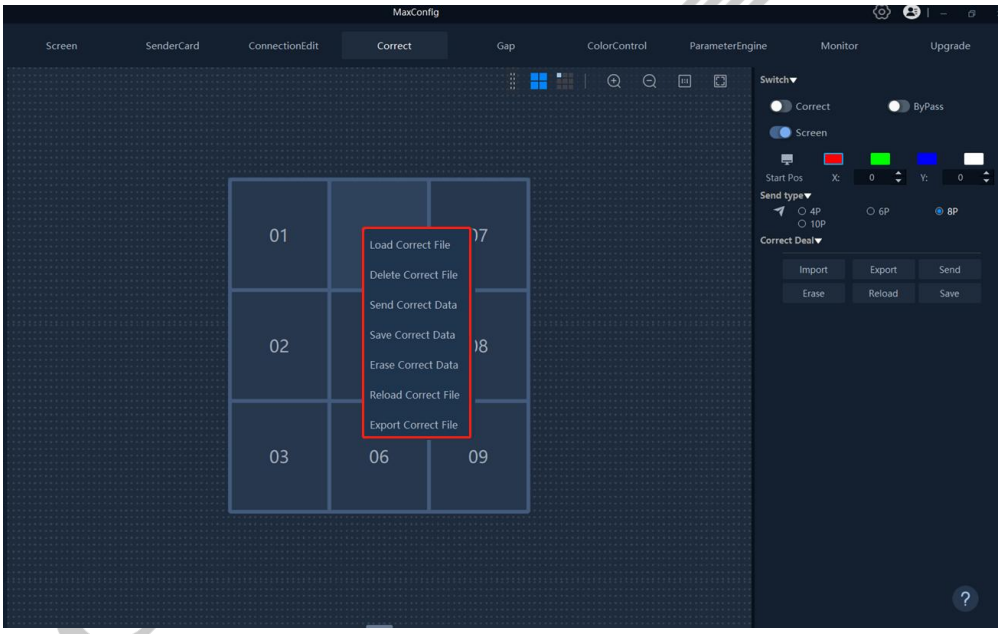
4) Click "Load correct data" to import the correct data of a local box to the selected box;

5) Enable the "Screen" function, set the "Start coordinate" and the background image to the screen via the software;

6) Click "Send" to send correct data to the box;

7) Click "Save" to keep the correct data to the device;

8) Click “Export” to select a path saving the correct file.



Additional description for other functions of single box operation:

- Delete correct data: Delete correct data imported to the box
- Send correct data: Send the correct data of the current box to the screen
- Erase correct data: Restore the correct data corresponding to the screen to the default value
- Reload correct data: Restore the correct data of the corresponding box to the last saved state

7.1.2 Single Light Board Correct

- Applicable Scenarios: ① Replacement of spare boxes and resending of correct data; ②

Re-import is required in case of correct data loss; ③ Replacement of the correct data of existing light boards.

- Operation steps:

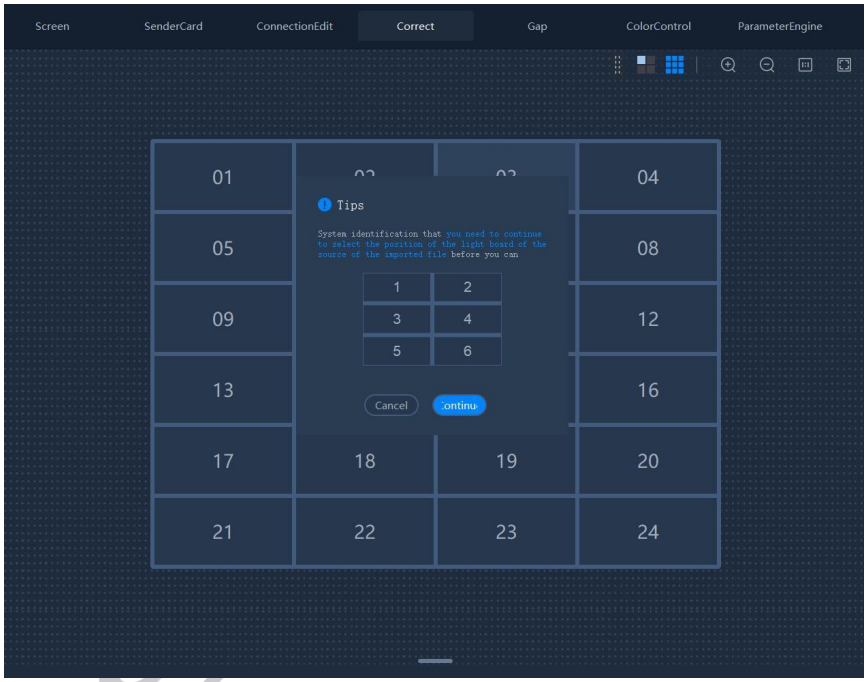
1) Enable “Bypass” and the “Correct” on the [Correct] interface.

2) Select a "Box" mode in the [Correct] view area, and set the "Start coordinate" and "Sending mode";

3) By selecting the corresponding light board in the view area, right-click to call out the quick operation of a single light board;

4) Click "Load correctdata" to import the correct file of the box/light board;

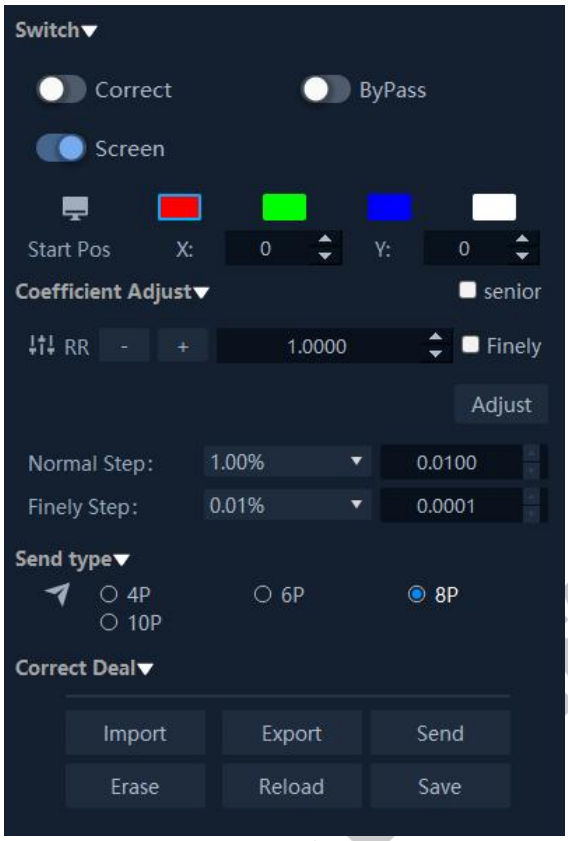
- If a box file is imported, you need to select the corresponding light board position before importing;



- If a light board file is imported, you need to import normally;

5) Click "Send" to send correct data to the box;

6) Enable the "Screen" function to set the background image to the screen via the software; The correct coefficient can be adjusted for the selected light board under the light board mode;



7）After confirmation, click "Save" to keep the correct data to the device;

8）Click “Export” to select a path saving the correct file.

* Other functions in single light board operation are similar to those in single box operation.

7.1.3 Multiple Boxes/Light Boards Correct

The operation steps are as follows,

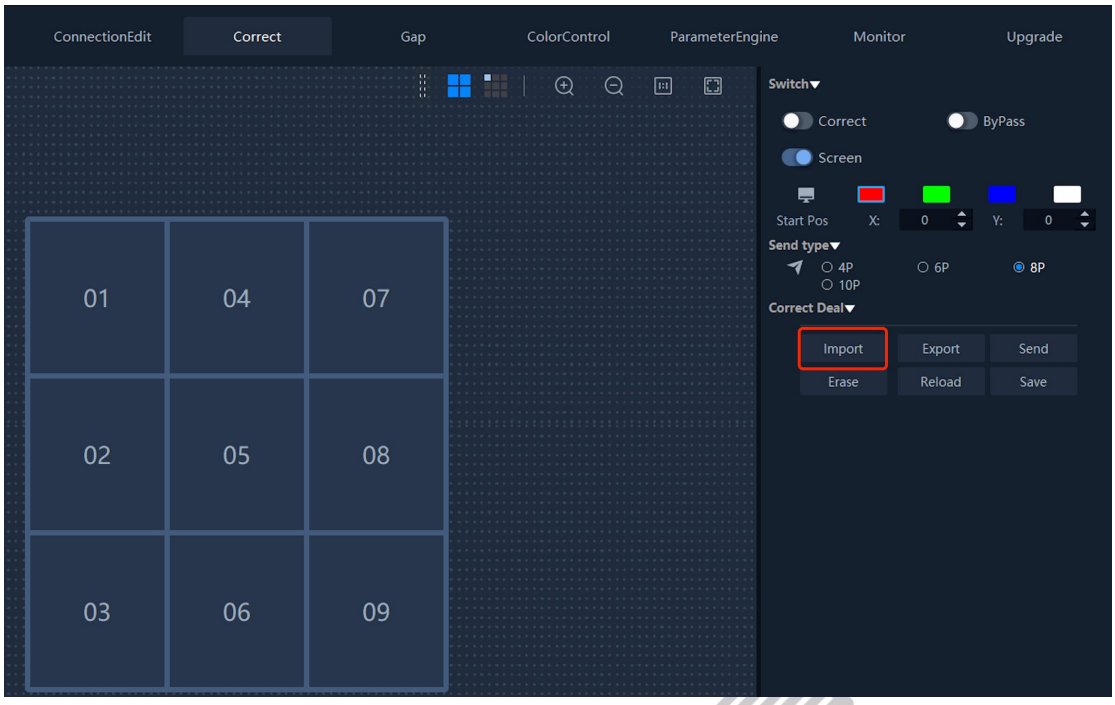
1) Enable “Bypass” and the “Correct” on the [Correct] interface;

2) Set the "Sending mode" and "Start coordinate";

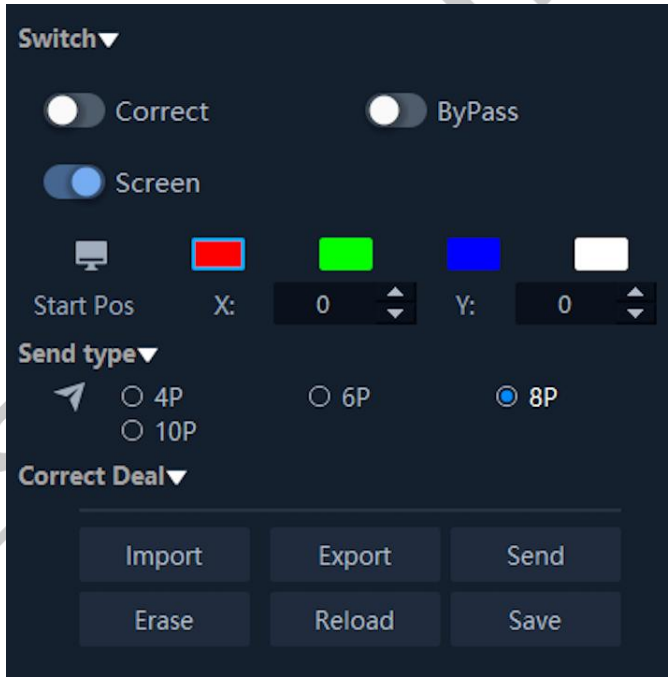
3) Click "Import" in the function area to import a folder containing the correct data of multiple boxes; (Note: the box correct file is identified here)

4) Click "Send" to send correct data to the box; The correct coefficient can be adjusted for the selected light board under the light board mode;

5) Click "Save" to keep the correct data to the device.



* Note: The options in the right function area are all valid for the full-screen



Additional description for full-screen operation:

- Sending Modes: Supports 4P/6P/8P/10P/Low Gray sending modes

  4P: Medium gray correction;

  6P & 8P: High gray correction;

  10P: C27 series high-precision chromaticity correction.
- Sending modes: Supporting 4P/6P/8P/10P/ low gray level and other sending modes
- Start coordinate setting: Enter positions of the start coordinate of the screen to identify the start position for correct

- Send correct data: Send the correct data to the screen
- Save correct data: Save the full-screen correct data
- Erase correct data: Restore the full-screen correct data to the default value
- Reload correct data: Restore the full-screen correct data to the last saved state

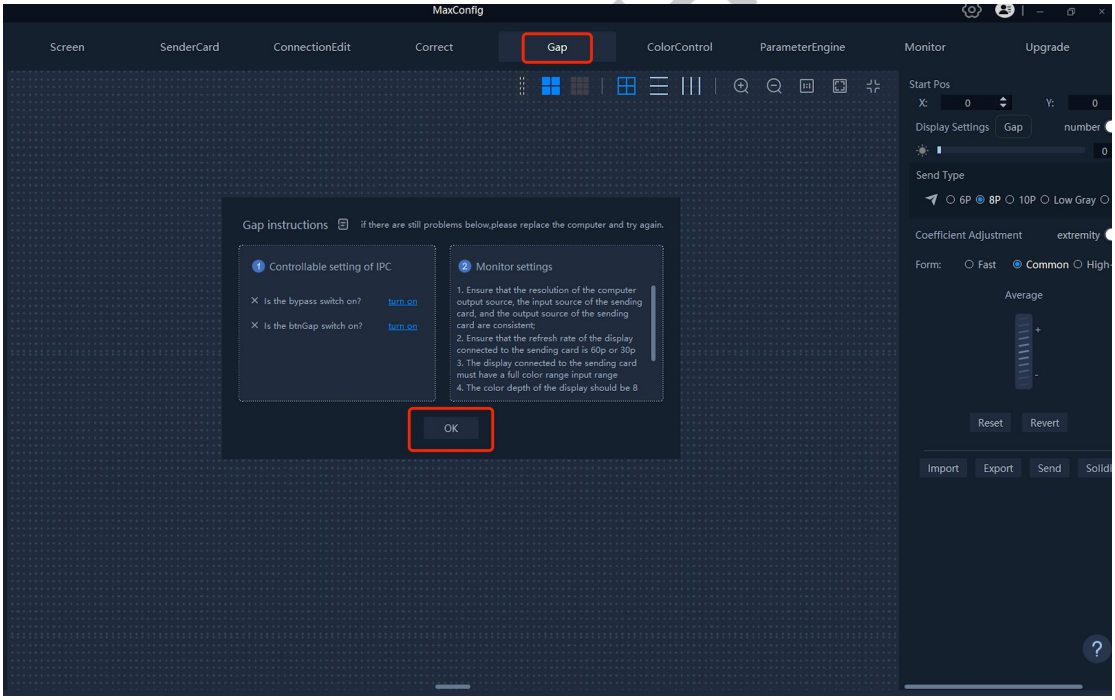
7.2 Joint Correction

In the splicing process of the LED screen, the installation tightness between two adjacent boxes/light boards is different, which may cause dark and bright lines at the joint. Joint repair function is for dark/light joints, with introduced joint repair function to control light and dark balance, and even the visual effect. According to different product designs, after going to the [Joint Repair] function, the software identifies the joint repair mode based on the parameter information of the connected device, so that the user can operate according to the guidance note of the system.

7.2.1 Quick Joint Repair

Supporting box/light board adjustment. The operation steps are as follows:

1) Enable "Bypass" on the [Sending card] interface, and enable "Joint repair" on the [Repair] interface with the normal display settings.



2) The software automatically reads the connection relationship of the current box;

3) Select to display the screen topology based on the Box/Light board in the canvas function area. By default, it is displayed based on the box. (* Note: If the light board parameters are not read, it is not available to enter the light board mode)

4) Select the joint repair mode. Supporting row/column/only select a row/only select a column;

5) Select the joint to be adjusted in the view area to adjust parameters.

Parameter adjustment supports ordinary mode/endpoint mode, and endpoint mode supports adjustment of coefficient accuracy: low precision/ordinary precision/high precision. When the device is connected, the repair coefficient is sent in real time.

6) After adjustment, click "Freeze " to keep parameters to the device.

The following is additional description of supported shortcut key operation and other functions in the "joint repair":

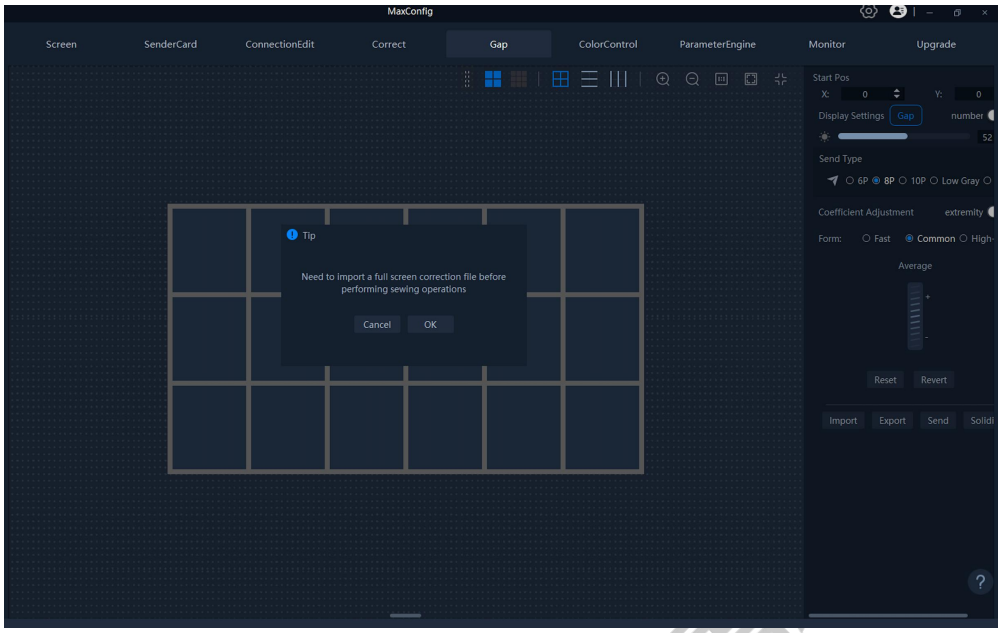
◆ Supported shortcut key operation

Shortcut Keys	**Effect**
Ctrl + A	Select all joints
Ctrl + mouse scroll wheel	Canvas zooms in/out
Mouse [scroll wheel + right button]	Enable or disable full-screen adjustment of any position
Hold down alt+ left mouse button	Drag the view

◆ Additional description for other functions

- Import: Quickly import the joint repair file
- Export: Export the joint repair file
- Freeze: Freeze the joint repair coefficient to the screen
- Reset the joint repair coefficient: Reset the joint repair coefficient to 1.0
- Restore the joint repair coefficient: Restores the joint repair coefficient to the last saved

7.2.2 Calibration Data for Joint Repair



In this mode, the device needs to import the calibration file of the full screen for operation. The operations are as follows:

1) Enable "Bypass" on the [Sending card] interface, and enable "Joint Repair" on the [Repair] interface with the normal display settings.

2) According to the prompts, select to import the calibration folder of the full screen/import calibration file of the full screen on the [Calibration] page;

3) The software automatically reads the connection relationship of the current box;

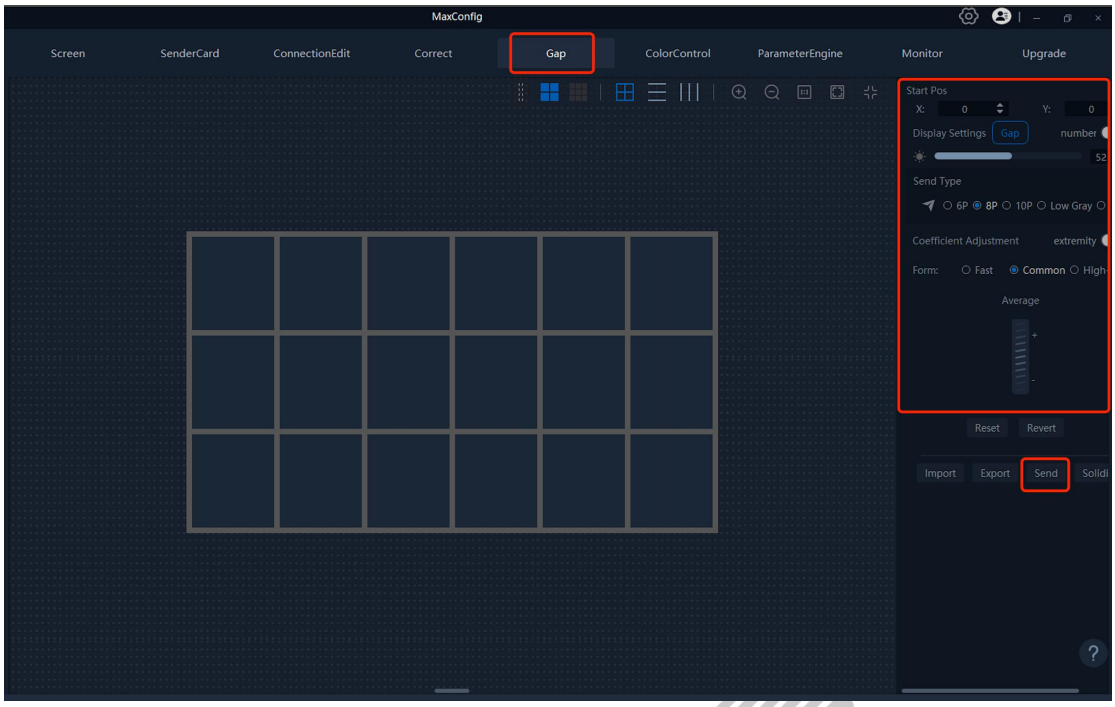
4) Select to display the screen topology based on the Box/Light board in the canvas function area. By default, it is displayed based on the box. (* Note: If the light board parameters are not read, it is not available to enter the light board mode)

5) Select the joint repair mode. Supporting row/column/only select a row/only select a column;

6) Select the joint to be adjusted in the view area to adjust parameters.

Parameter adjustment supports ordinary mode/endpoint mode, and endpoint mode supports adjustment of coefficient accuracy: low precision/ordinary precision/high precision. After parameter adjustment is completed, click to "Send" parameter to the screen to view the effect.

For other operations such as import, export, freeze, reset, and restoring the repair coefficient, please refer to 7.2.1 Quick Joint Repair.



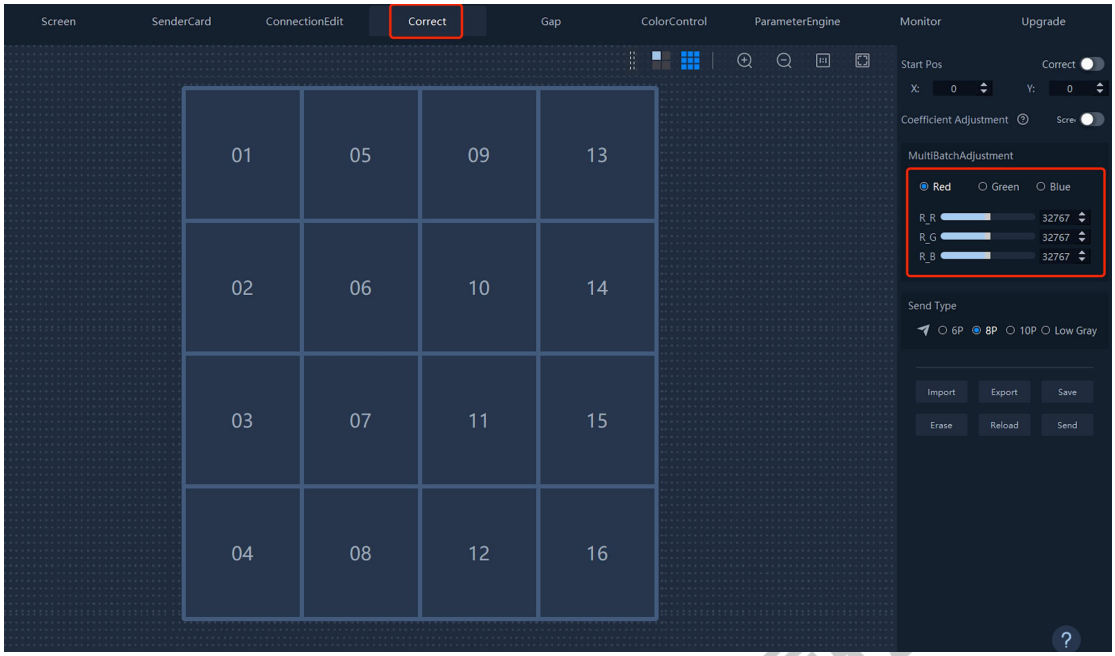
7.3 Multiple Brightness Adjustment

It is effective to eliminate uneven brightness by dividing the light board into multiple batches and separately adjusting the brightness for each batch. Therefore, the brightness stability of the entire screen can be maintained to improve the viewing experience.

Supported Product Series: CQ30 series

Operation mode: Go to "Multi-adjustment" settings on the right function area of the "Calibration" interface.

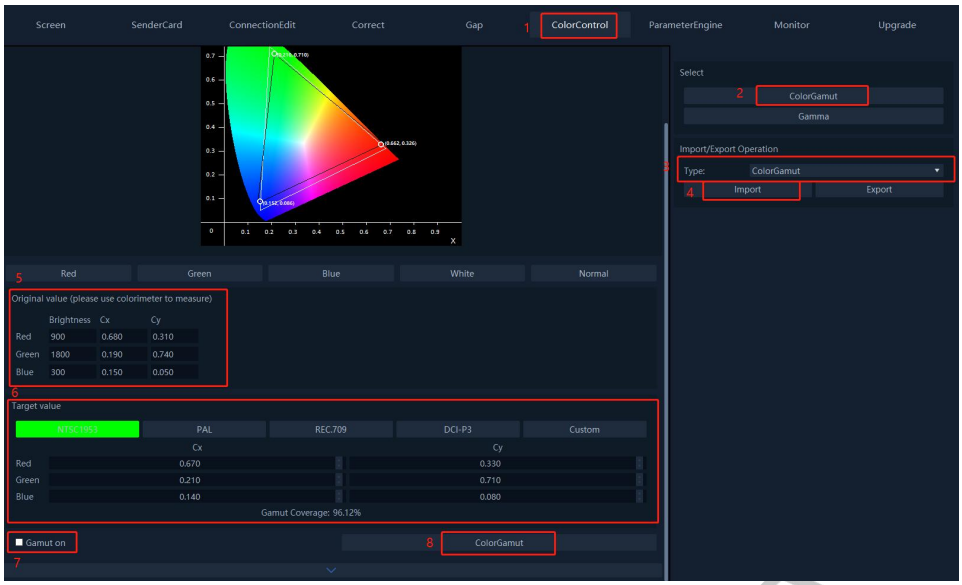
* If the adjustable upper limit of the box is displayed during operation, please switch the physical positions of the light board to be adjusted with that of the adjusted one, and select the switched light board on the software interface for setting.



7.4 Color Gamut Conversion

In order to meet the different needs of different people for color, the "color gamut conversion" function is introduced, which can adjust the color gamut of the LED screen. The adjustment parameters of this interface are only provided for professional and technical personnel for debugging. If necessary, please contact the professional staff for consultation.

1) Go to the function page of "Color control", select "Color gamut conversion" in the right function area;
2) Select "Color gamut conversion" in the type of import/export operation, and click "Import" to quickly import the original value file of the existing LED screen; Or collect the original value of the LED screen on the site and enter it in the corresponding area.
3) In the target value area, check "Color gamut on" and click "Color gamut conversion" to complete the setting;
4) If exporting is required, click "Export" and select a path saving the file.



7.5 Advanced Color Settings

Improve the visual quality and views of the screen by setting advanced colors.

Supported Product Series: CQ30 series

1) Adjustment of RGB components

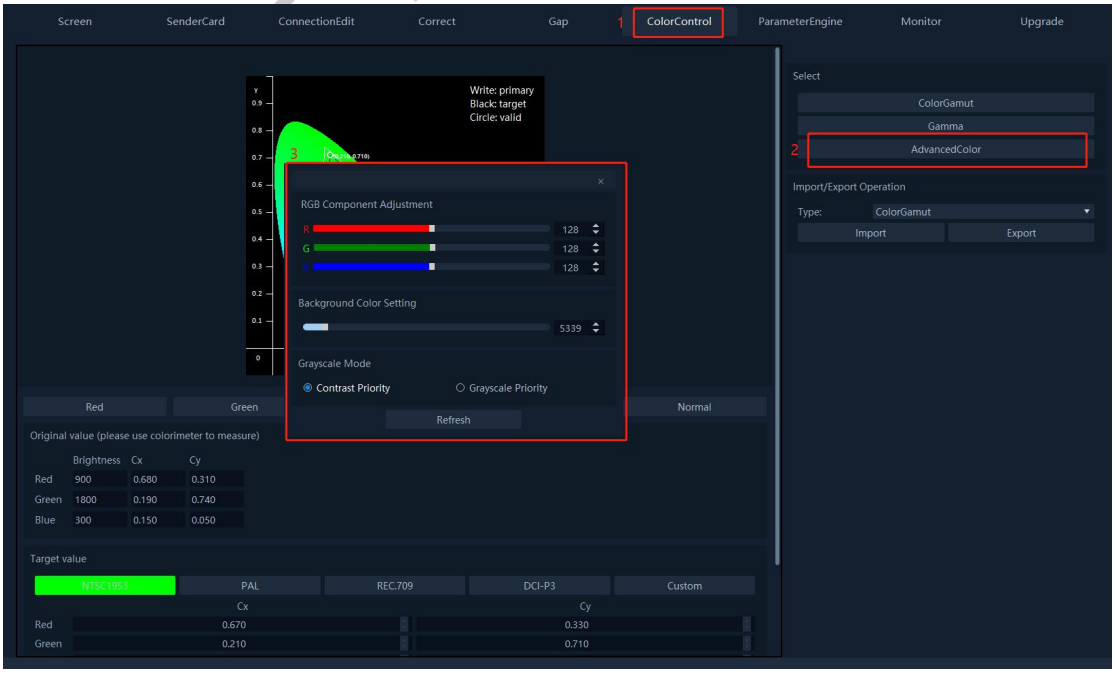
Improve the visual quality of the screen by adjusting R, G and B components.

2) Background color setting

Improve the visual quality and views of the input source with poor effect on the screen by presetting the background color of the screen.

3) Gray scale mode

The user can set different gray scale modes according to different application scenarios to achieve different representation.

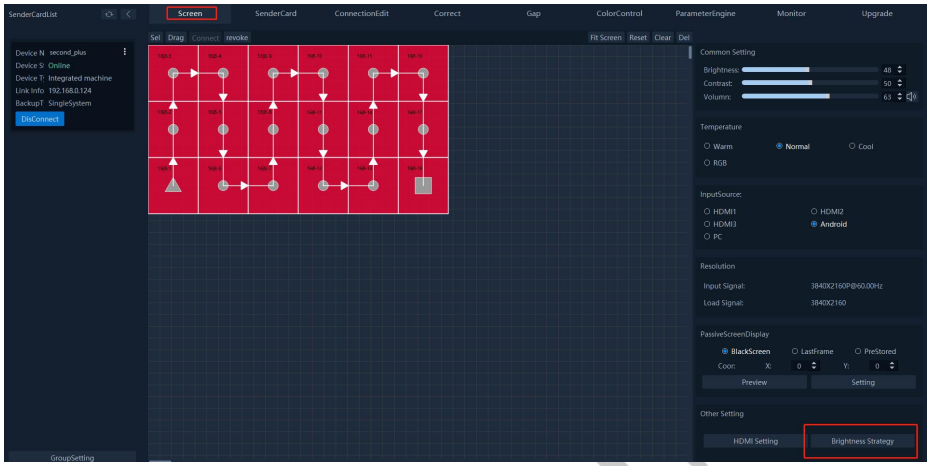


7.6 Brightness Strategies

The brightness policy can be configured in two modes: automatic brightness adjustment and periodic brightness adjustment

Function entry: [Screen - Brightness Policy]

* If the "Brightness Policy" entry is not displayed, the current device version does not support the configuration

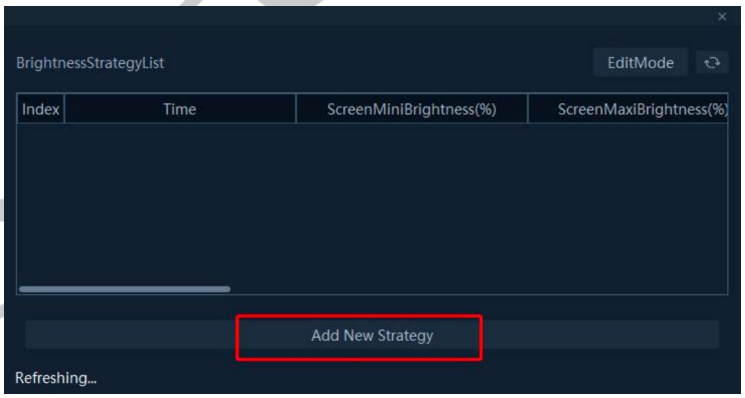


7.6.1 Automatic Brightness Policy

By collecting the ambient brightness, automatically adjust the brightness of the LED screen in real-time.

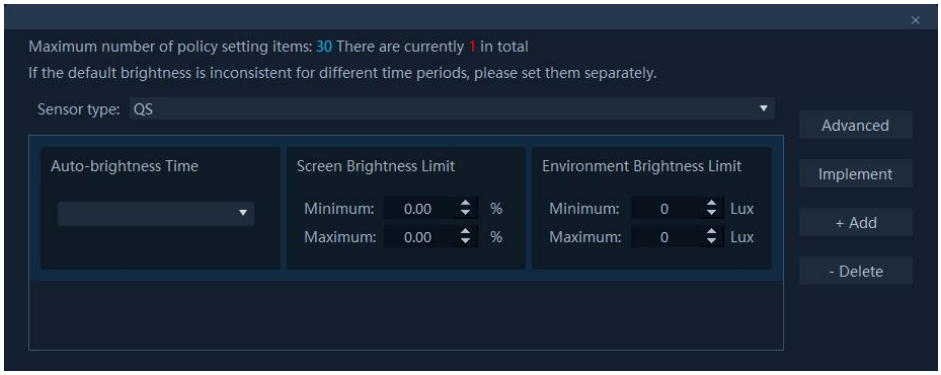
1. New Policy

1) Click "New PolicyAdd New Strategy";



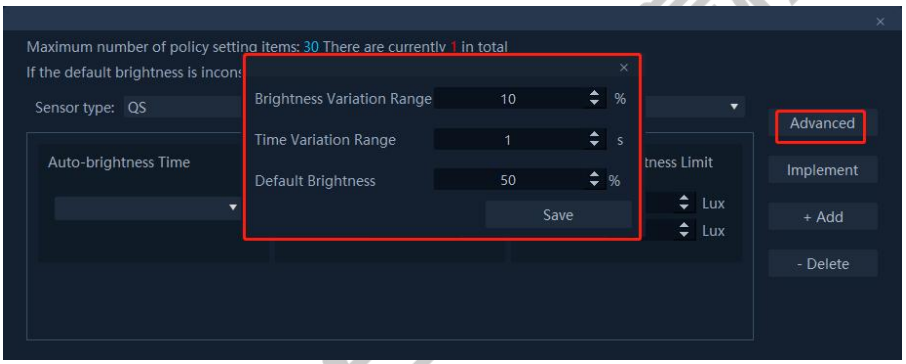
2) Select the probe type according to the actual circumstances, and set the automatic effective period and variation range of the brightness, as well as ambient brightness limit;

* For different brightness policies in different periods, click "+ Add" to add a new policy.



3) Supporting to configure the range of variation of brightness and time, and other information in the "Advanced Settings". For possible non-preset ambient brightness factors in the set period, you can control the screen brightness by configuring the default brightness value.

* As shown in the following figure: The brightness will change at a rate of 10% per second. If not within the automatic time range for brightness adjustment, the screen will maintain 50% brightness



4) After setting the brightness policy, click "Execute" to send the policy to the screen;

* For multiple policies with different advanced configuration items, maintain the same advanced configuration policy each time. Click “Execute” and maintain other policies in sequence.

2. Modify a policy

After the device is connected, go to the “Brightness Policy” function, click “Edit Mode”, check the policy to be modified, and click “Modify a Policy”. After the selected policy information is displayed, modify the policy according to the actual situation, and click “OK” to execute the modification.

3. Delete a policy

After the device is connected, go to the “Brightness Policy” function, click “Delete Mode”, check the policy to be deleted, click “Delete a Policy”, and refresh the policy list after deleted.

7.6.2 Scheduled Brightness Policy

Applicable to adjustment of screen brightness according to the specified period in case of no external optical sensor probe/external probe damage. Its difference with automatic brightness adjustment is that the impact of ambient brightness is ignored.

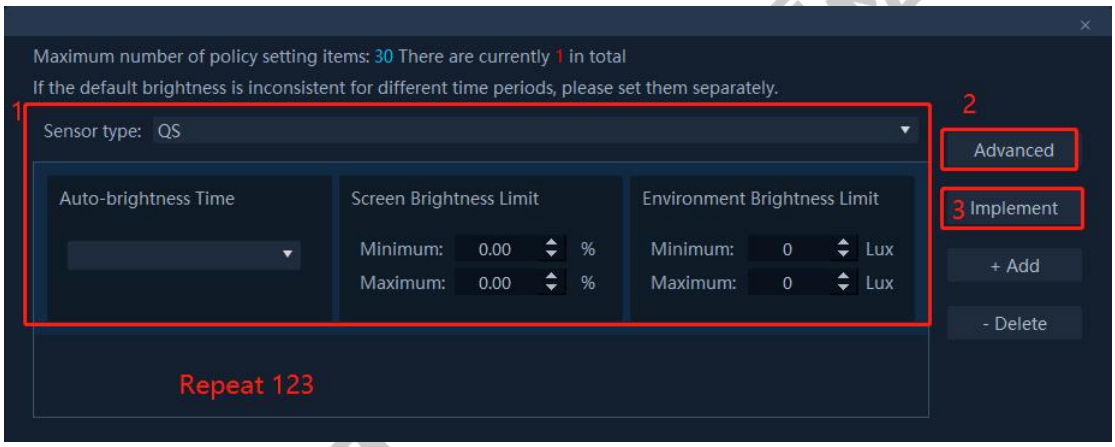
1. New Policy

1) Click “New Policy”;

2) Select the probe type according to the actual circumstances, and set the automatic effective period and variation range of the brightness, as well as ambient brightness limit, which can be written without restrictions;

3) Go to “Advanced Settings” to maintain the default brightness value, which is used to set the brightness value taken effect in the current time range. After confirmation, click “Execute” to deliver the policy to the device. (* The range of variation of brightness and time is invalid setting)

Repeat steps 2 and 3 to maintain the default brightness values for other periods.



1. Modify a policy

2. Modify a policy

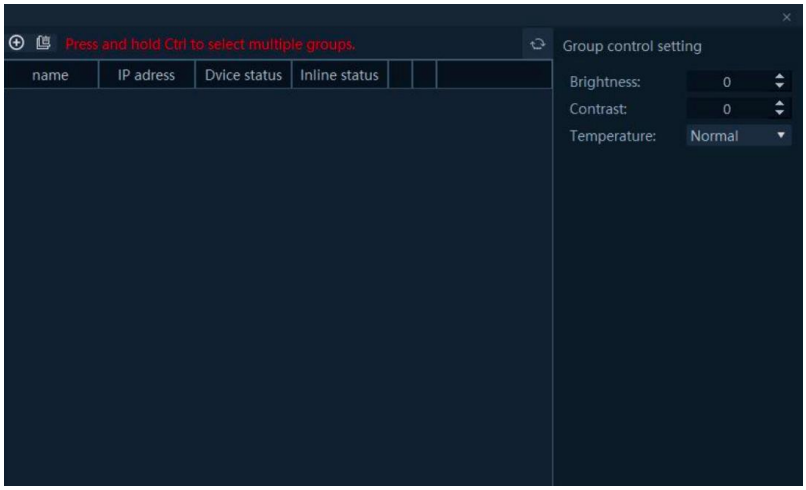
Refer to the “Modify a policy” mode in 7.4.1 Automatic Brightness Policy

3. Delete a policy

Refer to the “Delete a policy” mode in 7.4.1 Automatic Brightness Policy

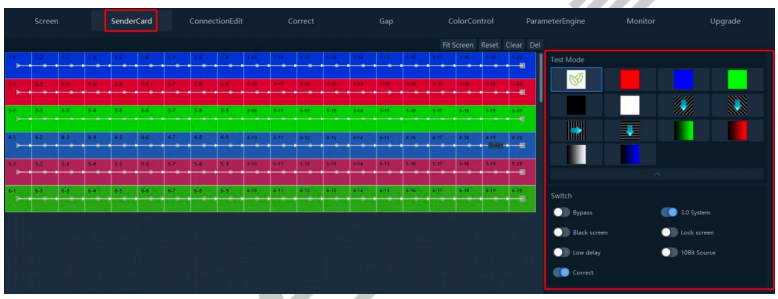
7.7 Group Control Settings

Group control supports to add the same type of controller in the same LAN to a group to achieve synchronous adjustment of brightness, contrast, and color temperature, as well as to delete the group and change the group name.



7.8 Screen Quick Control

Go to the function page of the [Sending card] to automatically read the switch status of the LED screen. Here, quickly control of the switch and testing screen of the LED screen are provided.



7.8.1 Testing Mode of Sending Card

The testing mode provide testing screens of red, green, blue, white, 255 gray scale, cross, vertical, incline lines, box positioning, light board positioning, etc.; The screen of other testing modes is output to the screen by the sending card.

7.8.2 Sending Card Switch

The "Switch" can quickly control the LED screen accordingly. Go to the [Sending card] interface to automatically read its current switching status. The switch includes: Bypass, 3.0 system, black screen, lock screen, repair, calibration, low delay, and 10Bit source. Users can quickly set switch (* Note: authorization status is only displayed in the second-generation system).

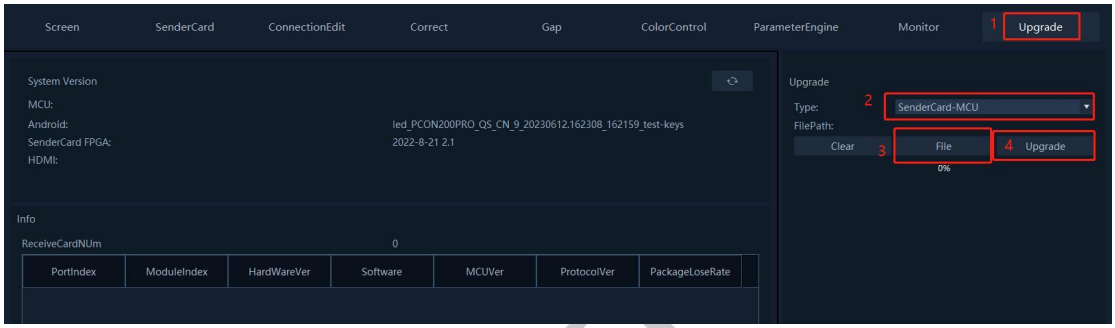
8 Firmware Upgrade

8.1 Program Upgrade of LED Screen

This can meet the firmware package upgrade of MCU, FPGA, and HDMI decoding chip of the controller and box. The operation steps are as follows:

1) Go to the [Upgrade] function page and select the “File type” to be upgraded.
2) Click "File" to select the program file to be upgraded. If the program file is incorrectly selected, click "Empty" and add it again;
3) Click "Upgrade" and wait for the upgrade to complete.

* Note: Upgrade with a U disk for the Android system



9 Screen Monitoring

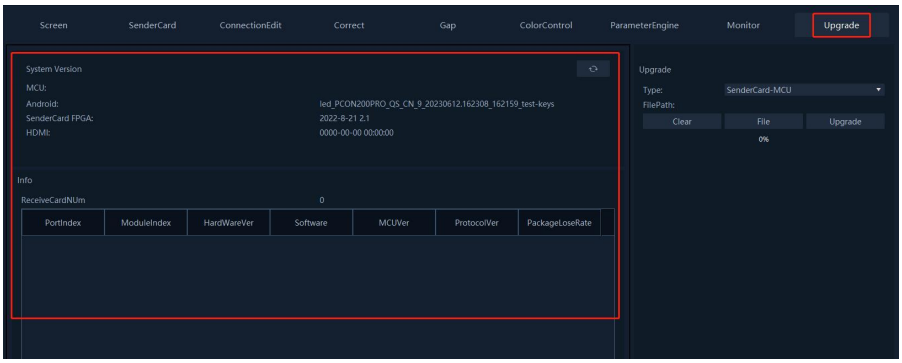
Provide information monitoring such as program version, box temperature, three-in-one board voltage, bit error rate and so on of the LED screen.

9.1 Box Monitoring

Go to the [Monitoring] interface, click "Refresh" to obtain the box temperature and voltage information of the LED screen.

9.2 View Version Information of LED Screen

Go to the [Monitoring] interface, click "Refresh" to view the program version and bit error rate of the controller and box.



* Note: Click "Bit error rate" in the list for fast zero clearing.

10 Software Settings

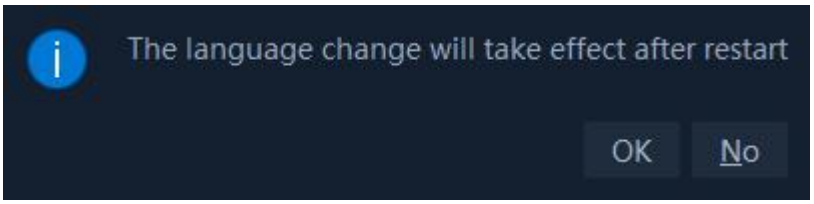
General settings of the software system include its language switching, viewing instructions, information about software, and check updates.

10.1Language Settings

Entry: Go to [Help - Language] from the main menu.

Supported languages: Simplified Chinese, Traditional Chinese, and English

After the software installation, the corresponding language is automatically selected based on the operating system language. The user can also click to change the language as required. After confirming information, restart the software to take effect.



10.2View Instruction for Use

Entry: Go to [Help - Instruction for Use] from the main menu.

The software instruction document is automatically opened, and the user can check it according to the required location.

10.3About Software

Entry: Go to [Help - about MaxConfig] from the main menu.

Enter to check software information.

10.4Check Update

Entry: Go to [Help - Check update] from the main menu.

The software automatically detects whether the current version is the latest. If not, you can download to update.

11 FAQ

11.1 Fail to install software

If a prompt is displayed indicating that the installation fails, try to follow the steps below:

1) Select the installation package, right-click to select "Properties";

2) Check "Lift restrictions" and click OK before trying to install.

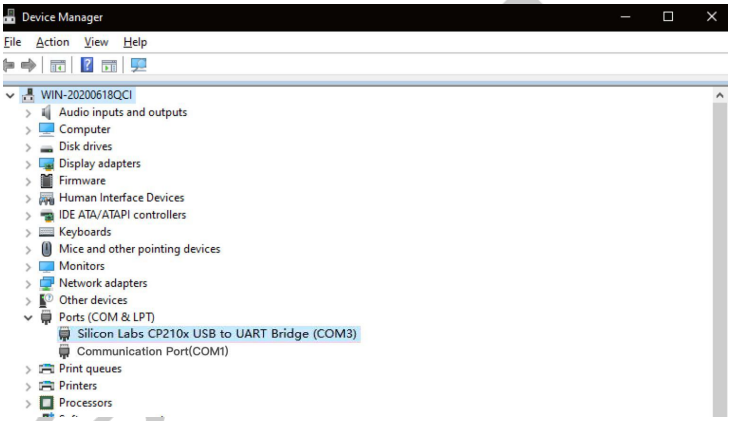
11.2 Software cannot detect the controller

11.2.1 Serial port connection modes

Go to the computer device management to check whether the serial port information is identified;

- If not identified, try to update the drive;
- If the driver is correctly installed, replace the serial cable and try again;

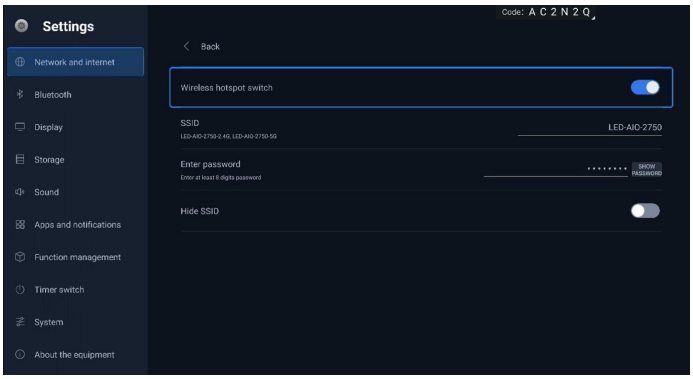
If detection is still unavailable after trying the above methods, please contact after-sales services



11.2.2 Hotspot Connection Mode

If Android hotspot cannot be found on the PC, it is required to check whether Android hotspot is switched on.

Step: More - Settings - Network and Internet - Wireless Hotspot



11.2.3 Direct Connection Mode of Network Cables

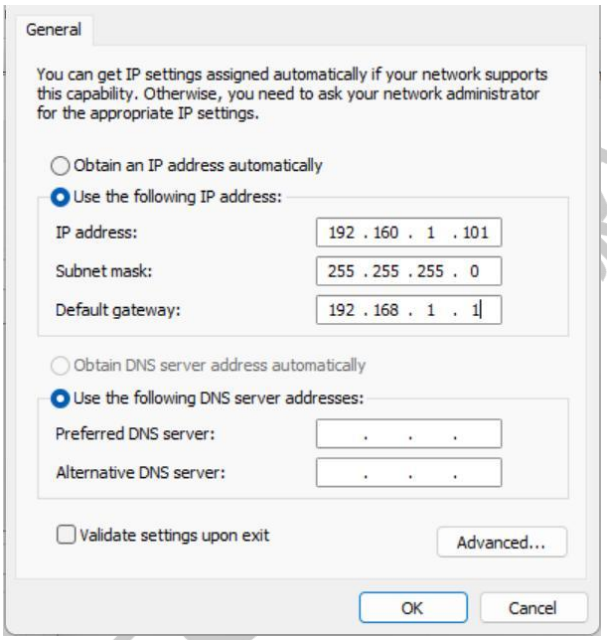
Check the network connection between the Android device and the PC, and ensure that the two devices use the same approach to obtain the IP address

- Check location of Android

Step: More - Settings - Network and Internet - Wired Network

- Check location of PC

Step: Open Network and Sharing Center - Status - Change Adapter Options - Double-click Ethernet - Properties - Double-click TCP/IPv4



11.3 How to set parameters after a 3-in-1 card is replaced

After the 3-in-1 card is replaced, you only need to send the connection diagram again, and the correction data and parameters will be automatically read back and sent. Operation steps: Click "Read" - "Send" on the interface of [Connection Relationship Edit].

11.4 How to set parameters after a light board is replaced

After the light board is replaced, no operation is required. The calibration data and parameters are automatically read back and sent.

11.5 Abnormal resolution of LED screen

Refer to Section 6.2 to set the HDMI resolution