AEB-A14 Edge Blending Controller

Software User Manual

Software Operation

Software files list

⚠Some security defense software will hinder the software installation. At this time, you need to temporarily quit the security defense software.

In the log in interface, there are two user account to choose-**admin** and **user**.

User need to log in with account "admin" for installation and commissioning, and the password is"admin".

1. Communication connection

1) RS232

Connect the device with control PC through the RS232 port to update the device program if needed.

2) Ethernet

There are 2 network connection method, connect GRO14 to WiFi Router or through RJ45 to LAN port. Then user can control the system through Ethernet.
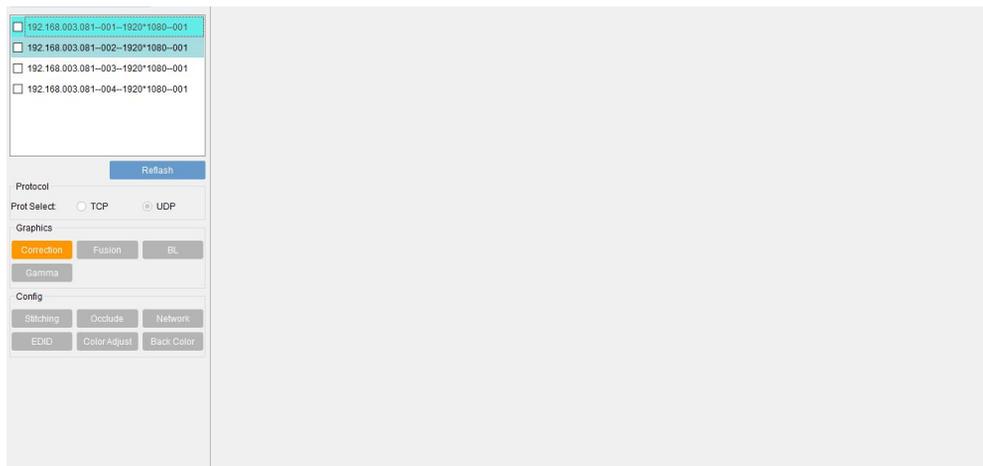
Double-click **Transform_Fusion.exe or Edge_Blending.exe** to enter the main interface as shown above. The information displayed in the upper left corner is the device IP address, output port, output resolution and the device machine code.

User can control and adjust each output by selecting the corresponding output serial number in the upper left corner. After selecting the 1st output port as shown in the figure below, all gray buttons become operable buttons.
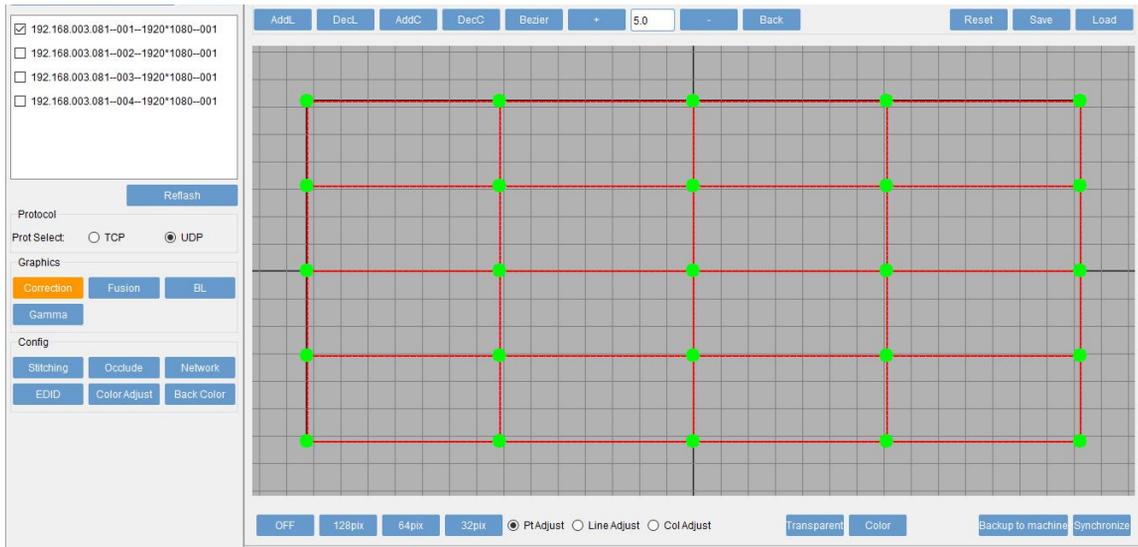
2. Geometry correction

Select network card: select the network card which is connected with the device (Need to operate this step when the computer has multiple network cards)

Refresh: Search the device IP address under current network

Network protocol: Control protocol is UDP by default. If using wireless network for commissioning, recommend to change to TCP protocol.

Bezier Correction: Select the output card for geometry alignment. As shown in the figure above, use the green dots and red boxes to simulate the output image for adjustment.

AddL(Add Line): Increase the vertical density points of the trapezoid mode;

AddC (Add column): Increase the horizontal density points of the trapezoidal mode;

DecL (Delete line): Reduce vertical density points of trapezoidal mode;

DecC (Delete column): Reduce the horizontal density points of the trapezoidal mode;

Bezier/Liner: Switch between trapezoidal adjustment and arc adjustment;

"+" and "-": Increase or decrease the step size of the trapezoidal adjustment;

Reset: Restore current trapezoidal and arc commissioning data;

Save: Save current trapezoidal and arc commissioning data. Clicking **Save** menu button or by pressing Ctrl+C on the keyboard to save the data to backup files for future spare use;

Load: Load the previously backup data files;

Back: return to the previous step;

Transparent: Turn on the grids transparency to overlay it on the output image;

Color: Adjust the grid color and distinguish the corresponding relationship between different projectors

Off: Turn off the grid;

**128Pix/64Pix/32Pix:** Adjust the grids density;

Pt Adjust(Point Adjustment), **Line adjust**(Entire Line Adjustment), **Col Adjust**(Entire Line Adjustment)

Backup to machine: After the arc is adjusted, back up the current data to the machine for future spare use.

Synchronize(Data synchronization): Synchronize the arc data that was backed up to the device last time.

Debugging method: Select the green dot in the grids with the mouse to making it in red. Then change the shape by dragging the mouse, or fine-tune through the "up, down, left, right" direction keys.

3. Edge blending adjustment
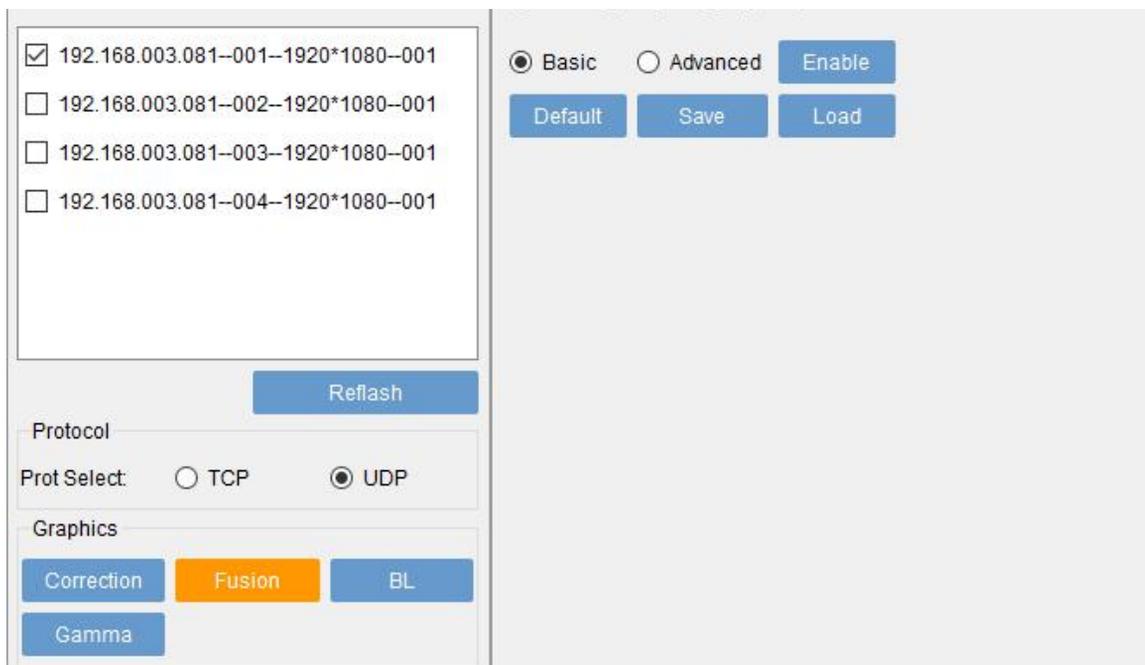
As shown above: Select the output port and click the menu **"Fusion"** . Then select the image edge blending direction in the upper right corner. Finally click the menu **"Enable"** to open the adjustment interface as shown below:
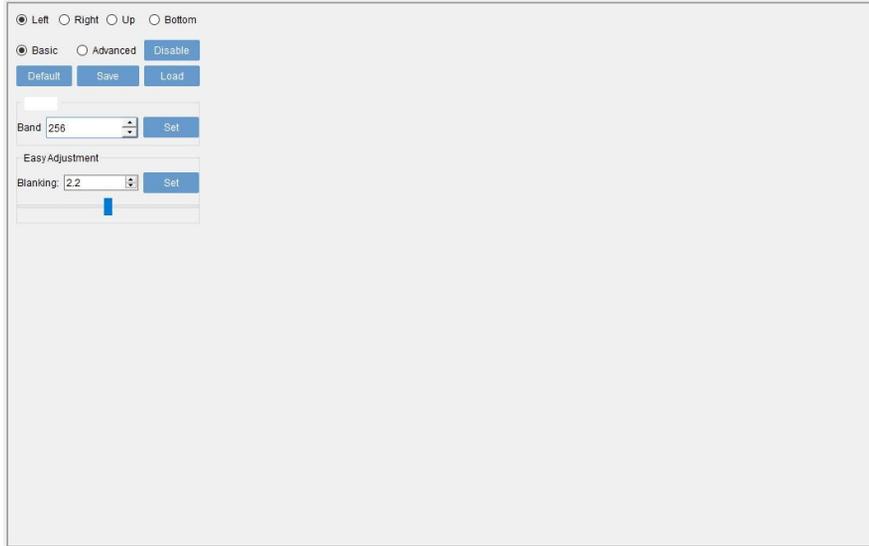
Left, Right, Up, Bottom: Direction selections for edge blending feathering;

Save: Save current edge blending feathering data. Click the menu **"save"** directly or through the keyboard Ctrl+Save to save the data to backup folder for future spare use;

Enable/Disable: Turn on or off the edge blending feathering band;

Default: Initialize the edge blending curve;

Load: Load the previously edge blending backup data file;

Setting: Set the overlap width or height according to the size of the overlap area of the adjacent projectors;

Easy adjustment: The default edge blending blanking is 2.2. Click the menu**"set"** to realize auto feathering. You can set the feathering effect by dragging below slider. (This is the basic and simple edge blending feathering method.)

Advanced Edge blending setting
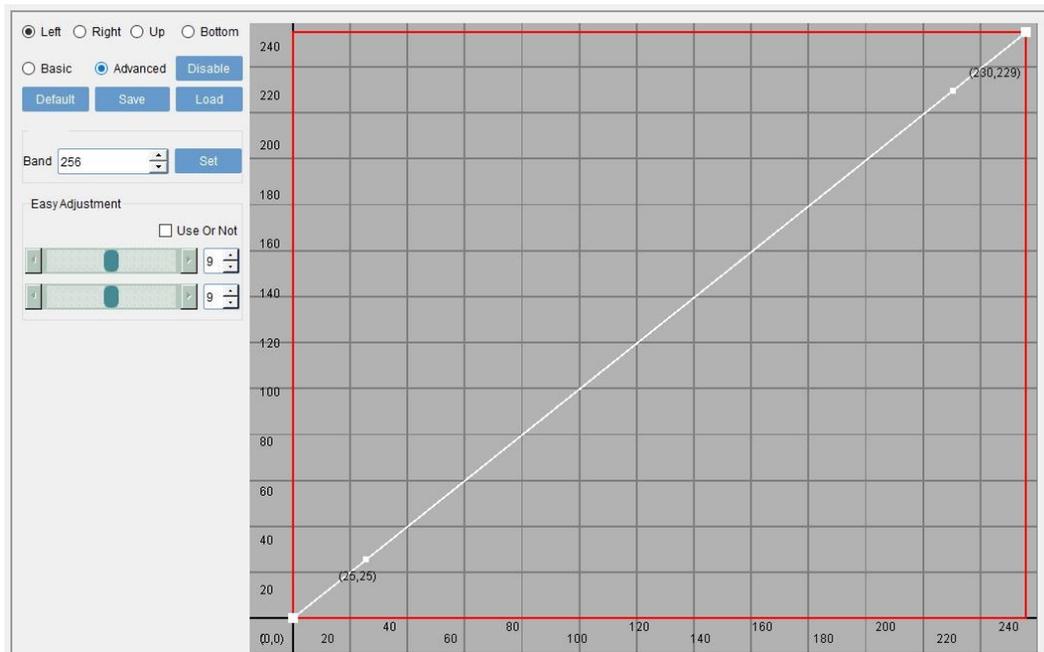
A: Calculate the edge blending width according to the overlapping grids of the geometry correction. Fill in the width and click the menu **"set".**

B: Tick item **"Use or not"** (as shown in the figure below) and the software will automatically upgrade a feathering curve. You can fine-tune the feathering effect by dragging the positions of the two sliders below.

Note: Try to ensure the overlapping area feathering value of the adjacent projector are the same.
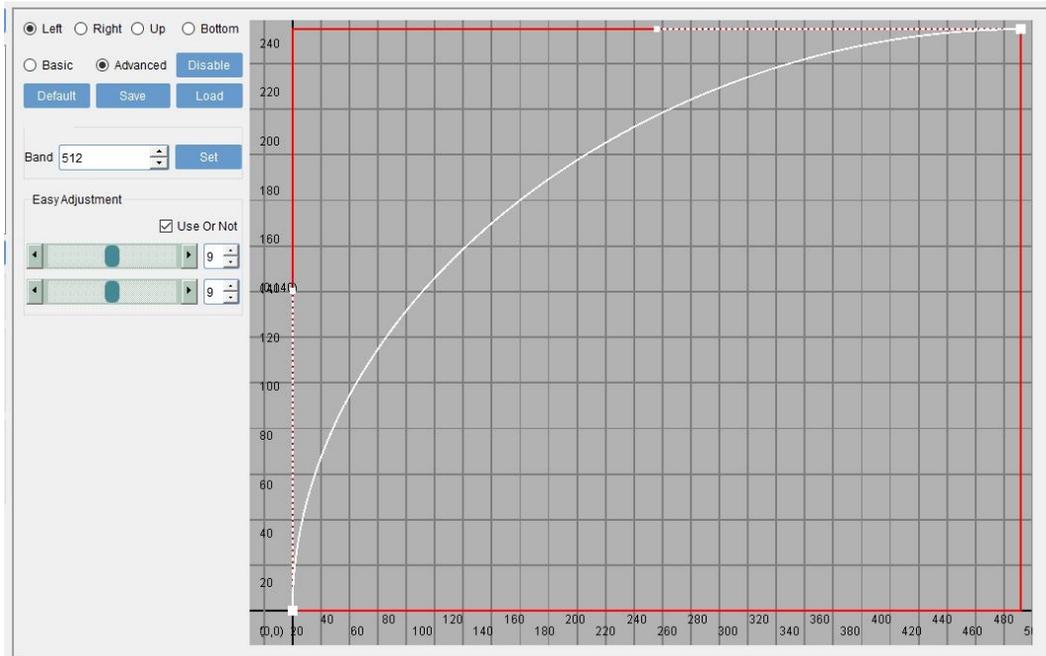
Advanced adjustment method: If above methods cannot meet the edge blending feathering effect, you can right-click anywhere on the white slash and choose to add an auxiliary point (At this time, you need to unselect the item **"Use or not"** . As shown below:
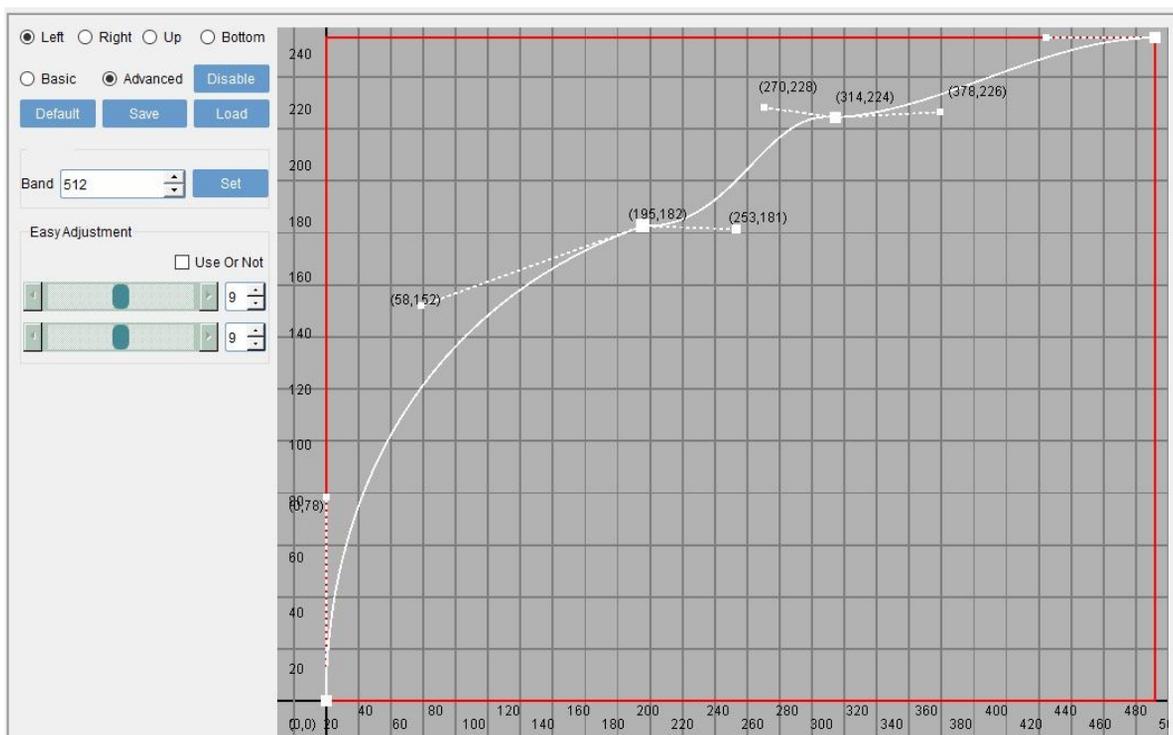
Select the added point. When the point turns red, you can drag it up and down to make it an upward parabola. At the same time, you can use the auxiliary points on both sides for uniform feathering. As shown in the below, multiple auxiliary points can be added. You can adjust it according to display effect of different projectors.

4. Dark area color adjustment

In edge blending application, color adjustment is important due to multiple units of projector images are combined together.As shown below: Select the button **"BL"** and click the **" Enable"** button on the right.
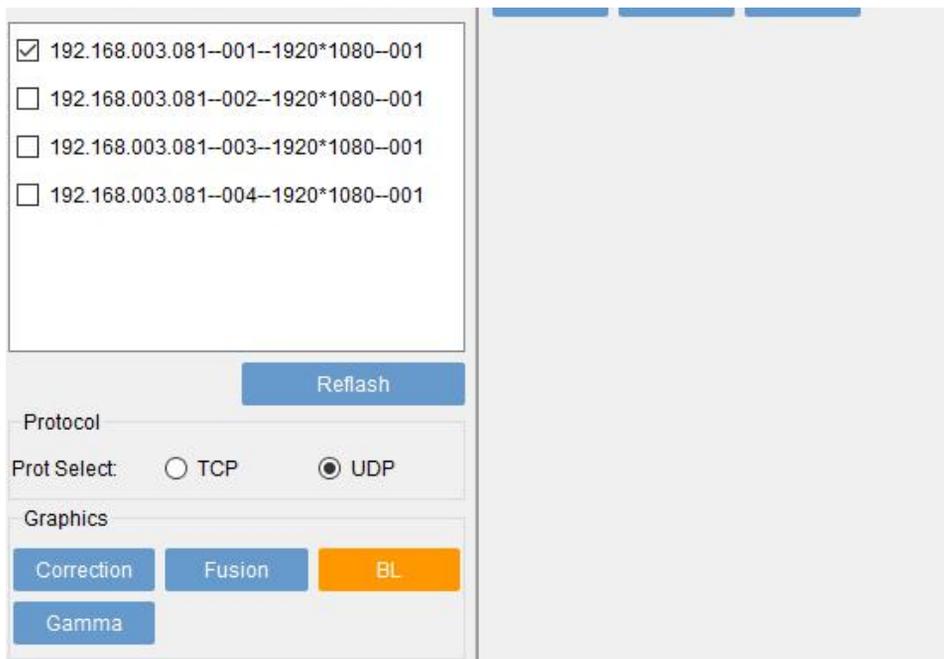
It will enter into the below interface.
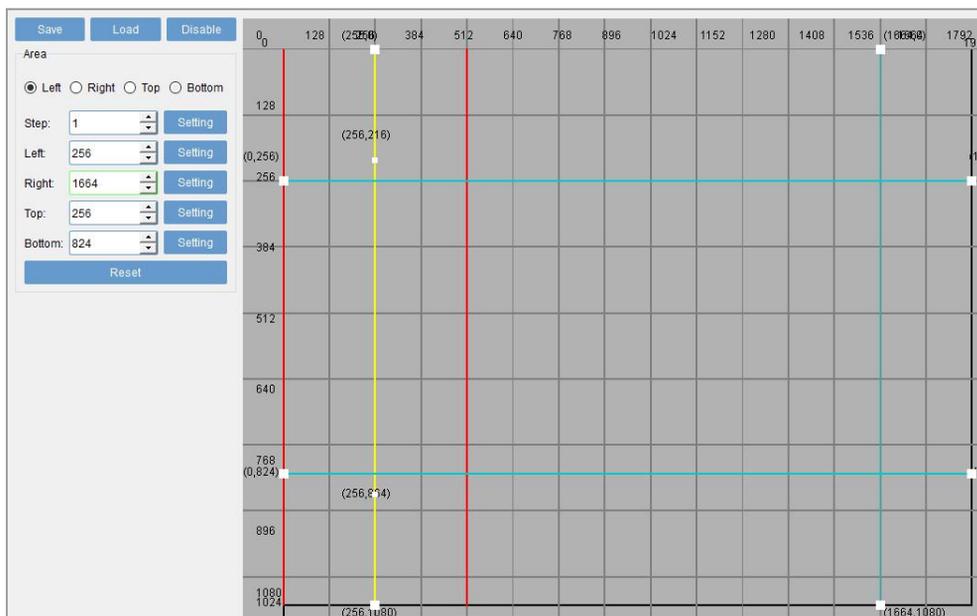
Save: Save current color adjustment data. Click the menu **"save"** directly or through the keyboard Ctrl+Save to save the data to backup folder for future spare use;

**Load:** Load the previously color adjustment backup data file;

Enable/Disable: Turn on or off the color adjustment;

Left, Right, Up, Bottom: Select and adjust the boundary line of the dark field. Select an edge and change the following parameters. So as to find the outer edge of the overlapping area of the adjacent projectors.

Setting: Set the step or location adjustment of non-edge blending area.

**Reset:** Cancel the color adjustment data and initialize the interface.

Dark area adjustment: Select the dark area and enter the dark area adjustment interface as shown in the figure below. You can define the dark area color by modifying the dark area threshold. When you manually drag and move up the red dot in the lower left corner, the selected dark area will be at a certain gray value (Its 50 in the figure below) Increase pure black or gray area brightness value to near two adjacent projectors overlapping area brightness.
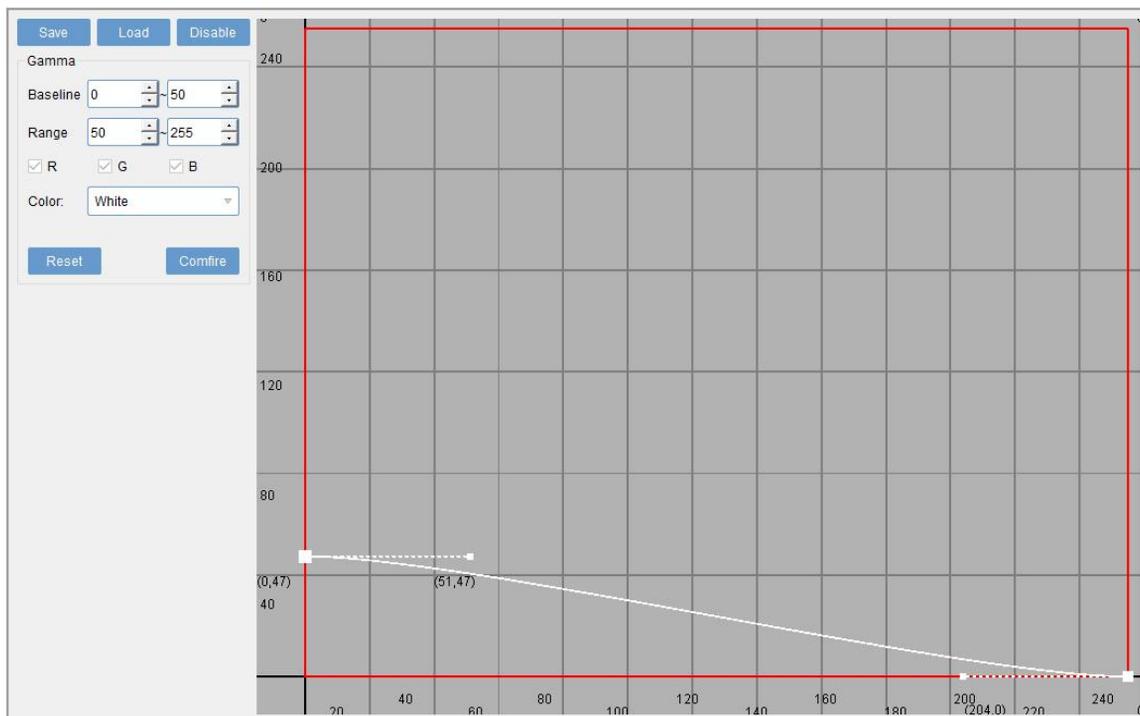

5. Other Setting

5.1 Stitching(video wall)

As shown in the figure below, you can select projector lines and columns according to projectors layout. And then select the projector resolutions. Finally click the buttons **"Setting"** and then **"Save config"**.
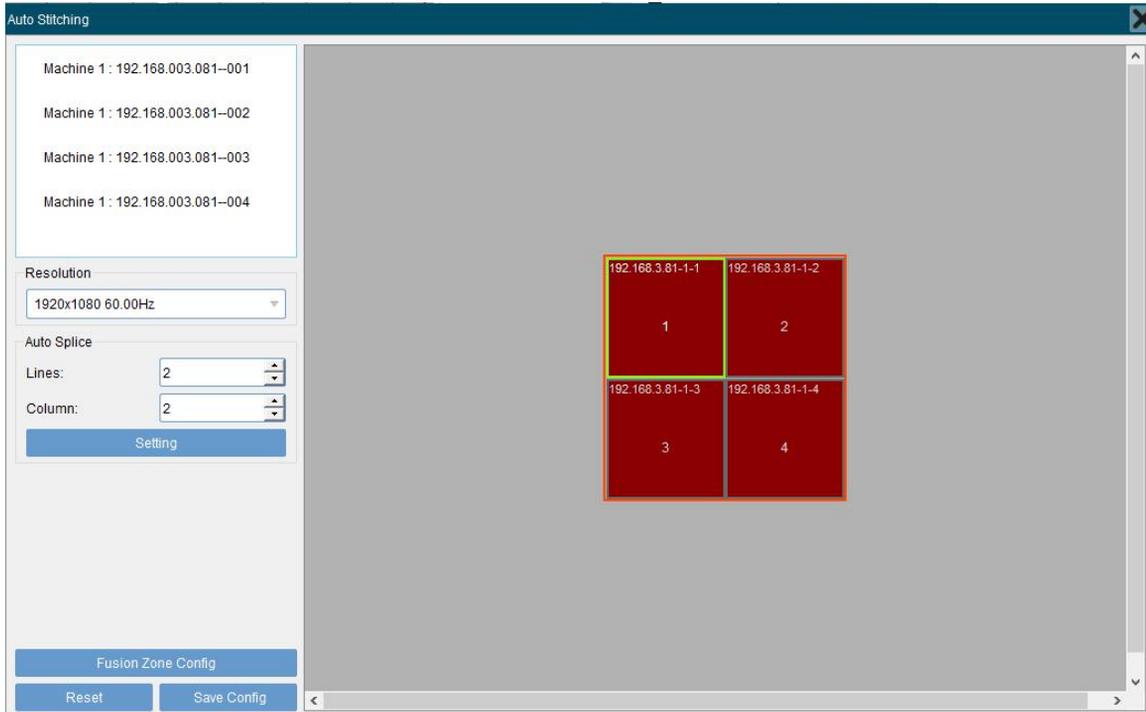
5.2 Edge blending area setting

Click the button**"Fusion Zone Config"** to enter the main setting interface. You can modify the overlapping area width. Or manually modify the position coordinates of each output image (as shown below). After all settings and click button **"Save Config".**
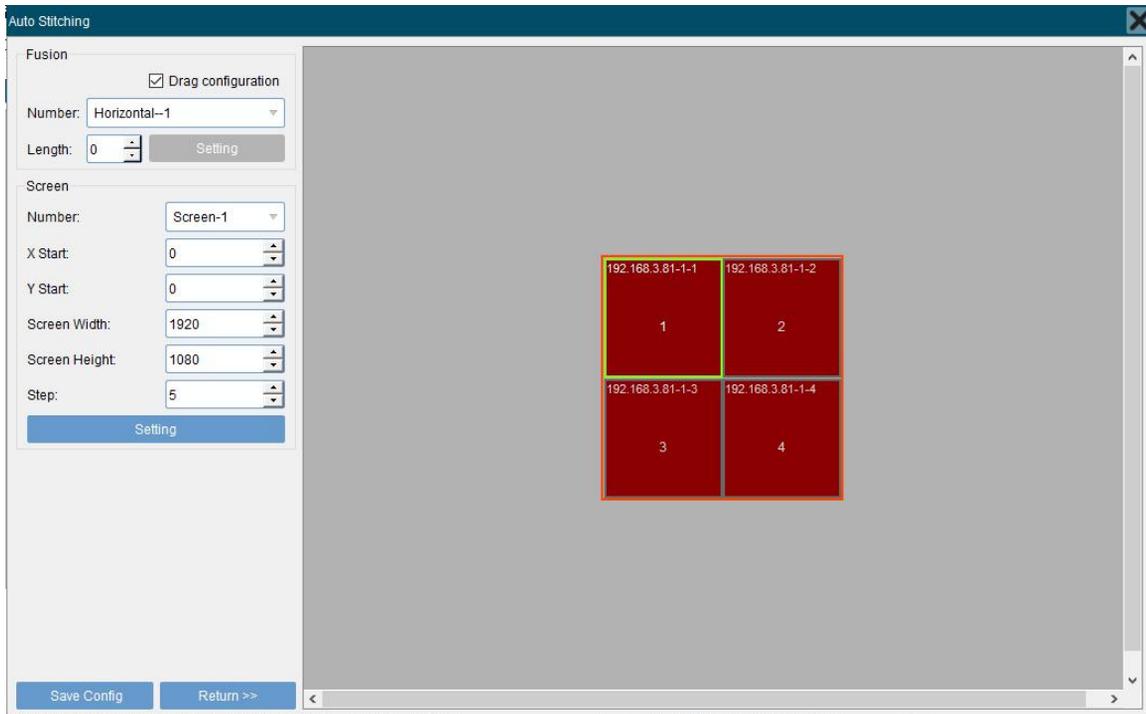
5.3 Network settings

As shown in the figure below, you can modify the IP address, gateway and MAC address of the device. If you need to cascade multiple machines, you can contact our engineers to set the machine ID.
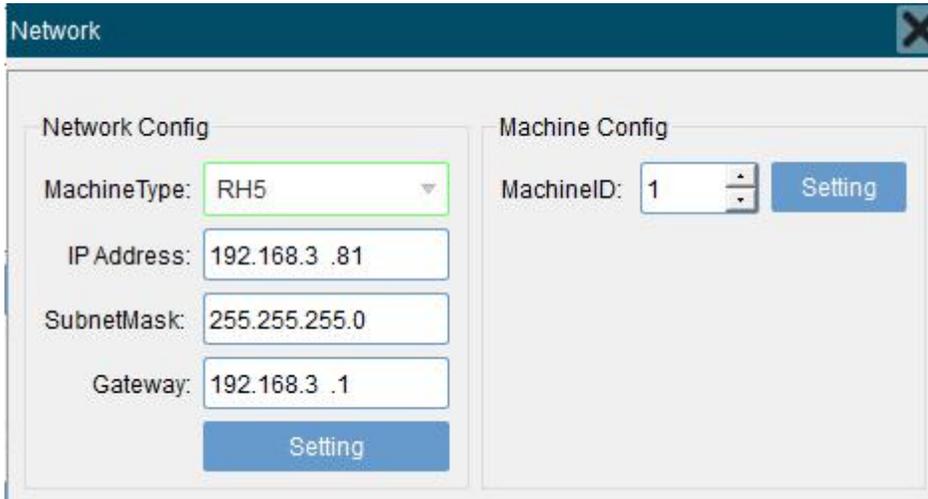
5.4 Color adjustment

As shown in the figure below, you can adjust each output's color, brightness and contrast.
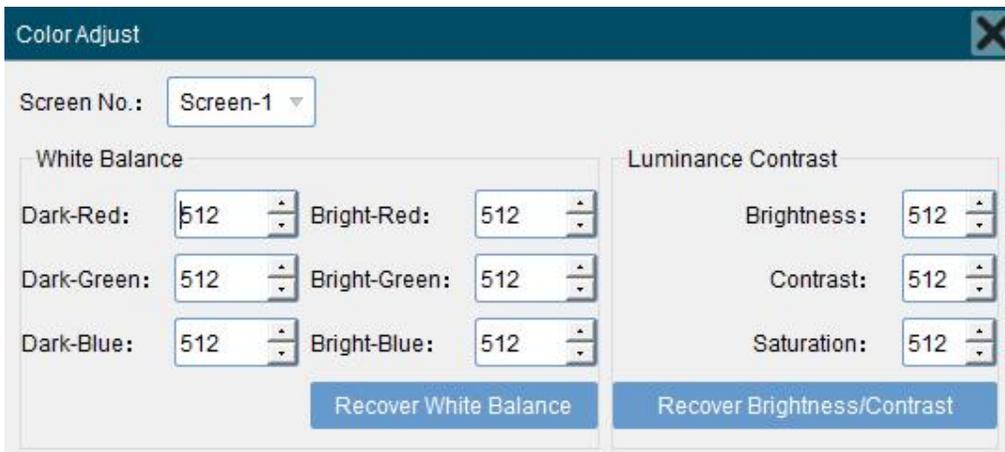
5.5 EDID

As shown in the figure below, you can set custom resolution here, it will be valid after restarting.

- 10 -
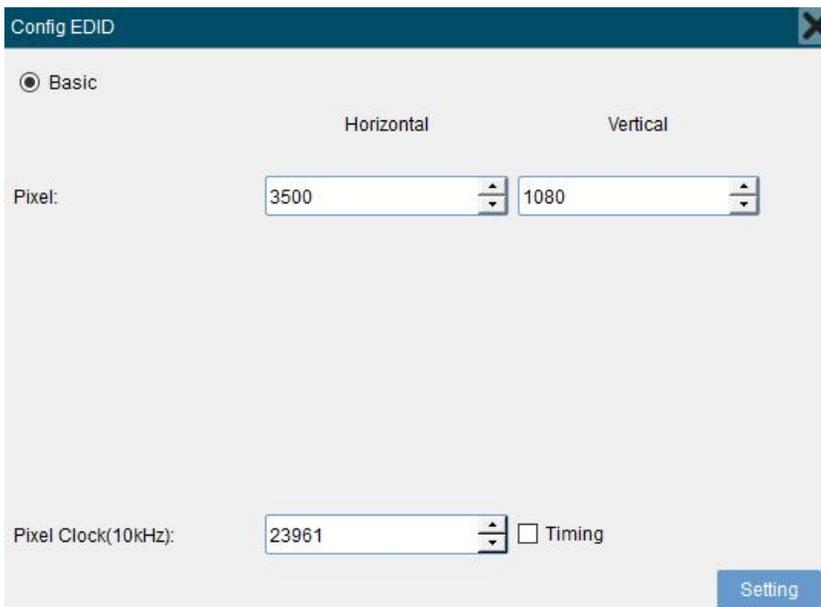
5.6 Back Color(Background color) setting

As shown in the figure below, you can modify the output card display color when there is no signal input. The default output color is blue and all following RGB values can be modified.



5.7 Any shape edge mask

Any shape edge mask with black background and will not change the image position and aspect ratio. It is convenient to trim out unnecessary content from the display.


Click **"Occlude"** in the configuration area and the following interface will pop up:
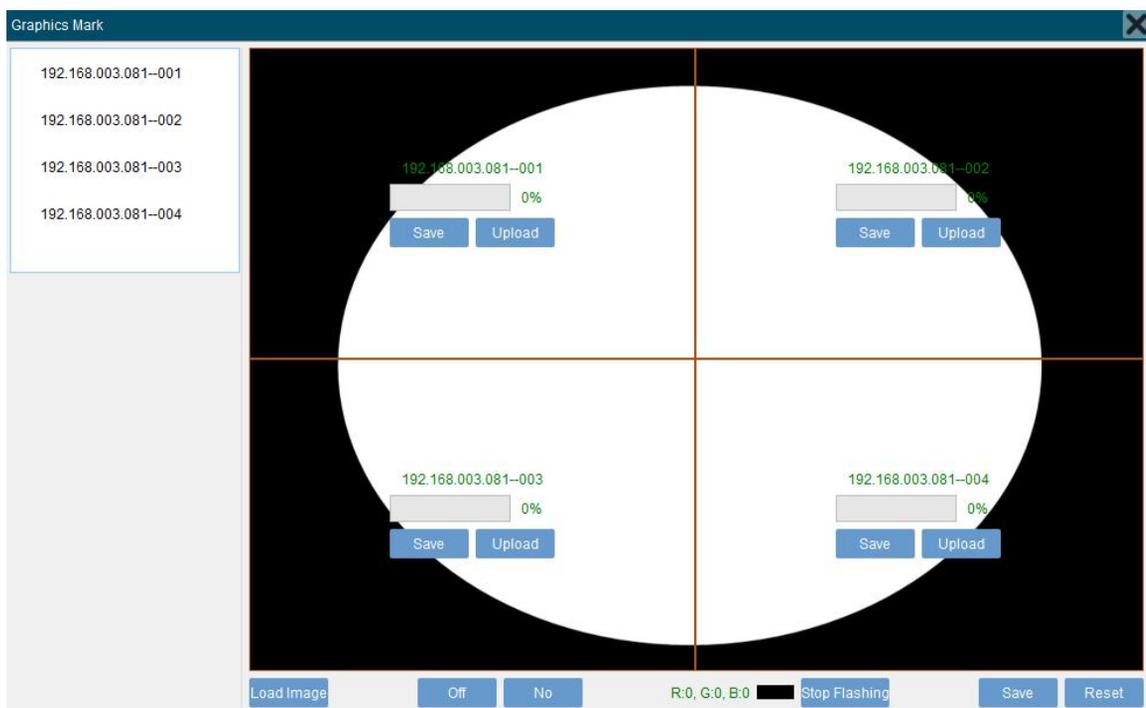
Load image: Select and load a image. The image resolution must be the same or exceed the input resolution. There are black and white. The black area defaults to the area that needs to be masked and not to be displayed.
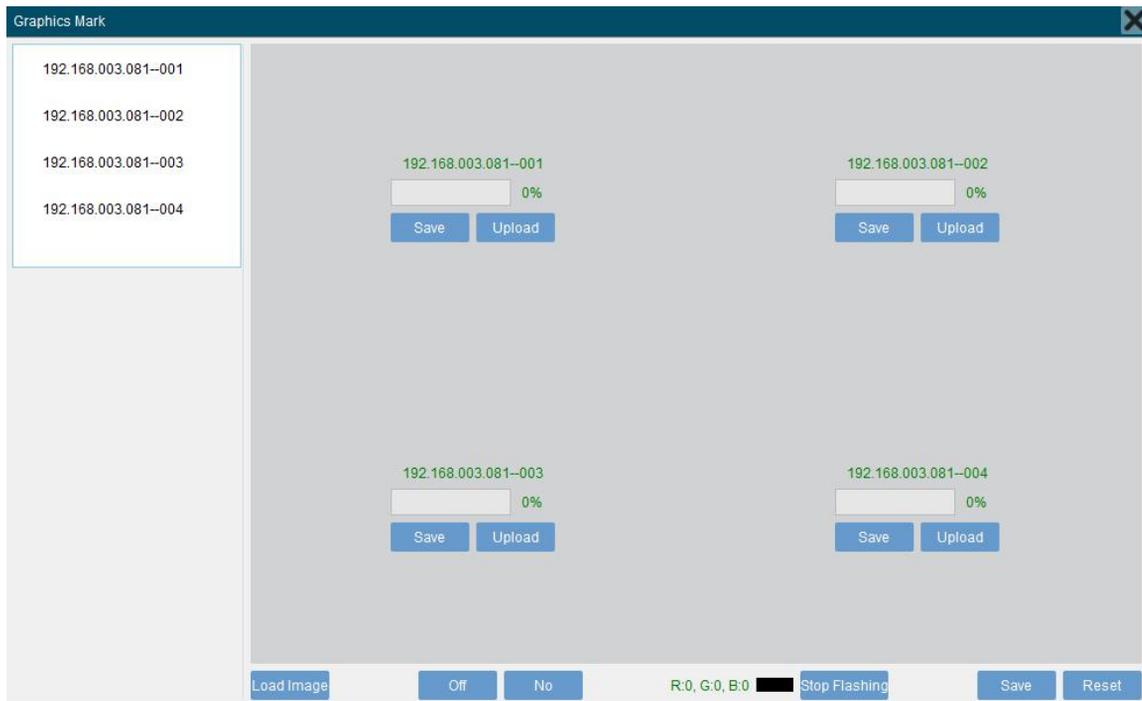
According to the above picture, programming each output independently and then click Save.
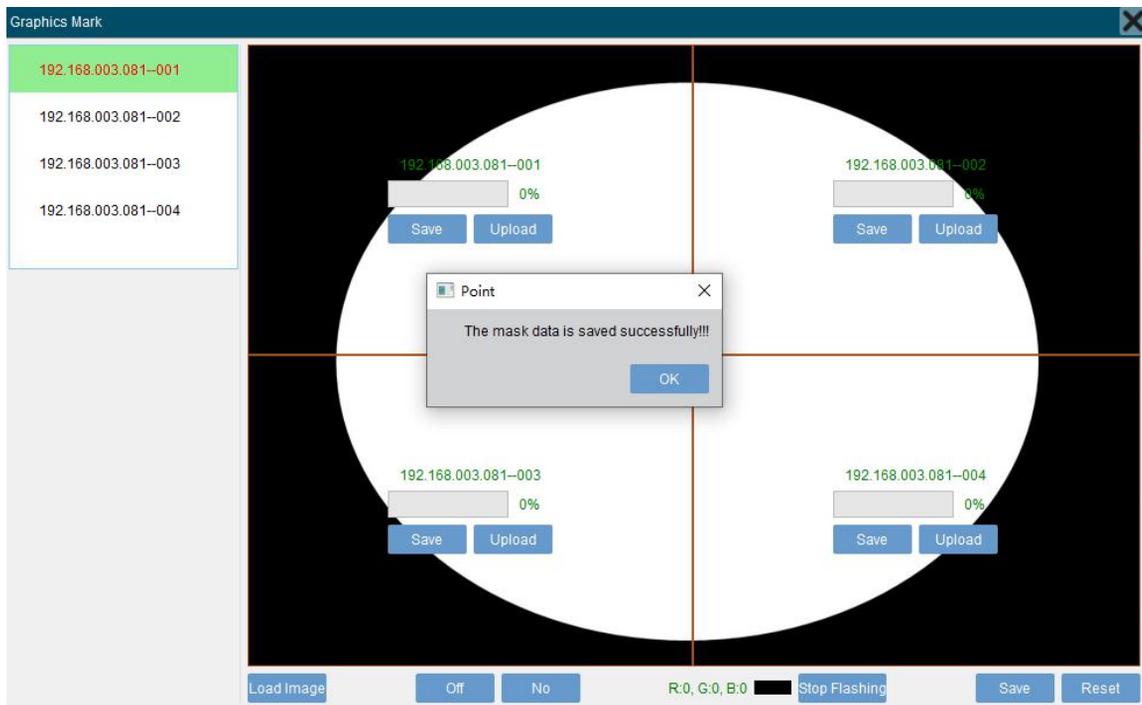
Notes: If the programming or save is wrong, you can click the "Reset" button in the lower right corner to clear the data.