

iSet

User Manual



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1 Introduction

1.1 Overview

iSet is a professional software developed by Colorlight for configuring and controlling LED displays. It can:

- Easily and quickly set the routing topology for sophisticated and large LED displays.
- Quickly adjust brightness, color, and other display parameters.
- Perform fast testing and diagnostics on LED displays.

1.2 System Requirement

Run *iSet* on a 64-bit version of Windows 7 (or later) to ensure compatibility and optimal performance.

2 iSet Installation

Step 1: Download *iSet* installer (for Windows system, for instance) at Colorlight's official website: www.colorlightinside.com/product/download/1514

Step 2: Double-click the installer to access the setup wizard.

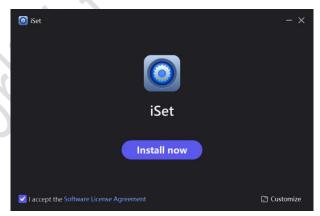


Fig 2.1-1 Install now



Step 3: Click Install now or Customize to continue.

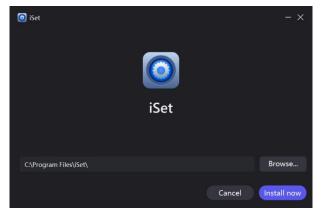


Fig 2.1-2 Installation path

Step 4: Click **Get started** to launch *iSet* or close the window to exit the setup wizard.

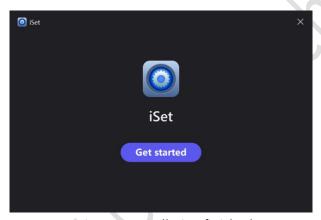


Fig 2.1-3 Installation finished

3 Quick Start

3.1 Device Connection

Step 1: Connect the processor to receivers using a network cable.

Step 2: Connect the input source to the processor using a signal cable.

Step 3: Connect your PC to the processor using a USB cable or network cable.



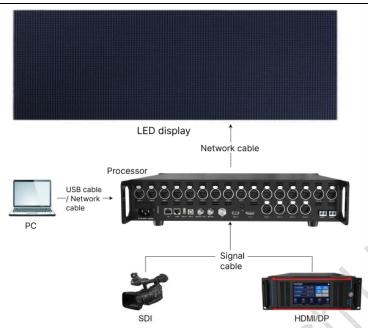


Fig 3.1-1 Device connection topology

3.2 Create Project

Step 1: Launch iSet.

Step 2: Click New project.

Step 3: Name the project and finish setting the items on the pop-up window.

Step 4: Click Create.

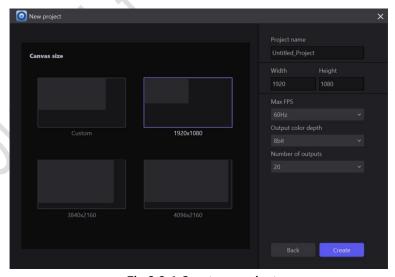


Fig 3.2-1 Create a project

3.3 Detect Device

Step 1: In the **Device information** tab, click **Detect devices**.



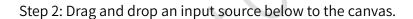
Step 2: Check the **Topology view** on the right and make sure the detected numbers of processors and receivers correspond to the actual situation on site.



Fig 3.3-1 Detect devices

3.4 Add Input Layer

Step 1: Select **Programming** on the left side to access the tab.



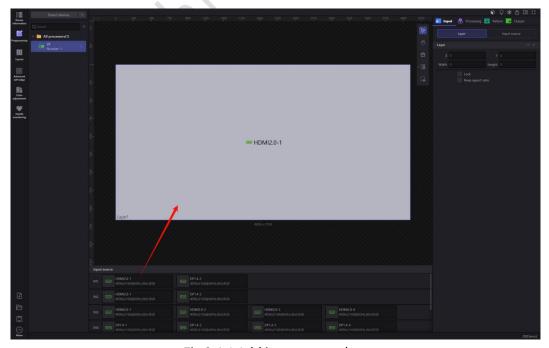


Fig 3.4-1 Add input source layer



3.5 Import Cabinet Parameters

- Step 1: Select Layout to access the tab.
- Step 2: Click the icon on the right-side of the canvas to access **Type library** tab.
- Step 3: Click the icon 🖺 to import files of cabinet parameters.

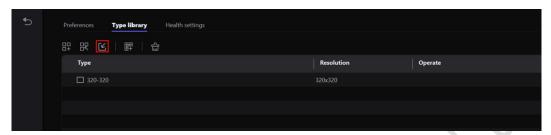


Fig 3.5-1 Import cabinet parameters

3.6 Add Cabinet

Step 1: Under the **Port list** in **Layout** tab, click the cross icon at the bottom right corner of an output port.

Step 2: Select a cabinet type or select **Custom...** to set a desired one, then click on the desired location on the canvas to add the cabinet.



Fig 3.6-1 Add a cabinet

3.7 Save Cabinet Parameters

Step 1: Right-click on a cabinet, then hover over Cabinet parameters.

Step 2: Select Save parameters...

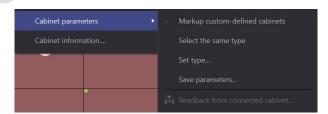


Fig 3.7-1 Save cabinet parameters



4 User Interface - Project Management

In the user interface for project management, you can create a new project (**New project**), create a demo project (**Demo project**), open a local project (**Open project**), continue with a project that has been saved and once opened (**History projects**), and switch the software language between English and Chinese.

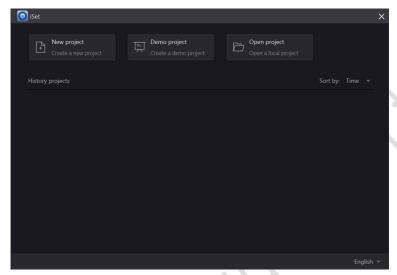


Fig 4-1 User interface for project management

New project

Click **New project** to start creating a new project. You can select a canvas size, name the project, and set the maximum frame rate (**Max FPS**) and output color depth (**Output color depth**) of the project.

- Canvas size: Select Custom to set a desired size or select a size from the available options.
- Project name: Name the project.
- Max FPS: Set the maximum frame rate of the output.

☐ Note:

You can manually set the number of output ports (**Number of outputs**) for the new project when the processor is not connected.



Demo project

There are 6 processor types available for demo project.



Fig 4-3 Processor types for demo project

Open project

You can click **Open project** to open a project saved in your PC.

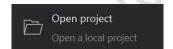


Fig 4-4 Open a local project

History projects

List the projects that have been saved in your PC and once opened.

• Sequence: The history projects can be listed either by time or by name.



Fig 4-5 History project

Language

iSet supports switching software language between English and Chinese.



5 Navigation Bar

You can switch tabs and manage projects by clicking corresponding icons on the navigation bar.

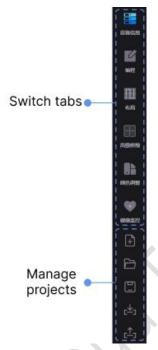


Fig 5-1 Navigation bar

Table 5-1 Description of the navigation bar

Section	Туре	Description
Navigation bar	Tab icons	☐: Device information ☐: Programming ☐: Layout ☐: Soft edge/Advanced soft edge ☐: Color adjustment ☐: Health monitoring
	Functional icons (project management)	 ☐: Create a new project or demo project. ☐: Open a local project file. ☐: Save the current project to your PC. ☐: Save the current project to the processor. ☐: Read the project saved in the processor.



6 Main Menu

Available options in the main menu include: **Settings, Capacity calculator..., Help...**, **Release notes...**, and **About...**

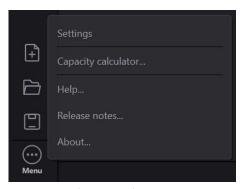


Fig 6-1 Main menu

- Help...: Click to view user manual of iSet.
- Release notes...: Click to view the release notes of iSet.
- **About...**: Click to view software version, compilation number, compile time, Colorlight's website address, the third party license agreement, and copyright information of *iSet*.

6.1 Settings

6.1.1 Preferences

In **Preferences** tab, you can find the items for general settings (**General settings**), hide/show certain sections on the navigation bar (**Software modules**), and set the **Layout** tab (**Layout options**).



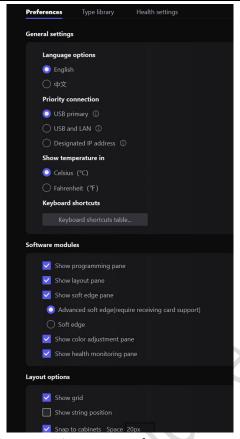


Fig 6.1.1-1 Preferences

General settings

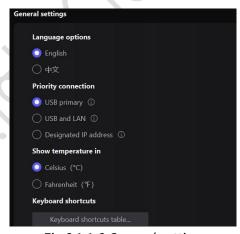


Fig 6.1.1-2 General settings

- Language options: Switch software language between English and Chinese.
- Priority connection: Decide the priority of device detection. Available options include USB primary, USB and LAN, and Designated IP address.
- Show temperature in: Switch temperature unit between Celsius and Fahrenheit.
- Keyboard shortcuts: View the keyboard shortcuts for Layout and Soft edge.



Software modules

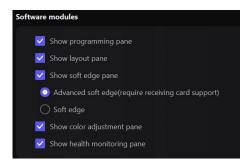


Fig 6.1.1-3 Hide/Show sections on navigation bar

Show programming pane

Select/Deselect this check box to show/hide the access to **Programming** tab on the navigation bar.

Show layout pane

Select/Deselect this checkbox to show/hide the access to **Layout** tab on the navigation bar.

Show soft edge pane

Select/Deselect this checkbox to show/hide the access to **Soft edge** tab on the navigation bar. You can also select **Advanced soft edge** under this checkbox to show the access to **Advanced soft edge** tab on the bar.

Show color adjustment pane

Select/Deselect this checkbox to show/hide the access to **Color adjustment** tab on the navigation bar.

Show health monitoring pane

Select/Deselect this checkbox to show/hide the access to **Health monitoring** tab on the navigation bar.

Layout options

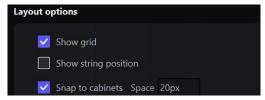


Fig 6.1.1-4 Layout options

Show grid

Select/Deselect this checkbox to show/hide grids on the canvas when a cabinet is selected.



Show string position

Select/Deselect this checkbox to show/hide the sequence number of the selected cabinets (when the selected cabinets \geq 2) on the LED display based on the routing sequence.

Snap to cabinets

Select/Deselect this checkbox to enable/disable the function that allows the selected cabinet, as you move it on the canvas, to automatically align to the nearest grid edge, canvas edge, or the edge of another cabinet.

■ Space: Set the distance in pixels within which the Snap to cabinets function takes effect.

6.1.2 Type Library

You can manage the parameter files of the cabinets in this tab.



Fig 6.1.2-1 Type library

Table 6.1.2-1 Description of the Type library

Section	Туре	Description
	Functional icons	☐: New type folder ☐: Import as folder ☐: Import cabinet type file ☐: Create multi-receiver cabinet type ☐: Delete all types
Type library	Functional icons (type management)	☑: Rename □: Delete
	Context menu	Edit: Modify the selected multi-receiver cabinet type. Export current cabinet parameters: Export the parameters of the selected cabinet. Export all cabinet parameters: Export the parameters of all cabinets in the list.



6.1.3 Health Settings

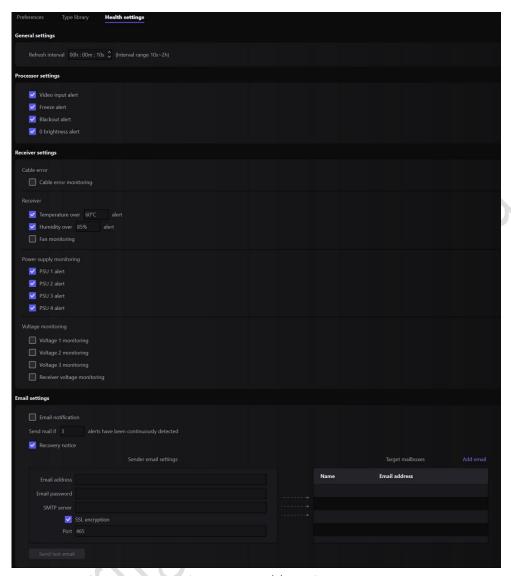


Fig 6.1.3-1 Health settings

General settings

This is for setting the interval for refreshing monitoring information.



Fig 6.1.3-2 General settings



Processor settings

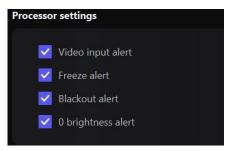


Fig 6.1.3-3 Processor settings

Video input alert

Select/Deselect this checkbox to enable/disable the alert when signal mismatch occurs.

Freeze alert

Select/Deselect this checkbox to enable/disable the alert when Freeze is enabled.

Blackout alert

Select/Deselect this checkbox to enable/disable the alert when **Blackout** is enabled.

• 0 brightness alert

Select/Deselect this checkbox to enable/disable the alert when the brightness value is 0.

Receiver settings



Fig 6.1.3-4 Receiver settings



• Cable error

Select/Deselect this checkbox to enable/disable the alert when cable error exceeds one in a million.

Temperature

Select/Deselect this checkbox to enable/disable the alert when the receivers' temperature exceeds the set threshold.

Humidity

Select/Deselect this checkbox to enable/disable the alert when the receivers' humidity exceeds the set threshold.

• Fan monitoring

Select/Deselect this checkbox to enable/disable monitoring the per-minute fan speed.

Power supply monitoring

Select/Deselect the checkboxes under this item to enable/disable monitoring the selected power supplies (up to 4 power supply units).

Voltage monitoring

Select/Deselect the checkboxes under this item to enable/disable monitoring the voltages (up to 4 voltage monitoring units).

Email settings

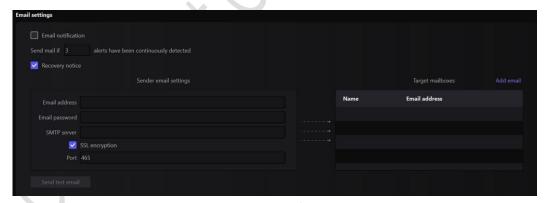


Fig 6.1.3-5 Email settings

• Email notification

Select/Deselect this checkbox to enable/disable sending email of the alert information to a designated email box.



Recovery notice

Select/Deselect this checkbox to enable/disable sending an email notice to a designated email box when all exceptions are removed.

Table 6.1.3-1 Setting email box

Section	Туре	Description
		Email address: The email address of the sender.
		Email password: The password of the sender email.
	Email sender	SMTP server: Server address.
Manitarina		SSL encryption: Select this checkbox and then set the
Monitoring		port number.
settings		Add email: Add an email box for receiving the notice
	Email receiver	email.
		Delete : Delete the selected email address.
		Edit: Modify the selected email box information.

Send test email

Click **Send test email** to send a test email to the target mailboxes and check whether the mailboxes can receive the email.

6.2 Capacity Calculator

In **Capacity calculator**, you can calculate the loading capacity of the output ports respectively in **General** and **Low latency** modes based on set conditions.



Fig 6.2-1 Capacity calculator



7 Area for Selecting Processor

On the left side of the main user interface of *iSet*, you can detect and manage processors.

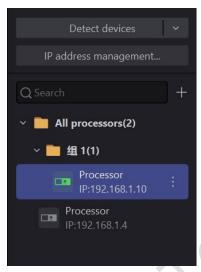


Fig 7-1 Device tree list

Detect devices

- All devices: Detect all connected processors and receivers.
- Processors only: Detect the connected processors only.

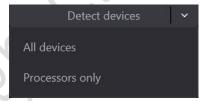


Fig 7-2 Detect devices

Processor list

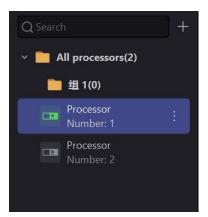


Fig 7-3 List of processors



Table 7-1 Description of the processor list

Section	Туре	Description
		Search bar: Search for the desired processor in the
	Search bar and	listed.
	functional icons	☐: Add processor or processor group.
Dro coccer liet		: Show the menu for more functions.
Processor list		Add processor or processor group.
	Processor/Processor	Rename: Rename the processor/processor group.
	group menu	Delete : Delete the current processor/processor
		group.

A Note:

The available options in the processor (group) menu varies in different tabs.

Device set

The type of processor for detection and the detecting method can be changed.



Fig 7-4 Device set

IP address management

When **Designated IP address** is selected for **Priority connection**, the option to access the **IP address management** window will be shown under **Detect devices**. Only the processors listed in the window can be detected.

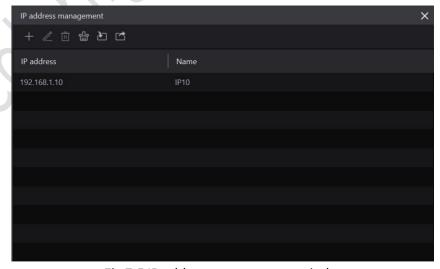


Fig 7-5 IP address management window



Table 7-2 Description of IP address management window

Section	Туре	Description
		t: Add IP.
		∠ : Modify IP address and name.
IP address	Toolbar	ill: Delete the selected IP.
management	Toolbai	급: Delete all IP addresses.
		█: Import local IP to the IP list.
		Export the IP in the list to local PC.

8 Toolbar



Fig 8-1 iSet toolbar

Table 8-1 Description of toolbars in different tabs

Section	Tab	Description
		: Full-screen/Normal display
		■: Hide/Show the right-side bar
	Carant	🛅 : Read only mode. All elements on the user
	General	interface cannot be selected for operation.
		E: Message center for showing notice of software
	X	exception.
_	116	: Blackout (Display black.)
Software		♥ : The LED display will gradually reduce its
toolbar		brightness and completely display black after
	Programming	the set time.
		器 : Freeze (Hold and display the last frame of the
		input signal.)
		: View basic information of the 3D box.
	Layout / Soft edge	☐: Display image on the assistant screen.
	Monitoring	: View the monitoring messages.



9 Device Information

In **Device information** tab, you can view the information of the detected processors and receivers.

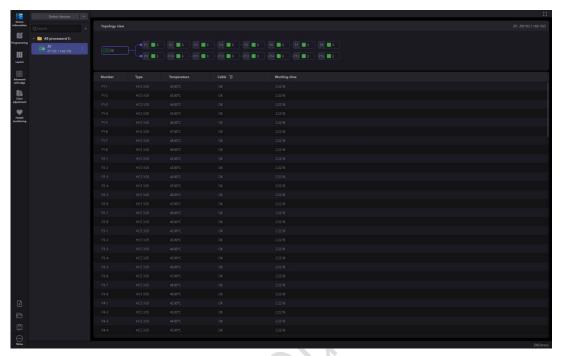


Fig 9-1 Device information

Topology view

The **Topology view** shows the connection status and the detected number of the output ports. The connected ports will be shown in green, and those not connected will be shown in gray.



Fig 9-2 Topology view

Cabinet list

The list under the **Topology view** shows information of the cabinets, including the ports' identity number, type, temperature, cable status, and working time.

- Indicates the cabinets in the list are all connected.
- Indicates the cabinets in the list are those with errors.



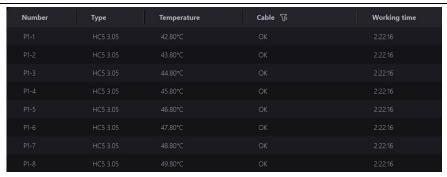


Fig 9-3 Cabinet list

Recount error packet

Right click on the cabinet list to bring up the context menu for recounting error packets.

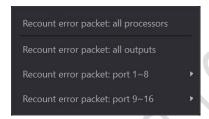


Fig 9-4 Recount error packet

10 Programming

In **Programming** tab, you can set the input source and color parameters.

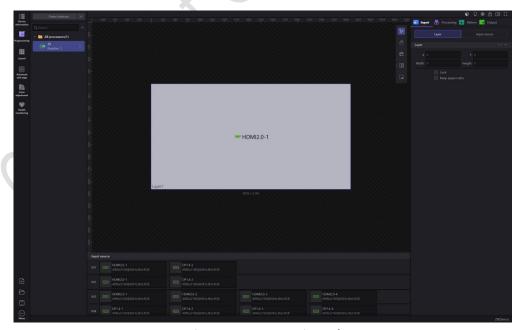


Fig 10-1 Programming tab



10.1 Settings for Single Processor

10.1.1 Processor Menu

Table 10.1.1-1 Description of the processor menu

Item	Description
	Modify the IP address of the processor, subnet mask, and the
IP Settings	default gateway. The IP address can also be obtained
	automatically.
Restore to factory settings	Restore the processor to its factory settings.
Hot Backup Settings	Set the backup of the input source.
Import parameters from file	Import processor parameter file from local PC.
Export parameters to file	Export the parameters set in the Programming tab to local PC
	as a file.

10.1.2 Programming View

You can set the canvas and manage the signal layers in this area.



Fig 10.1.2-1 Programming view

Guides

A guide line can be dragged from the ruler in the programming view area and added to the canvas.



Context menu of the guide line

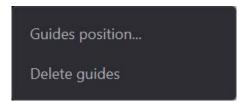


Fig 10.1.2.-2 Context menu of guide lines

Table 10.1.2-1 Description of the menu

Item	Description
Guides position	Modify the X/Y coordinate of the selected line to change its position.
Delete guides	Delete the selected guide line.

Programming view tools

Table 10.1.2-2 Description of the programming view tools

Section	Туре	Description
Programming view	Functional buttons (tools)	: Hand (Move the current programming view.) :: Delete all layers :: Output rule selection (Set the output when signal failure occurs.) :: Preset (Preset-related options.) :: Fade in and Fade out :: Navigator

Output rule selection

There are 3 options available for the output when signal failure occurs.

- Output black on the layer whose signal fails.
- Stop image output when signal failure occurs to any of the layers.
- Stop image output when signals of all layers fail.

• Fade in and Fade out

Add cross-fade effect for image switching after setting the desired effect duration.

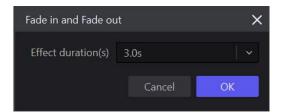


Fig 10.1.2-3 Setting cross-fade effect



Preset

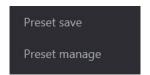


Fig 10.1.2-4 Preset menu

- **Preset save**: Save the parameters of the **Programming** tab as a preset for quick application.
- **Preset management**: Manage the saved presets, including to preview, load, rename, delete, and apply the presets in a loop.
 - ◆ Polling: Automatically switch presets according to the set intervals.

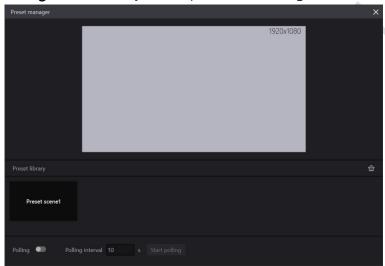


Fig 10.1.2-5 Preset management

Signal layer context menu

Table 10.1.2-3 Description of the signal layer context menu

Item	Description	
Bring to top	Bring the selected layer to top.	
Send to back	Send the selected layer to back.	
Maximize	Maximize the selected layer to fill the canvas.	
Restore down	Restore the selected layer to original size.	
Lock position	Lock the selected layer on its current position.	
Set as	Select a new input source for the selected layer.	
Delete	Delete the selected layer.	



Programming view context menu

Table 10.1.2-4 Description of the programming view context menu

Item	Description
Max frame rate and color depth settings	Set the maximum frame rate and color depth for
	the output.
Canvas size settings	Set the canvas size.
Canvas fill settings	Add a background image for the canvas, and
	scale the image and set its opacity if necessary.
Delete all guides	Delete all guide lines on the canvas.

10.1.3 Input Source

The Input source area displays the input sources of the main board and sub-board.



Fig 10.1.3-1 Input source

• Add signal layer: Drag the desired signal and drop it to the canvas.

Input source menu

Table 10.1.3-1 Description of the input source menu

Item	Description
Rename	Rename the input source.
	Set the desired format for the selected input source, including
EDID	its resolution, frame rate, color depth, color format, and
	standard.
Crop	Crop the input source and stretch the cropped image to the
	size of the original input source.
Limited range to full range	Extend the limited grayscale to the full one. (16-235→0-255)
Balance settings	Stabilize HDMI signal.
Mosaic settings	Set the signals for splicing a Mosaic signal.



10.1.4 Input

Layer

Set the position and size of the selected signal layer in this tab.

- 1:1: Display the layer at the same resolution as the input source of it.
- Lock: Lock the current position and size of the signal layer.
- **Keep aspect ratio**: Scale the signal layer based on the original aspect ratio.
- Opacity: Set the opacity of the input image.

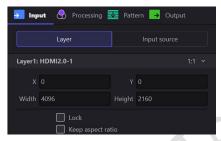


Fig 10.1.4-1 Layer

Input source

- Drop-down menu: Select a target input source.
- **EDID**: Set and show the resolution, frame rate, color depth, and standard of the input source. The color format of the input source is not shown.
- Crop: Crop an input source without the need to access the window for cropping.
- Image quality adjustment: Set parameters of a selected input source, including its brightness, color temperature, RGB color, hue, saturation, brightness compensation, and contrast, and enable Low latency for the signal.
- **Limited range to full range**: Extend the grayscale from the range of 16-235 to 0-255.



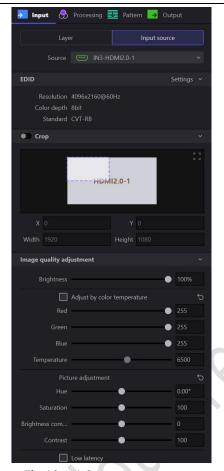


Fig 10.1.4-2 Input source pane

10.1.5 Processing

Target

Select a sub-board signal for modification.

■ Apply to all signals of the current processor: Apply the modified color parameters to all signals connected to the current processor.



Fig 10.1.5-1 Select target signal

Color magic

Color magic is the function for adjusting color based on HSV model. It supports adjusting the hue, saturation, and brightness of a specified color without changing the status of other colors.





Fig 10.1.5-2 Color magic

Color curves

With **Color curves** enabled, the response curves of red, green, blue, and white can be customized to realize independent fine-tuning, avoiding overexposure at high brightness value, and maintaining details at low grayscale. Through this function, you can also fine tune the display effect and compensate for the differences in ambient light or camera performance.

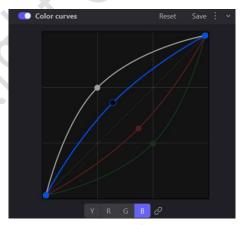


Fig 10.1.5-3 Color curves

3D LUT

3D LUT is a professional color management technology widely adopted in film and industrial sphere. With this function enabled, you can precisely control the full 3D color space for more accurate color display.



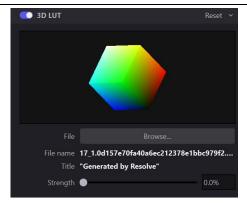


Fig 10.1.5-4 3D LUT

10.1.6 Pattern

You can select different patterns to check the display effect, so as to test and diagnose the cabinets.

• Custom: Drag the slider of Red, Green, and Blue to test the display effect of the corresponding colors.

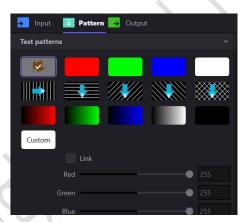


Fig 10.1.6-1 Test patterns

10.1.7 Output

Color

- **Brightness**: Drag the slider to adjust the brightness of the LED display.
 - Group settings: Click Settings... to access the window where you can adjust the brightness of the specified output ports without changing that of other ports.



Fig 10.1.7-1 Brightness



Color adjustment

Adjust the color temperature and brightness of red, green, and blue for a desired color display effect.



Fig 10.1.7-2 Color adjustment

A Notes:

Some processor models only support adjusting either color temperature or the brightness of RGB.

Picture adjustment

Adjust the hue, saturation, brightness compensation, and contrast of the output.

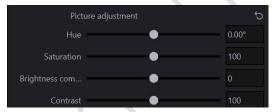


Fig 10.1.7-3 Picture adjustment

HDR

Compared with normal image, an HDR image contains wider color gamut, higher dynamic range and contrast ratio, richer color, and more details, ensuring a more natural and vivid image display.

■ HDR dynamic calibration: Offset the loss of brightness before and after the calibration.

A Notes:

After enabling HDR, the Output color space presented in Precise color will be invalid. After selecting HDR dynamic calibration checkbox, the Without calibration tab will appear in Precise color, presenting the color space before calibration.



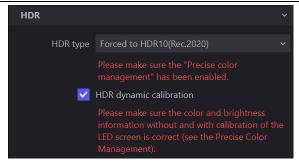


Fig 10.1.7-4 HDR

Precise color

Precise color supports modifying the measurements of the color spaces respectively presented in **With calibration** and **Output color space** for a desired color gamut output.

If **HDR** is enabled, you can modify the measurements of the color spaces presented in both **Without calibration** and **With calibration** for a desired output effect.

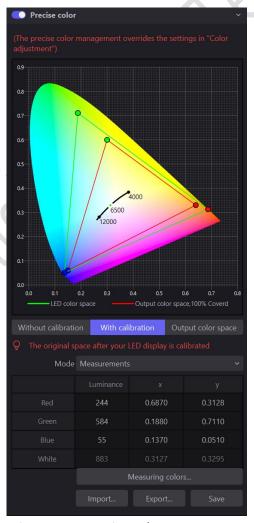


Fig 10.1.7-5 Precise color management



Network

Max frame rate and output color depth

Set the maximum frame rate and color depth of the output in this pane.

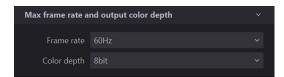


Fig 10.1.7-6 Maximum frame rate and color depth of the output

• Video Sync

- Source: Select among Automatic, Input, Genlock, and Internal.
 - ◆ Automatic: The sync source is determined by the default preference, that is, Genlock > Input > Internal.

A Notes:

When the input is selected automatically, the online signal will be selected as the sync source first.

When there are multiple online signal layers on the canvas, the signal of the bottom layer will be selected as the sync source first.

For some processor models, the signal of the top layer will be selected first when **Low latency** is enabled.

- ◆ Input: Synchronize to the frame rate of the selected input signal.
- ◆ **Genlock**: Synchronize to the frame rate of the signal generated by the external Genlock device.
- ◆ Internal: Synchronize to the set frame rate (custom).



Fig 10.1.7-1 Video sync



• Frame rate multiplication

■ Multiplier

- ♦ Automatic: When the output frame rate is \leq 24.61Hz, the multiplier is automatically set to 3×. When the output frame rate is between 24.61Hz and 49Hz, the multiplier is set to 2×. When the output frame rate exceeds 49Hz, the multiplication feature is disabled.
- ◆ Specify: The multiplier is specified to 2~10 times.

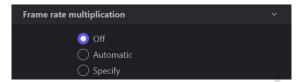


Fig 10.1.7-8 Frame rate multiplication

■ Frame multiplexing

Frame multiplexing allows for integrating multiple videos and inputs of solid color into one image. The frame rate will double with the increase of the integrated scenes.

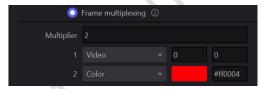


Fig 10.1.7-9 Frame multiplexing

■ 3D

This feature allows for simulating 3D effect through setting the input images, signal sequence for left and right eyes, and signal delay.

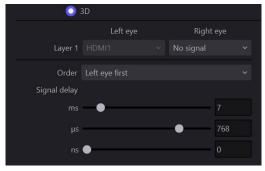


Fig 10.1.7-10 3D effect settings



Control

Art-net

This feature allows for controlling the brightness, RGB color, color temperature, and test patterns of the processor output by using the console or a console simulating software.

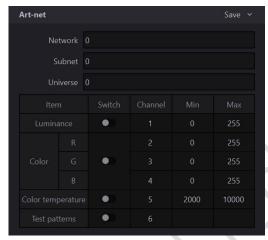


Fig 10.1.7-11 Art-net

Advanced

Better gray

This feature allows for improving the display effect of the LED display at low brightness value.



Low latency

This feature supports reducing the delay time from the input to the final display on the LED screen.

A Notes:

A signal with **Low latency** enabled cannot be scaled or cropped. The signal should not be a 3G SDI signal. It should be added on a single layer and the starting point should be (0,0).

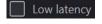


Fig 10.1.7-13 Low latency



• Low latency enable

This feature supports reducing the delay time from the input of a single sub-board to the final display on the LED screen.

A Notes:

A signal selected for **Low latency enable** cannot be cropped.

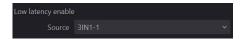


Fig 10.1.7-14 Low latency enable

• 0 frame delay

Compared with Low latency, this feature further reduces the delay time.

Notes:

When **0** frame delay is enabled, the features of Frame rate multiplication, HDR, Video Sync, and Fade in and Fade out will all be unavailable.



Fig 10.1.7-15 0 frame delay

VSync delay

This feature can reduce the delay of the HDMI signal image to synchronize the image output.



Dynamic peaking

This feature allows for automatically calculating the average brightness. With this feature enabled, the system will automatically decrease/increase the receiver brightness when it is too high/low.



Fig 10.1.7-17 Dynamic peaking

Dynamic contrast

This feature allows for adjusting the edges of the output image for a clearer display.



Fig 10.1.7-18 Dynamic contrast



Fiber output

Select this checkbox to switch the output mode to Fiber output.



Fig 10.1.7-19 Fiber output

Input audio

Drag the slider to adjust the volume of the input audio.



Fig 10.1.7-20 Input audio

Virtual pixel

If the cabinets support virtual pixels, the display effect can be improved by setting the routing mode, row offset, and column offset of the virtual pixels.

Virtual state: Supported modes include $4\times$, $3\times$, and $0.75\times$.

Routing mode: Supported modes include Left to right and Up to down.

Row offset: Select either No offset or Offset upward.

Column offset: Select either No offset or Offset leftward.



Fig 10.1.7-21 Virtual pixels

Processor Work Modes

There are 3 available work modes:

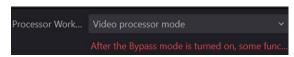


Fig 10.1.7-22 Processor working mode

- Video processor mode: The regular working mode.
- Bypass mode: Reduce the delay time from image input to the final display on the LED screen.
- **Fiber transmitter mode**: The processor is used as a fiber optic transceiver.



A Notes:

When Bypass mode is selected, the features of 3D, Frame rate multiplication, Video Sync, Fade in and Fade out, Preset, and HDIM output mode will all be unavailable.

Fiber2 Output Modes

There are 3 available output modes for Fiber2:



Fig 10.1.7-23 Fiber2 output mode

• Copy mode: Copy the output image and display it through another processor. The adopted output ports of the 2 processors must have the same identifier number.

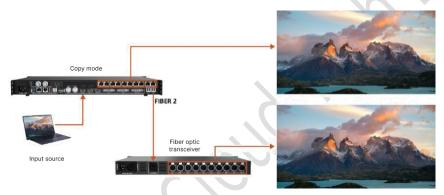


Fig 10.1.7-24 Copy mode

• Backup mode: Fiber2 can be used as the backup output port.

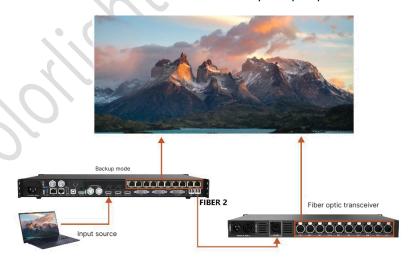


Fig 10.1.7-25 Backup mode

• **Video loop out mode**: Transmit the images of Input source1 and Input source2 to the connected processors (of the same model).



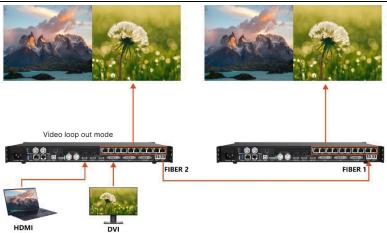


Fig 10.1.7-26 Video loop out mode

• HDMI output mode

Set output mode for HDMI1.3. The available modes include **Pre-monitoring** and **Video output**.

Pre-monitoring: All output images will be scaled to 1920×1080@60Hz.

Video output: Display images at the set resolution and frame rate. The canvas size cannot be modified.



Fig 10.1.7-27 HDMI output mode

10.2 Processor Groups in Programming

Multiple processors can be grouped for a unified control on brightness, color, test patterns, and freeze&blackout settings.



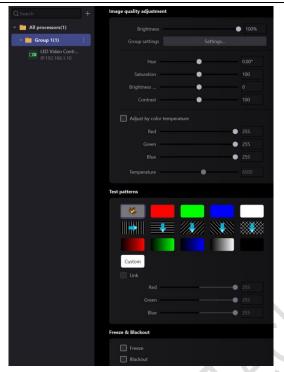


Fig 10.2-1 Manage processor groups in Programming tab

10.3 All Processors in Programming

In **Programming** tab, you can manage and load the presets of all detected processors.



Fig 10.3-1 Manage all processors in Programming tab



Menu

 Full screen reset to factory settings: Reset all processors and some data of the receivers to the factory settings.

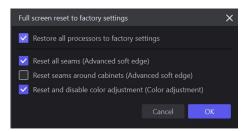


Fig 10.3-2 Factory reset

11 Layout

The layout view is where you set cabinet layout and mapping.

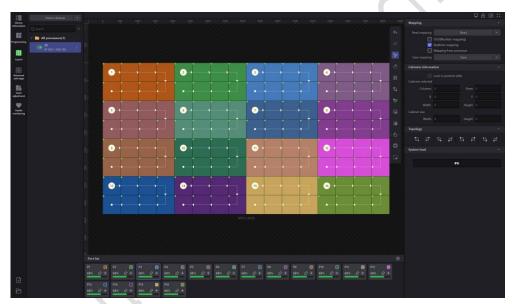


Fig 11-1 User interface for layout

11.1 Menu of Area for Selecting Processor in the Layout View

Menu of area for selecting processor in layout view

• Cabinet status LED: Highlight cabinet with LED indicator

Status LEDs include connection status indicator (red) and signal transmission indicator (green).

- **On**: The connection status indicator displays steady red, and the signal transmission indicator blinks.
- Off: The signal transmission indicator is not lit.

Cabinet parameters



Markup custom-defined cabinets

- Selected: The custom cabinet is gray.
- Unselected: Do not mark up custom cabinet.
- Save parameters: Save parameters of the cabinet connected to the output ports of all processors to the receivers.

■Note:

Cannot save custom cabinet parameters.

Port redundancy

When there's only one processor, quick settings of port redundancy are available. When there're multiple processors, quick settings of processor redundancy are available.

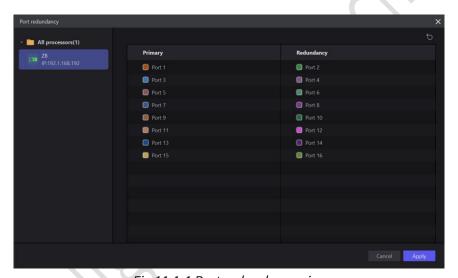


Fig 11.1-1 Port redundancy view

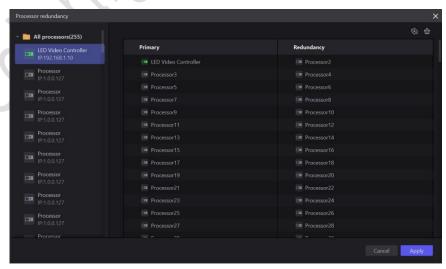


Fig 11.1-2 Processors redundancy view



□ Note:

The redundancy view of processor group menu is identical to that of the all processors menu.

Processor menu in the layout view

Table 11.1-1 Processor menu in the layout view

ltem	Description			
Import mapping by	Import local cabinet layout to the current processor.			
processor				
Import mapping by other	Import other processors' cabinet mapping.			
processors	mport office processors of an amount mapping.			
Export mapping by	Export the cabinet layout of the current processor locally.			
processor	Export the cabinet layout of the current processor locally.			
Set as redundancy for	Setting redundancy among processors.			
Cancel redundancy	Cancel redundancy among processors.			
Cabinet parameters	Mark up the custom cabinet of the current processor and save			
Cabinet parameters	the cabinet parameters.			
	View the cabinet count, type, resolution, size, working			
Cabinet information	voltage, power consumption, and weight of the current			
	processor.			

11.2 Layout View

Layout view is where you can edit cabinet layout.

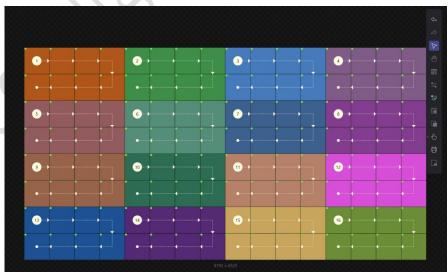


Fig 11.2-1 Layout view

Tools in the layout view



Table 11.2-1 Tools in the layout view

Section	Туре	Description				
Canvas	Toolbar	 Go back to the previous step. Restore the changes. Move the view area. Access the cabinet management interface. Clear cabinet topology. Customize cabinet topology manually. Group the selected cabinets. Ungroup cabinet group. Highlight cabinet with LED indicator. Print. Navigator. 				

11.2.1 Splicing view

Select **All processors** and set the control area of the processor, splicing the control area of multiple processors.

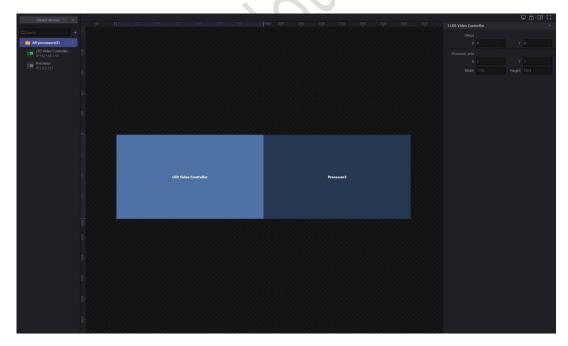


Fig 11.2.1-1 Splicing view



11.3 Port List

Port list is where you can add a cabinet, change the color of the cabinet connected to the output port, and show the load capacity of the output port.



Fig 11.3-1 Port list

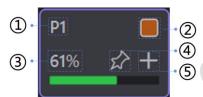


Fig 11.3-2 Output port

Table 11.3-1 Tools in the layout view

Section	Туре	Description			
Port list	Output port	 : Numbers of the output ports. : Cabinet fill. Support customizing the color of the cabinet connected to the output port. : Display the load capacity of the output port. : Lock the cabinet connected to the output port. : Add a cabinet connected to the output port. 			
	Tool	②: Control area of the output port. Support modifying the cabinet connected to output port.			



Context menu of output port

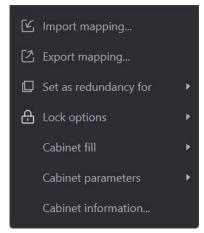


Fig 11.3-3 Context menu of output port

Table 11.3-2 Context menu of output port

Item	Description		
Import manning	Import the mapping of an output port to the current output		
Import mapping	port.		
Export mapping	Export the mapping of the current output port locally.		
Set as redundancy for	Set the redundancy among output ports.		
Cancel redundancy	Cancel the redundancy among output ports.		
Lock options	Lock the cabinet connected to the output port.		
Calabara (III	Customize the color of the cabinet connected to the output		
Cabinet fill	port.		
Cabinet parameters	Mark up the custom cabinet connected to the current output		
Cabinet parameters	port and save the cabinet parameters.		
	View the cabinet count, type, resolution, size, working		
Cabinet information	voltage, power consumption, and weight of the current		
	processor.		



11.4 Right-side Panel

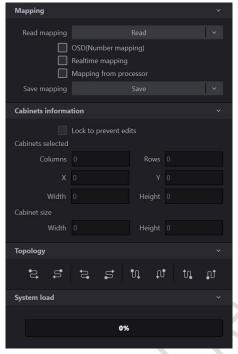


Fig 11.4-1 Right-side panel in the layout view

Mapping

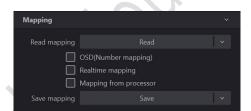


Fig 11.4-2 Mapping

- Read mapping: Read the mapping of the current processor and all processors.
- OSD (Number mapping): Indicate the actual cabinet mapping by numbers.
- Realtime mapping: Changes to mapping are displayed on the screen in real time.
- Mapping from processor: Display the screen according to the mapping saved in the processor.
- Save mapping: Save mapping to the current processor and cabinets or all processors and cabinets.



Cabinet information

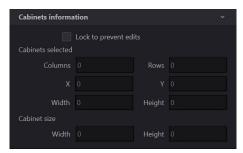


Fig 11.4-3 Cabinet information

- Lock to prevent edits: Lock the selected cabinet.
- Cabinets selected: Set the columns, rows, and position of the selected cabinet. Change the width and height of the selected cabinet or cabinet group.
- Cabinet size: Change the width and height of the selected cabinet.

Topology

8 preset topologies are available for quick cabinet mapping.



Fig 11.4-4 Topology

System load

Show the total load capacity of the current processor

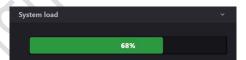


Fig 11.4-5 System load

12 Soft Edge

Soft edge is designed to keep the screen brightness balanced. *iSet* supports **Advanced soft edge** and **Soft edge**.

12.1 Advanced Soft Edge

Support seam of multiple processors at the same time. **Advanced soft edge** is separate from calibration, and works together with calibration coefficients.



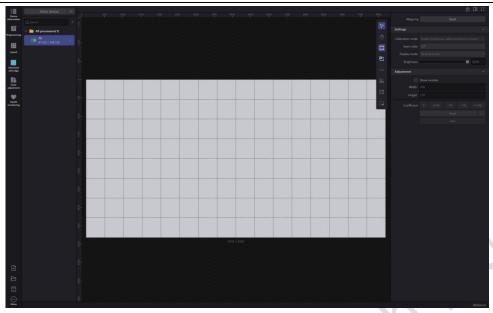


Fig 12.1-1 Advanced soft edge

12.1.1 Tools in Advanced soft edge

Table 12.1.1-1 Tools in advanced soft edge

Section	Туре	Description			
Advanced soft edge	Tools	 W: Move the view area. Select a seam. Select a cabinet. Customize seam selection. Import seam coefficients. Export seam coefficients. Navigator. 			

12.1.2 Seam Selection

Select the seam between modules or cabinets for soft edge.

• Read mapping: Retrieve the advanced soft edge and calibration information of the current processor and receivers.



Fig 12.1.2-1 Read mapping



Calibration mode

- Disable calibration: Disable calibration.
- Enable brightness calibration (from receiver): After enabling brightness calibration, LED screen displays the brightness calibration coefficients saved in the receiver.
- Enable chroma calibration (from receiver): After enabling chroma calibration, LED screen displays the brightness chroma coefficients saved in the receiver.
- Enable brightness calibration (from module): After enabling brightness calibration, LED screen displays the brightness calibration coefficients saved in the module.
- Enable chroma calibration (from module): After enabling chroma calibration, LED screen displays the chroma calibration coefficients saved in the module.

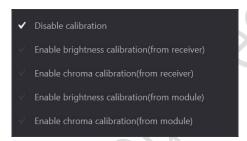


Fig 12.1.2-2 Calibration mode

Seam state

- On: Display seam effects on the LED screen.
- Off: Do not display seam effects.



Fig 12.1.2-3 Seam state

Display mode

- Normal mode: Display playback content. Cannot do the seam operations.
- Seam mode: Do the seam operations. LED screen displays white.

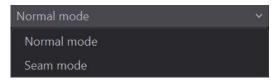


Fig 12.1.2-4 Display mode



• Brightness: The brightness is consistent with that of the Programming interface. Used for adjusting the LED screen brightness.



Fig 12.1.2-5 Brightness

• Show module

- Selected: Set the cabinet module size.
- Unselected: Cannot change the cabinet module size.



Fig 12.1.2-6 Show module

■Note:

The width and height of the module should be divisible by the width and height of the cabinet.

• Coefficient: Adjust the selected seam.



Fig 12.1.2-7 Coefficient

• Reset: Reset the coefficients of the selected seam or all seams.

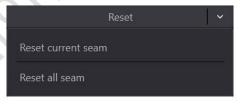


Fig 12.1.2-8 Reset

• Save: Save the seam coefficients to the receiver.





Seam view

• Seam area: Select a seam to change the seam coefficients of the overall, start, and end points.

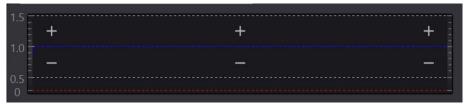


Fig 12.1.2-10 Seam area

12.1.3 Select cabinet

You can only modify the seam at the edge of the cabinet.

 Reset: Reset the seam coefficients of the selected cabinet, the edge of the cabinet, or all seams.

■Note:

The functions are identical to Select seam except for Show module.

12.2 Soft Edge

Simultaneous seam of multiple processors is not supported. Change the calibration coefficients to keep the screen brightness balanced.

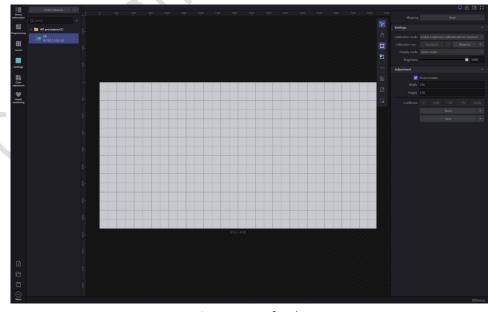


Fig 12.2-1 Soft edge



The functions of **Soft edge** are similar to that of the **Advanced soft edge**. The distinctions are listed below:

Calibration mode



Fig 12.2-2 Calibration mode

■ No modifications to module calibration coefficient

- Selected: Cannot save the cabinet coefficients to the module.
- Unselected: Save the cabinet coefficients to the module.

■Note:

This function is available when you enable calibration from the module.

■ Enable low gray calibration

- Selected: Save the cabinet coefficients as low gray calibration coefficients to the receiver or module.
- Unselected: Cannot save low gray calibration coefficients.

■Note:

This function works with receiver; **Enable brightness calibration** should be selected.

• Calibration coefficient: You can read back calibration coefficients or reset them as custom values.



- **Readback**: Read calibration coefficients from receiver or module.
- Reset to: Reset and customize calibration coefficients.

Display mode

- Seam mode: Enable Show screen.
- Reset: Reset the unsaved calibration coefficients.



13 Color Adjustment

Change the original gamut and target gamut for ideal display effects.

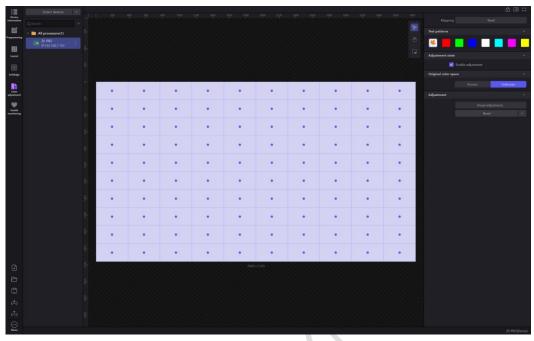


Fig 13-1 Color adjustment

- Read mapping: Retrieve the color adjustment information of the current processor and receiver, and the view area displays the corresponding cabinet information.
- **Test patterns**: Select different test patterns to view the corresponding display effects.



Fig 13-2 Test patterns

- Adjustment state
 - Enable adjustment
 - Selected: Enable color adjustment.
 - Unselected: Disable color adjustment.
- Reset: Reset the color adjustment parameters of the selected cabinet or all cabinets.



13.1 Unknown Original Color Space

When **Unknown** under **Original color space** is selected, only **Visual adjustment** is available.

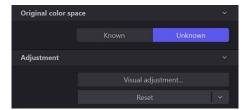


Fig 13.1-1 Unknown original color and space

- Visual adjustment...: Change the components of RGB to adjust the cabinet's color performance.
 - Test patterns: This function is identical to Test patterns at the right side of Color adjustment.
 - Import...: Import local color adjustment coefficient file.
 - **Export...**: Export the current color adjustment coefficient file locally.
 - **Readback**: Read back color adjustment coefficient file saved in the receiver.
 - Save to receivers: Save the adjusted color coefficients to the selected cabinet or all cabinets.

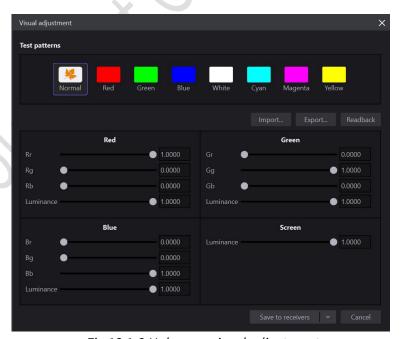


Fig 13.1-2 Unknown visual adjustment



13.2 Known Original Color Space

When Known under Original color space is selected, Original color space setting, Visual adjustment, Advanced adjustment, Color matching across batches, Select the same batch are available.

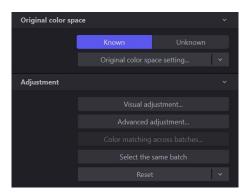


Fig 13.2-1 Unknown original color space

- Original color space setting...: Set the original values of cabinet.
 - Import...: Import files of original values locally.
 - Export...: Export the original values locally.
 - Measuring colors...: Connect to color meter, and then measure the original values of screen and update table data
 - **Set to defaults**: Restore defaults.
 - Save as preset: Preset the original values for quick retrieval.
 - Load preset: Load the preset original values.
 - Save to receivers: Save the original values to the selected cabinet or all cabinets.



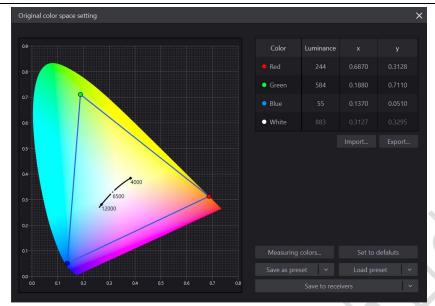


Fig 13.2-2 Original color space setting

• **Visual adjustment...**: The functions are identical to those in **Unknown**, excluding gamut display.

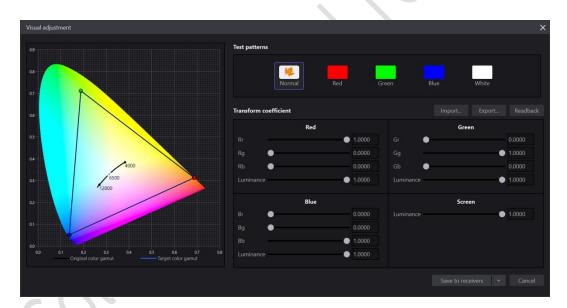


Fig 13.2-3 Known visual adjustment

- Advanced adjustment: Change the original gamut and target gamut for cabinet color performance.
 - Color: Include RGB and All (include cyan, magenta, and yellow).
 - Target: Customize the gamut range or specify the preset target gamut.
 - **Actual**: Calculated through original gamut and target gamut. Support manual editing.



- ◆ Import...: Import file of gamut value locally.
- ◆ **Export...**: Export the current gamut values locally.
- ◆ Use original: The function is identical to original gamut.
- Transform coefficient: The function is identical to visual adjustment.

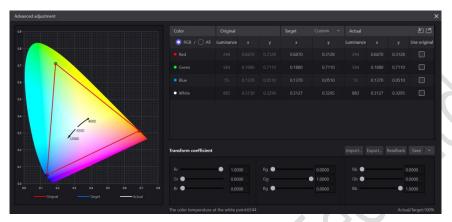


Fig 13.2-4 Advanced adjustment

- Multi-batch adjustment: Enable this function only when the original values of the selected cabinets are inconsistent. Change the target gamut and keep the target cabinet gamut of multiple batches consistent.
 - Auto merge: Automatically calculate the common target gamut of different batches.
 - Save to receivers: Save the color coefficients to receivers.

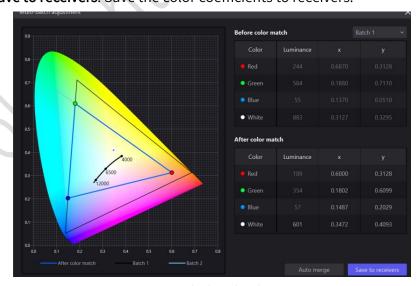


Fig 13.2-5 Multi-batch adjustment

• Select the same batch: Select cabinets of the same batch.



14 Health Monitoring

Health monitoring supports real-time monitoring of input sources connected to the processor, including temperature, humidity, Ethernet cable error rate, fan, power supply, voltage, and connection status of receivers.

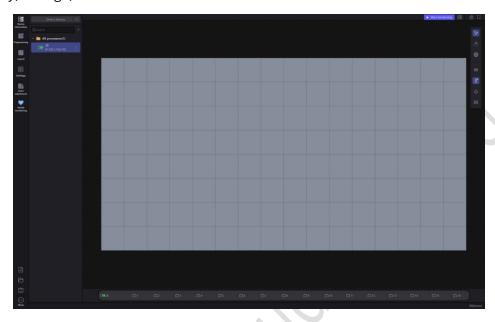


Fig 14.1-1 Health monitoring

Table 14-1 Functions of health monitoring

Section	Туре	Description				
		🔯: Health settings.				
	1/16/	▶ Start monitoring: Enable monitoring.				
		Stop monitoring: Disable monitoring.				
		■: Monitoring log.				
\ (. Move the view area.				
	Toolbar	▣: Input source monitoring.				
		E: Temperature monitoring.				
Monitoring		(a): Humidity monitoring.				
		■: Bit error of Ethernet cable.				
		☑: Voltage monitoring.				
		E: Power supply monitoring.				
		᠃ Fan monitoring.				
	Menu of all	Output entions (primary/redundancy output)				
	processors	Output options (primary/redundancy output).				



		View	the	monitoring	information	of	all
Monitoring	Monitoring	processors/processor groups.					
	View the monitoring information of a single processor.						
	view	Display the connection status between processor and					
	receive	r.					

- Output options (primary/redundancy output)
 - Auto: When the primary output port does not output images, automatically switch to the redundancy output port; When the primary output port returns to normal, automatically switch to the primary output port.
 - **Primary**: Redundancy output port is not allowed to output images.
 - Backup: Primary output port is not allowed to output images.

14.1 Video Input Monitoring

Monitor the connection status and input format of video input.

When the input format is expected, display the information in green. If not, display the information in red. When the video input is disconnected, "Disconnected" appears under **Actual**.



Fig 14.1-1 Video input monitoring

Video input monitoring settings

- Step 1 Click on to access the video input monitoring settings interface.
- Step 2 Click **Settings...** to open the **video input monitoring settings** window.

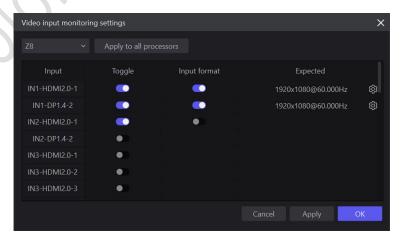


Fig 14.1-2 Video input monitoring settings



- Switch processor: You can switch the processor and set signal monitoring.
- Apply to all processors: Apply the current settings to all processors.

Toggle

- Enable: Monitor the current signal.
- Disable: Do not monitor the current signal.

Input format

- Enable: Monitor the signal input format.
- Disable: Do not monitor the signal input format.
- **Expected**: Monitor if the input format of the current signal matches the expected format.
 - Settings: Click on

 to edit the expected format of the current signal.
 - ◆ From input: Display the online signals only. Click the option to match the actual resolution of the input signal.

14.2 Receiver Monitoring

Monitor the temperature, humidity, Ethernet cable bit error, voltage, power supply, fan, connection status, and redundancy status of receivers.

When the cabinet is white, it indicates that the receivers are normal. When the cabinet is red, it indicates that the receivers are in exception. When the cabinet is gray, it indicates that the receivers are offline.

Temperature

Click on to view the temperature of receiver.

When the detected temperature is more than the configured alert value, the cabinet turns red, and the **button** produces a flickering red light



Fig 14.2-1 Temperature

Humidity

Click on to view the humidity of receiver.

When the detected humidity is more than the configured alert value, the cabinet turns red, and the button produces a flickering red light.

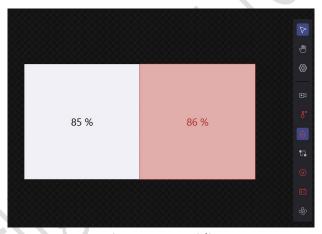


Fig 14.2-2 Humidity

Ethernet cable bit error

Click on wiew the receiver's Ethernet cable bit error.

When the Ethernet cable bit error is more than millionth, the cabinet turns red, and the button produces a flickering red light.





Fig 14.2-3 Ethernet cable bit error

Voltage

Click on to view the receiver voltage.

When the voltage is abnormal, the cabinet turns red, and the button produces a flickering red light.



Fig 14.2-4 Voltage

Power supply

Click on to view the power supply of receiver.

When the power supply is in exception, the cabinet turns red, and the button produces a flickering red light.





Fig 14.2-5 Power supply

Fan

Click on to view the receiver's fan and monitor its speed per minute.

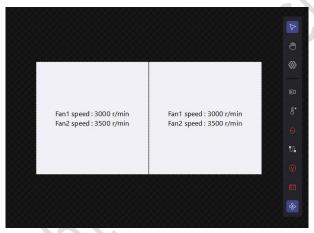


Fig 14.2-6 Fan

14.3 Monitoring View

Connection status

When you hover the mouse over the output port or cabinet, the connection status between processor and cabinet will be displayed.

Enable monitoring, and \boxtimes appears when the processor is disconnected.





Fig 14.3-1 Connection status

Redundancy port status

After enabling monitoring, iSet monitors the status of redundancy port in real time.

When the primary/redundancy port is disconnected, the output port turns red, letting you know that the primary/redundancy port is disconnected from receiver.



Fig 14.3-2 Redundancy monitoring



Preview window

Select all processors or processor groups to view the monitoring preview windows of all processors.

When the receiver is in exception during monitoring, the corresponding cabinet displays red. Hover over the preview window and you will be notified that exceptions are happening.



Fig 14.3-3 Preview window

14.4 Monitoring Information

Record the monitoring information to track the exceptions happened during monitoring.

Log

Step 1Click on to open the date selection window.

Step 2Select a date and view the log.

```
17:08:34 [Alert]
        Receiver alert
                Processor1 (Z8),port 1,Receiver 2-8:Humidity over limit
                 Processor1 (Z8),port 1,Receiver 1-8:PSU 1 alert
                 Processor1 (Z8),port 1,Receiver 1-8:PSU 2 alert
Processor1 (Z8),port 2,Receiver 2-8:Humidity over limit
                 Processor1 (Z8),port 2,Receiver 1-8:PSU 1 alert
                 Processor1 (Z8),port 2,Receiver 1-8:PSU 2 alert
                 Processor1 (Z8).port 3.Receiver 2-8:Humidity over limit
                 Processor1 (Z8),port 3,Receiver 1-8:PSU 1 alert
                 Processor1 (Z8),port 3,Receiver 1-8:PSU 2 alert
                 Processor1 (Z8),port 4,Receiver 2-8:Humidity over limit
                 Processor1 (Z8),port 4,Receiver 1-8:PSU 1 alert
                 Processor1 (Z8),port 4,Receiver 1-8:PSU 2 alert
                 Processor1 (Z8),port 5,Receiver 2-8:Humidity over limit
                 Processor1 (Z8),port 5,Receiver 1-8:PSU 1 alert
                 Processor1 (Z8),port 5,Receiver 1-8:PSU 2 alert
```

Fig 14.4-2 Monitoring log

Email

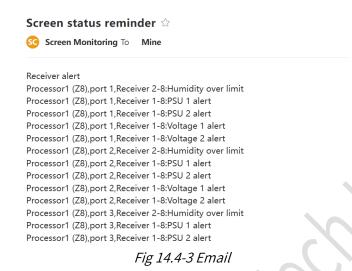
Step 1 Click on to access the health settings.

Step 2 Enable **Email notification** and set how often continuous exceptions happen.

Step 3 Set the sender email address and target email address.



Enable monitoring and the alarm information will be sent to the target email address according to alarm information when the frequency of continuous exceptions is more than the times you set.



Statement

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