Absen 艾比森



User Manual

Product range： PO Pro Series

Revision History

Version number	Pages	Revised Content Description	Date of revision	Revision Personnel
V1.0	-	The first edition was formulated	2025.10.28	Jianwu.Lin
V1.1	-	Add steps for multi-screen splicing operation	2026.02.24	Jianwu.Lin

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1.0 Scope of application

This specification applies to the Pro version of the poster screen series, specifically the 640mm×1920mm poster screen. Unless otherwise specified, all references to "product(s)" in the following content refer to Pro products. For any special requirements, customization can be made based on actual conditions.

2.0 Product description

2.1 Product introduction

The PO Series Pro is built around flip-chip COB technology, delivering exceptional stability and ultra-high-definition image quality. Available in pixel pitches of 1.53mm and 1.86mm, it effectively eliminates image granularity, resulting in sharper, more refined visual performance.

Equipped with a streamlined intelligent control system, the series supports loop playback functionality and remote cloud-based management—features that directly lower operational overheads. Its distinctive foldable design offers 0-180° multi-angle adjustability and achieves a 40% volume reduction when folded, enabling seamless adaptation to diverse application scenarios.

The PO Pro Series excels in commercial display segments, including information dissemination, commercial promotions, retail environments, and small-scale rental applications.

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2.2 Product features

1) It is ready-to-use right upon delivery, requiring no professional installation or debugging, and supports plug-and-play functionality.
2) It utilizes flip-chip technology combined with the multilayer surface mounting process, delivering a 10,000:1 contrast ratio and comprehensive image quality optimization.
3) It features downward foldability and dual-sided display, which facilitates easier transportation.
4) It supports playback control via USB and LAN-based apps, as well as internet connectivity options including WiFi, Ethernet, and more.
5) It is equipped with intelligent cluster management for remote centralized control, covering functions such as content approval and playback management.
6) It is fitted with universal wheels for effortless mobility.
7) It supports remote intelligent monitoring, as well as remote and scheduled screen power-on/power-off.
8) It enables remote wireless interaction through smart terminals, allowing for seamless control anytime and anywhere.
9) It is compatible with SIM card insertion to enable network connectivity.

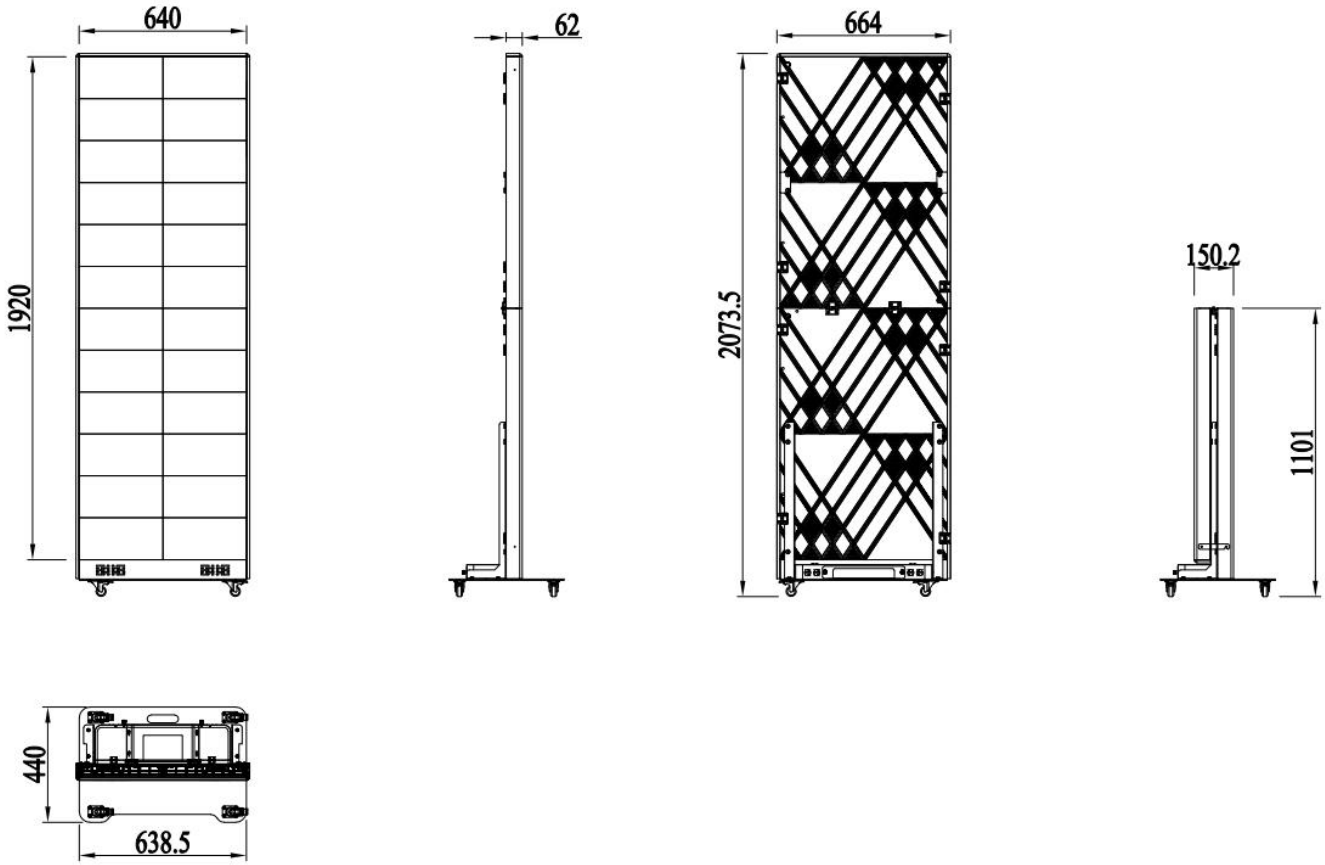
2.3 Product images



Seat mounting

2.4 Product size structure drawing

◆ Seat size(mm)：



Note: 1. The design and specifications will be upgraded and updated from time to time and will be subject to change without notice.

2. The dimension values (mm) shown in the chart are approximate.

3.0 Specification parameters

Model		PO1.5 Pro	PO1.8 Pro
Physical Parameter	LED Type	Flip-chip RGB	
	Pixel Pitch (mm)	1.53	1.86
	Screen Size (mm)	640*1920	
	Overall Size（mm）	664*2073.5*62	
	Screen Resolution (dots)	416*1248	344*1032
	Poster Weight (kg)	51kg	
	Module Dimensions (WxH)/(mm)	320*160	
	Function	Mobile base, foldable, cascadable; （optional：hanging , wall mounting)	
Optoelectronic Parameter	Brightness (nit)	600	
	Refresh Rate (Hz)	3840	
	Gray scale (Bit)	13	
	Contrast Ratio	10000：1	
	Color Temperature (k)	6500	
	Viewing Angle (H/) (°)	160/160	
	AC Operating Voltage (V)	100-240V 50/60Hz	
	Power Consumption (Max./Avg.)(W/set)	356/119	381/127
Application Parameter	Controller	Built-in, Supports Synchronous/Asynchronous	
	Interface	HDMI*2（1*IN 1*OUT）、USB 3.0*1、AUDIO OUT*1、RJ45*1、WIFI	
	Storage Temperature（℃）	-40~+60	
	Operating Temperature（℃）	-10~+40	
	Storage Humidity（RH）	10%~85%	
	Operating Humidity（RH）	10%~80%	

	IP Rating（Front/Rear）	IP40/IP21
	Module Maintenance	Front
	Packaging & Dimensions (Length × Width × Height, mm)	Flight Case 1 pack (contains 1 units)：W523*D808*H1315.3 (including casters)
		Flight Case 1 pack (contains 2 units)：W1053*D863*H1315.3 (including casters)
	Packaging weight (kg)	91 (1contains 1 units) / 163 (contains 2 units)
	Installation Method	Mobile Stand
	Application Environment	Indoor

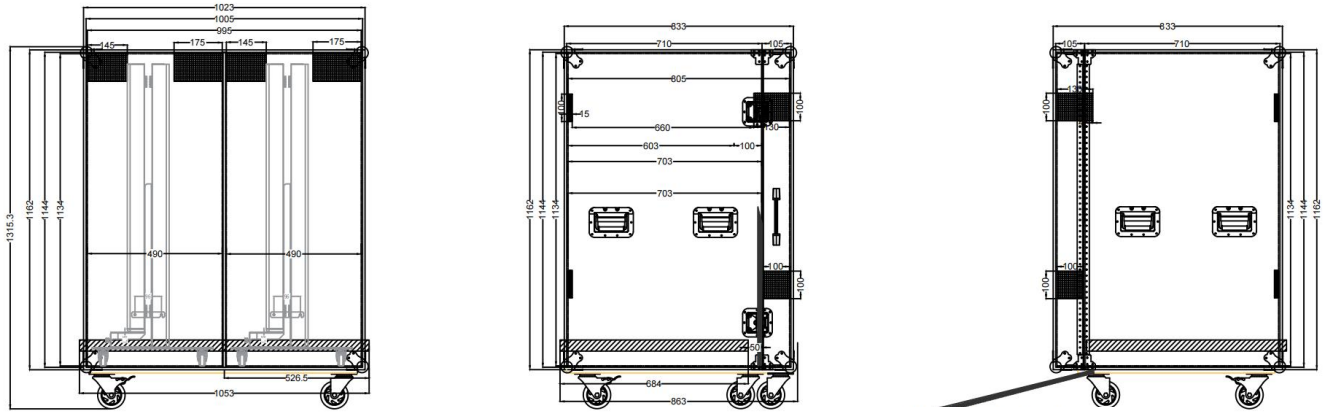
4.0 Product interfaces

Type	Illustrate
USB 2.0	USB 2.0 (Type A) interface, support U disk program playback and U disk expansion The file system supports FAT32 and allows a single file up to 4GB
LAN	100 Gigabit Ethernet port, used to connect to the network or control the computer
WiFi	Connect a WiFi antenna (supports 2.4GHz WiFi)
COM	Connect a 4G antenna.
Power connector	Standard typed power interface.
Switch buttons	Power on/off, button switch to turn the device on and off

5.0 Packaging solutions

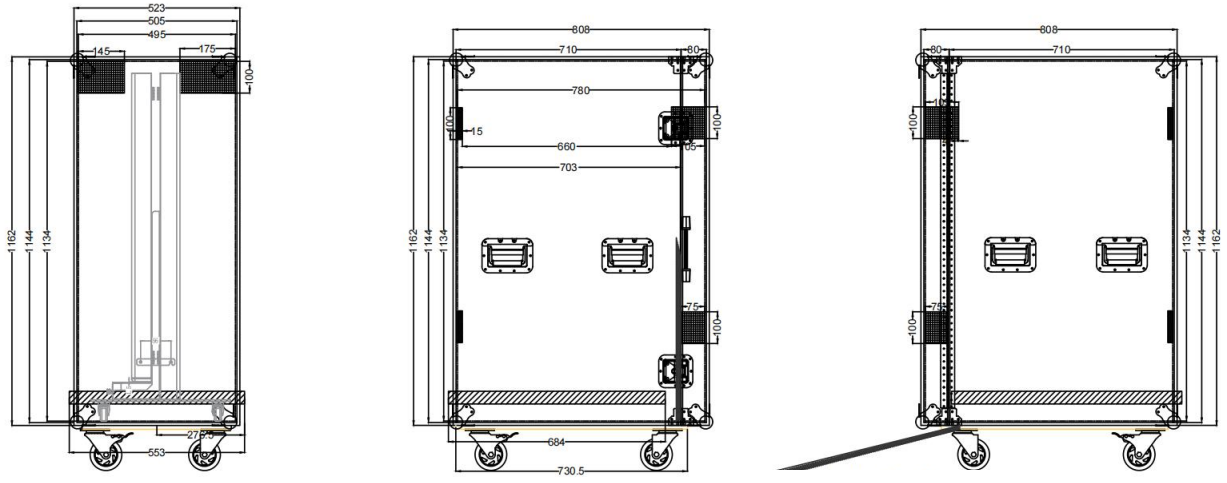
Unless the customer specifies its packaging information, it will provide the customer with a standard shipping container, and the specific transportation method will change slightly due to different regions, and the actual packaging method shall prevail. The packaging method and label information are as follows.

5.1 Flight Case 1 pack (contains 2 units)（mm）



a foldable ramp for loading goods

5.2 Flight Case 1 pack (contains 1 units)（mm）



a foldable ramp for loading goods

6.0 Precautions for product use

Item	Parameter & description
Operating environment temperature	Ambient temperature: -10°C~40°C; Other temperature ranges require the addition of temperature control equipment. The temperature of the lamp surface ≤ 60 °C during the working process, and the temperature exceeds the standard and the temperature control equipment needs to be added;
Storage environment temperature	Ambient temperature: -40°C~60°C; Above 30 °C requires cooling treatment; Exceeded -20°C needs to be heated up;
Operating environment humidity	Ambient humidity: 10 ~ 80% RH, humidity exceeding the standard needs to be dehumidified in the use of the environment before normal use；
Storage environment humidity	Ambient humidity: 10~ 85% RH, humidity more than 80% RH needs to be dehumidified;
Overdue storage treatment	The product has not been stored for more than one month or power out of the box for more than 48 hours after opening the box, and it takes 6 hours of aging before use before normal use. The aging mode is: full brightness setting 10% 1hrs, full brightness setting 30% 1hrs, full brightness setting 60% 2hrs, full brightness setting 80% 1hrs, full brightness setting 100% 1hrs (brightness gradually increasing aging);
Dustproof	Ip3X dustproof rating on the back. Should not be exposed to more dust environment, such as more sand and dust outdoors, indoor high dust workshop, etc., need to display the box for special protection；
Corrosive gas resistant	Corrosive gases in the air containing salt or acid gas environment, will cause corrosion of electronic components, crystalline leakage and other phenomena;

Protection against electromagnetic radiation	The module should not be placed in an environment where electromagnetic radiation and radio frequency radiation exceed the intensity of the electric field by 5V/m interference sources;
Anti-static	Prevent the damage of electrostatics to electronic devices in humid environments, and avoid the damage of leakage to the human body;
Shockproof	The display should be installed on a robust and reliable installation structure without strong vibration;
Stay away from water sources	The box is not treated with waterproofing, and the water conductivity can short-circuit the circuit, resulting in damage to the circuit devices, so it is necessary to stay away from the water source;
Personal injury	The angle and height of the module installation should be suitable, and the sharp corners should be packaged to prevent the damage of the strong outer shell to the human body;
Security requirements	It is necessary to ensure the stability of the power supply system, maintain the normal level of frequency, voltage, current harmonics, when a plurality of LED display boxes are spliced, the metal shell should be grounded together with the metal frame installed in the LED display, and the grounding resistance of the overall system of the display should not be greater than 1Ω, and the leakage current should not exceed 5% of the input current. The electrical strength should meet the provisions of SJ/T 1114 1-2017 General Specification 5.7.5 for light-emitting diode (LED) displays;
other	If the product is an indoor installation product, it should be confirmed that the structure of the product is stable and the safety of the surrounding personnel;

7.0 Accessory Description

7.1 Standard accessories



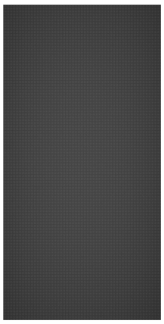
HDMI cable *1m



Main power cable *5m



Power patch cord *0.5m



Spare module *1PCS



T-type wrench

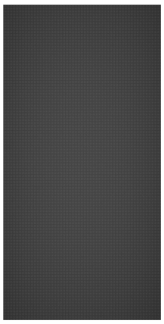


Anti-static gloves



Suction cup front maintenance tool

7.2 Optional accessories



Spare module



Receiving card

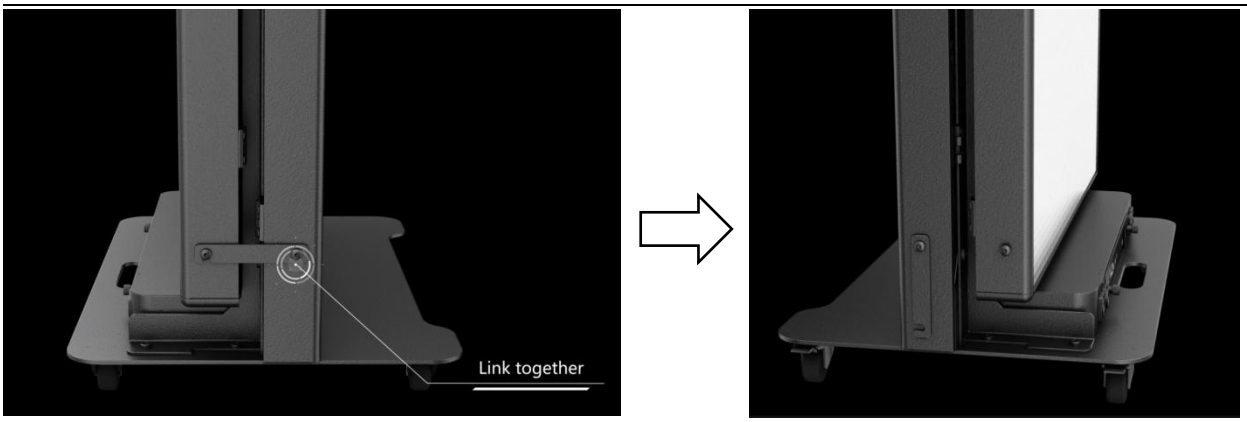


Power supply

8.0 Usage Steps

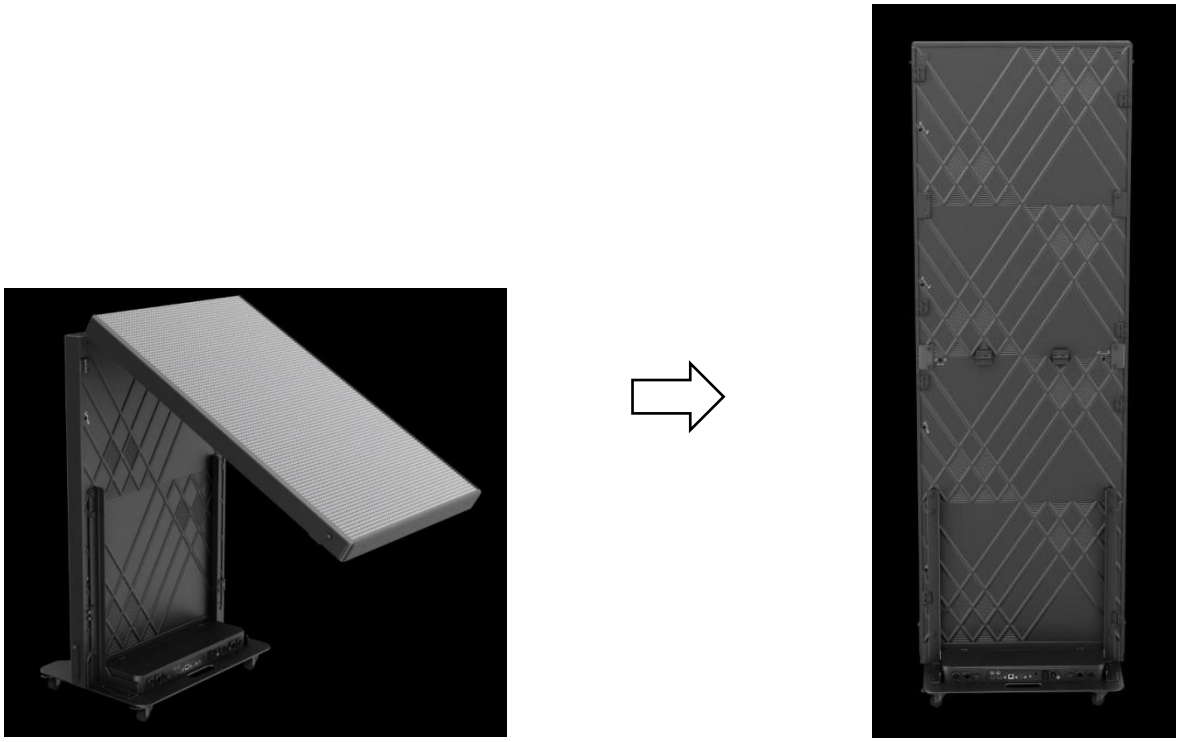
8.1 Unlock the lock

（1）Loosen the hexagon screws on both sides of the machine in turn, rotate the connecting plate 90°, and then tighten the hexagon screws again to complete the fixing of the connecting plate.



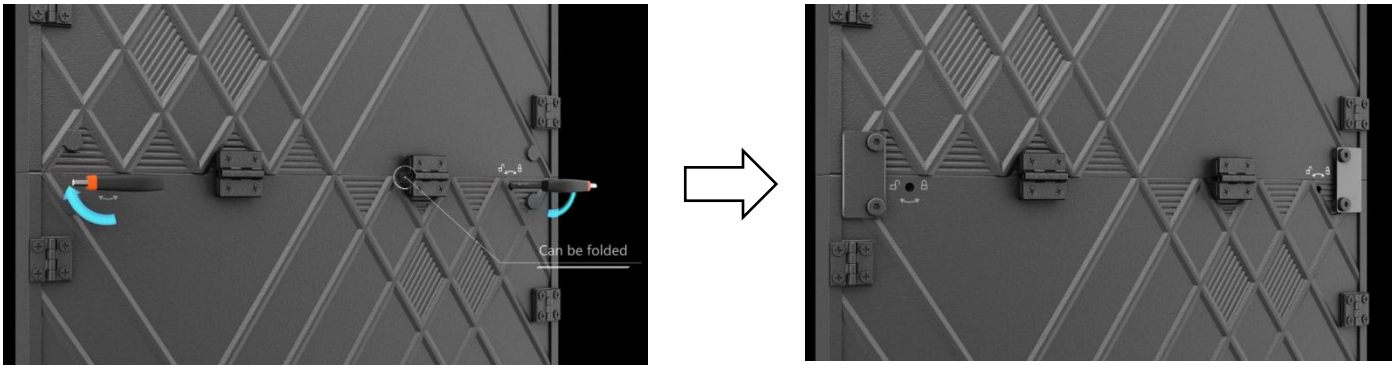
(2) Slowly unfold the second half of the screenshot upward to make the overall display vertical.

Note: Unfold at a steady pace to avoid collisions. Keep your hands on the device during unfolding.



(3) After the angle is adjusted, observe the positioning clip at the folding connection, slowly rotate and tighten it with a hex key in the "locking direction", and fix the connecting plate with an internal hex screw to ensure that the screen is not loose or jammed after unfolding and

remains stable.

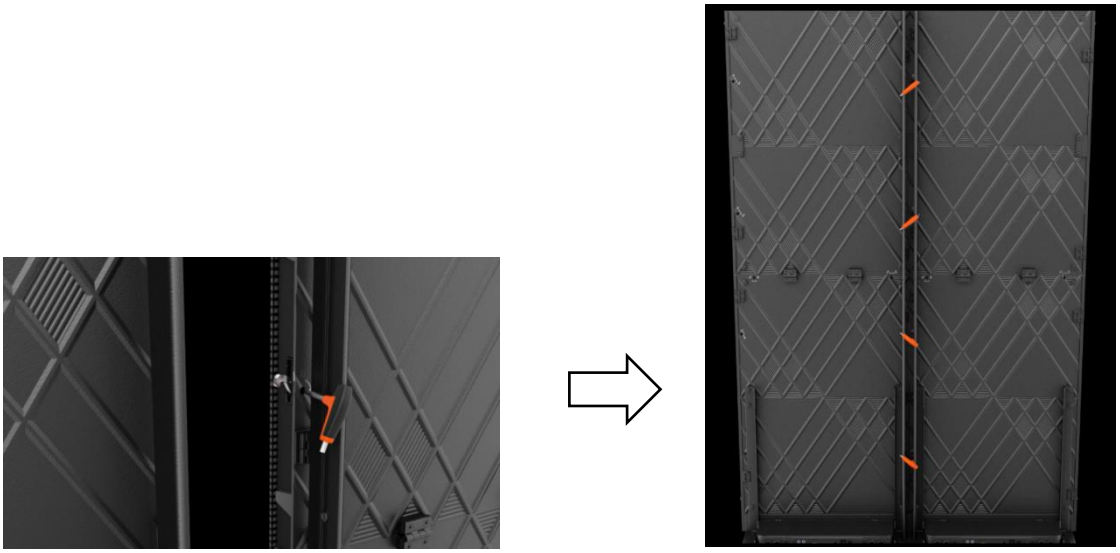


8.2 Multi-Stage Cascade

(1) Open the frame of each screen to be joined except the left and right sides of the large screen, and operate the fixed pin lock rod in the middle, then force the frame to open backward.



(2) Align each screen panel to be joined, then use a hex key to tighten the hook lock at the central joint counterclockwise.



(4) Use an HDMI cable to connect the HDMI OUT of the first screen on the left front to the HDMI IN of the second screen, and the HDMI OUT of the second screen to the HDMI IN of the third screen, and so on, to connect a large 2K resolution screen with the number of inner screens.

Use a power jumper to connect the POWER OUT of the first screen on the left front to the POWER IN of the second screen, and so on. Depending on the power load, it is recommended to connect up to 6 units in series.



Power cord connected



HDMI cable connected

(5) Use the app to set the screens from the second one onward to sync playback mode and HDMI signal. Set the first screen to output 2K resolution to achieve seamless multi-screen setup.



9.0 Broadcast Control Software Application and Operation

Matters need attention ：

1、 The operation steps are based on the standard software and version of the product. The actual operation steps may vary. Our company may modify and change the content of the manual at any time without notice.

2、 For more detailed instructions, refer to the software system manual.

9.1 Download control software

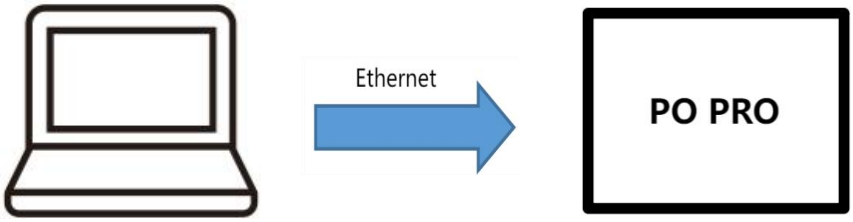
name	type	explain	How to get
ViPlex Handy	Mobile client	A mobile display management software with Android and iOS versions, designed for screen management, program editing, and distribution.	
Screen Sprite	PC client	LAN display management	www.novastar-led.cn

		software, available only for Windows, is primarily used for display management, program editing, and publishing.	

9.2 linkage POPRO

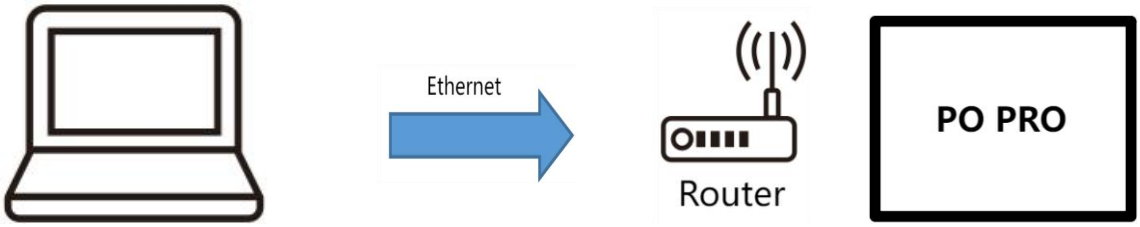
Wired Direct

Configuration required: Modify the local IP address and enable the DHCP option in Screen Elf software.



Wired LAN connection

No configuration required.



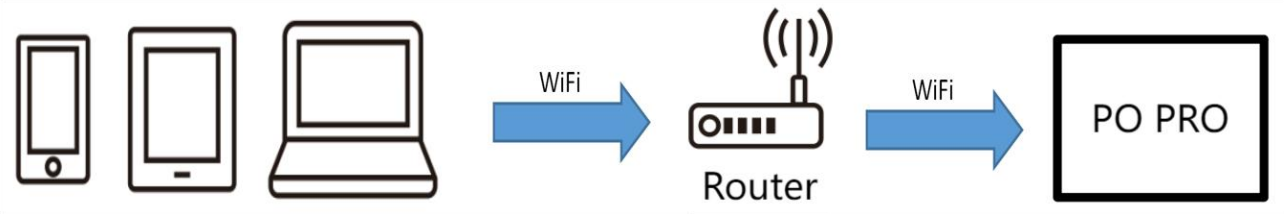
WiFi hotspot direct connection

No configuration required



WLAN Wireless Local Area Networks

Configuration: Connect to the router by using the mouse and monitor to access the WiFi settings interface.



9.3 Log in to PO PRO

Account type	Default name	Default password
Connect to PO PRO's WiFi hotspot	AP name: The last 8 digits of AP+SN.	SN2008@+
Log in to the PRO system	Username: admin	SN2008@+

9.3.1 Mobile device login steps

- When using direct Wi-Fi hotspot connection, connect the device to the PO PRO's WiFi AP.
- When using a wireless local area network connection, connect the device to the same router as the PO PRO.

Step 1: Open ViPlex Handy.

ViPlex Handy automatically detects the PO PRO all-in-one machine and refreshes the local device list. Users can also manually refresh the list by swiping down.

:  indicates that PO PRO is online and you can log in to proceed to step 3.

: indicates that PO PRO is offline and cannot be logged in.

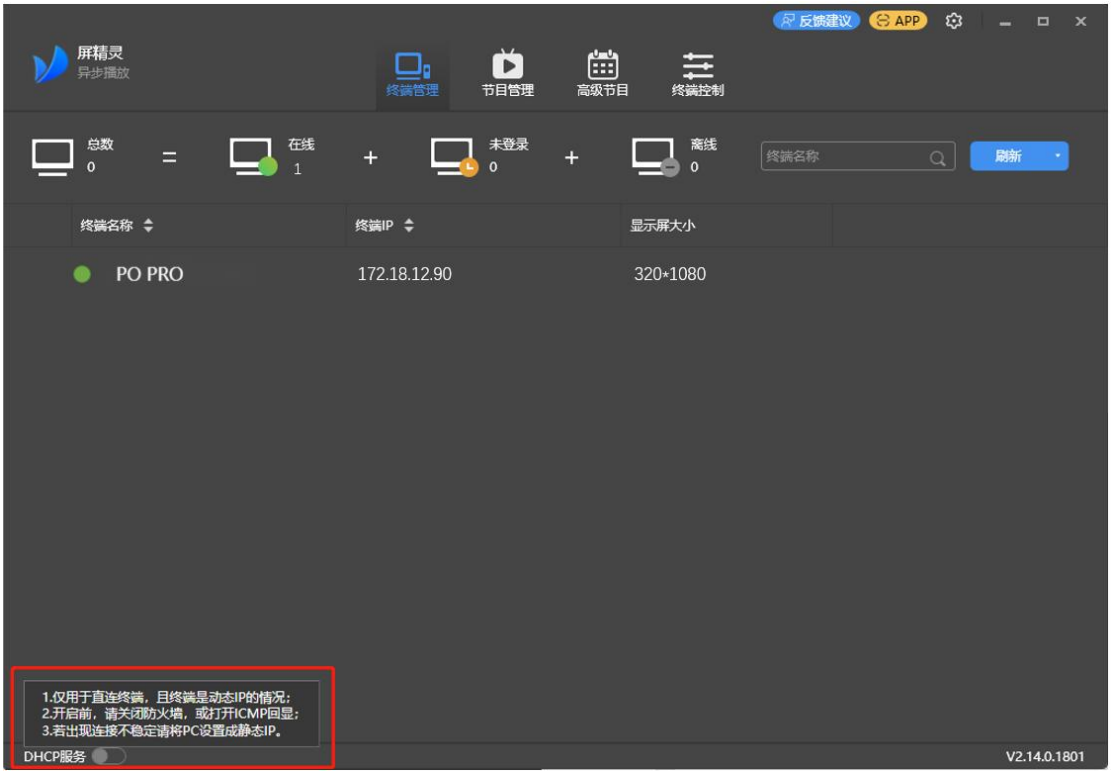
Step 2: Click "Connect" after the device name.

Step 3: Enter the password for the "admin" user and click OK.

9.3.2 PC Login Steps

Step 1: Launch Screen Elf software on your PC

- When using a direct network cable connection, connect the PC's network port to the PO PRO's network port with a cable, then enable the DHCP service in the lower-left corner of the software.



- When using a wired LAN connection, connect the PC's network port to the router connected to the PO PRO via a network cable.
- When using direct Wi-Fi hotspot connection, connect the device to the PO PRO's WiFi AP.
- When using a wireless local area network connection, connect the device to the same router as the PO PRO.

Step 2: Click Refresh to update the panel list

When ViPlex Expres detects PO PRO, it will automatically log in using the default account or the last successfully logged-in account.

- 

:Indicates that PO PRO is offline and cannot log in.
- 

: Indicates that PO PRO is online and can be accessed to proceed to step 4
- 

:Indicates successful login to PO PRO

Step 3: Connect to the single-machine screen

Step 4: Enter the password for the "admin" user and click OK. After successful login, Screen Wizard will automatically save the account information.

9.4 Broadcast Control Software Usage Guide

(1) PC operation steps

1. Open the Screen Elf software and select the working mode as "Parazacco spilurus subsp. spilurus step playback".



2. Select "Program Management" to access the program management interface.



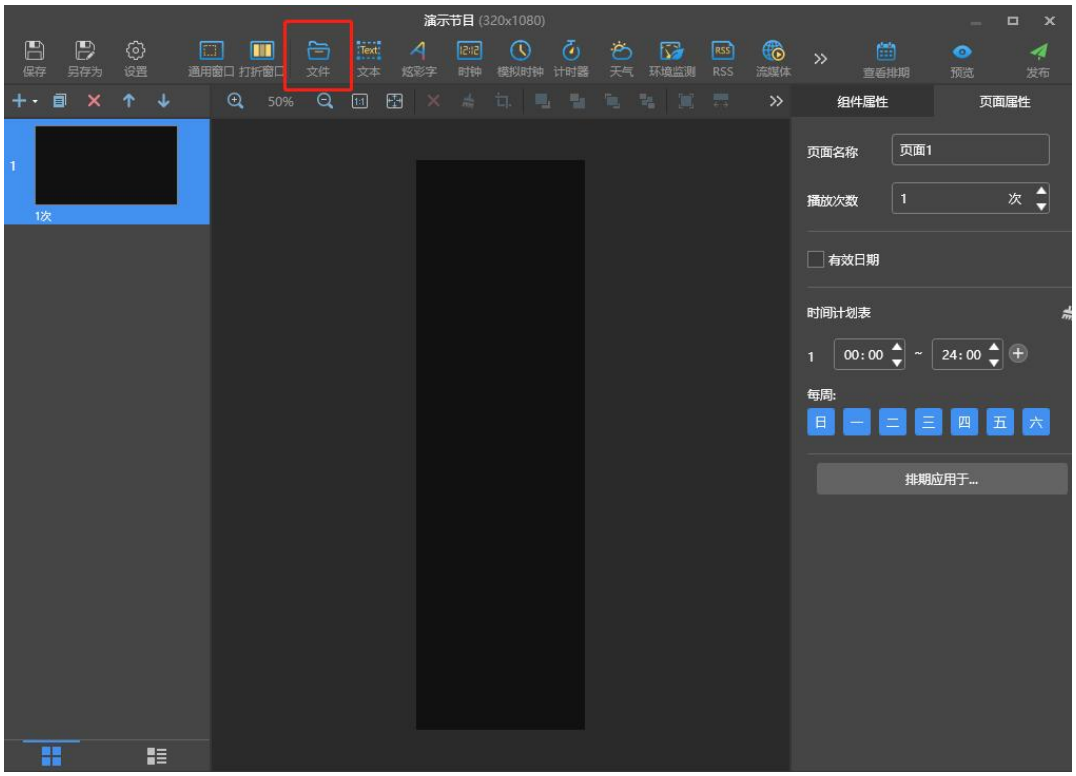
3. Click New and select Standard Screen from the drop-down menu.



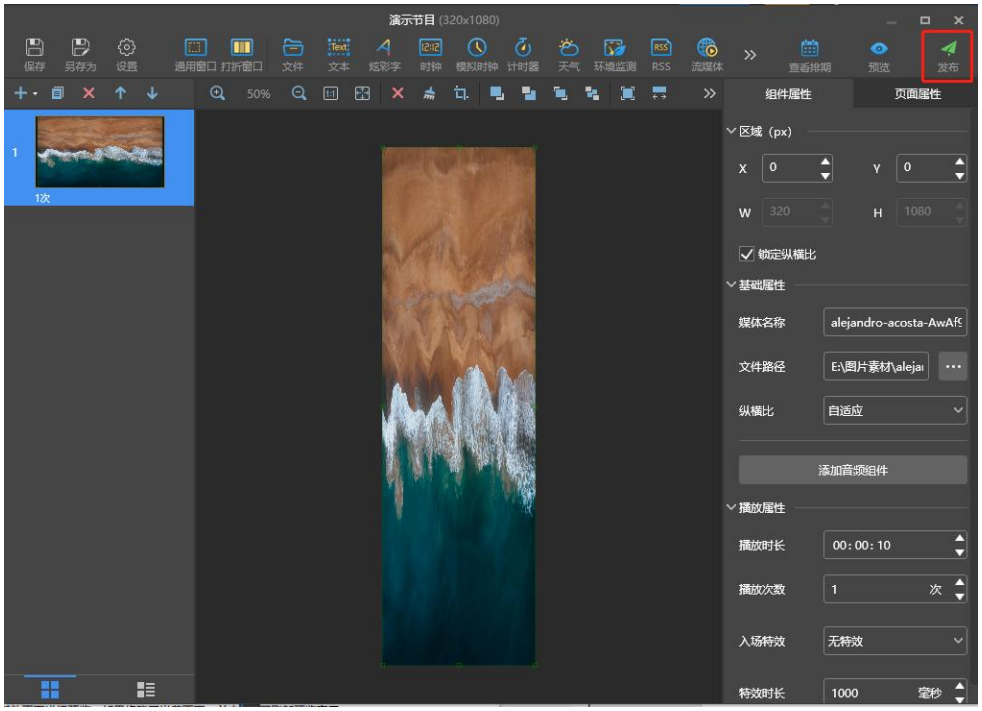
4. In the program information window, enter the resolution 416*1248.



5. Add multimedia programs to the program editing window.



6. After adding the program, click "Publish" to play it.

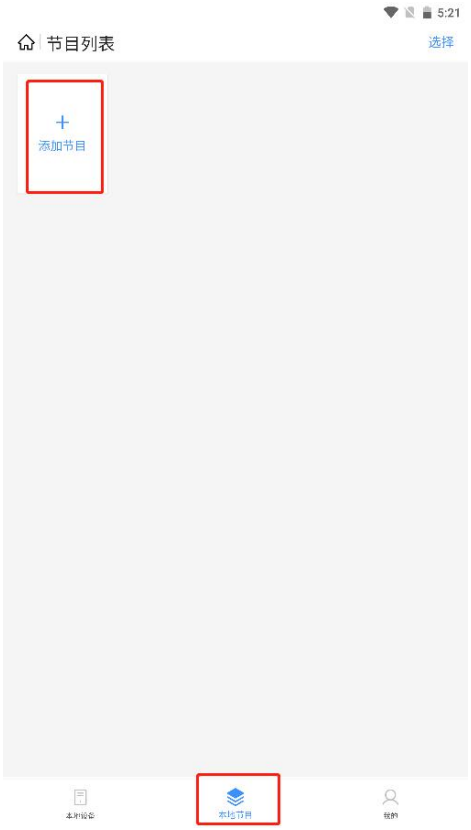


(2) Mobile operation steps

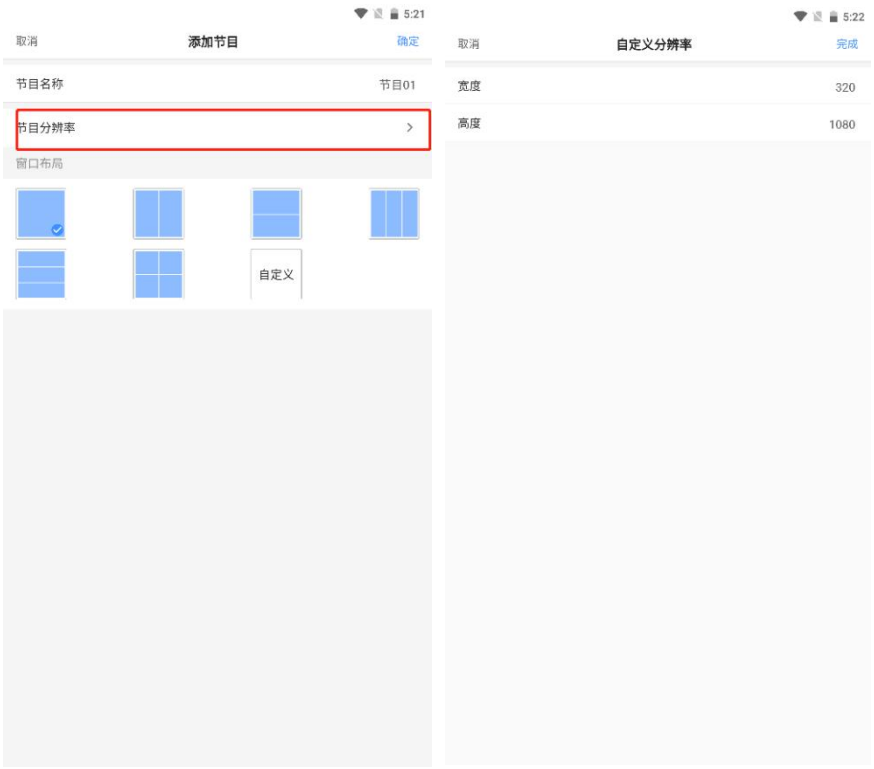
1. Launch Screen Elf, go to the main page, and click "Local Connection".



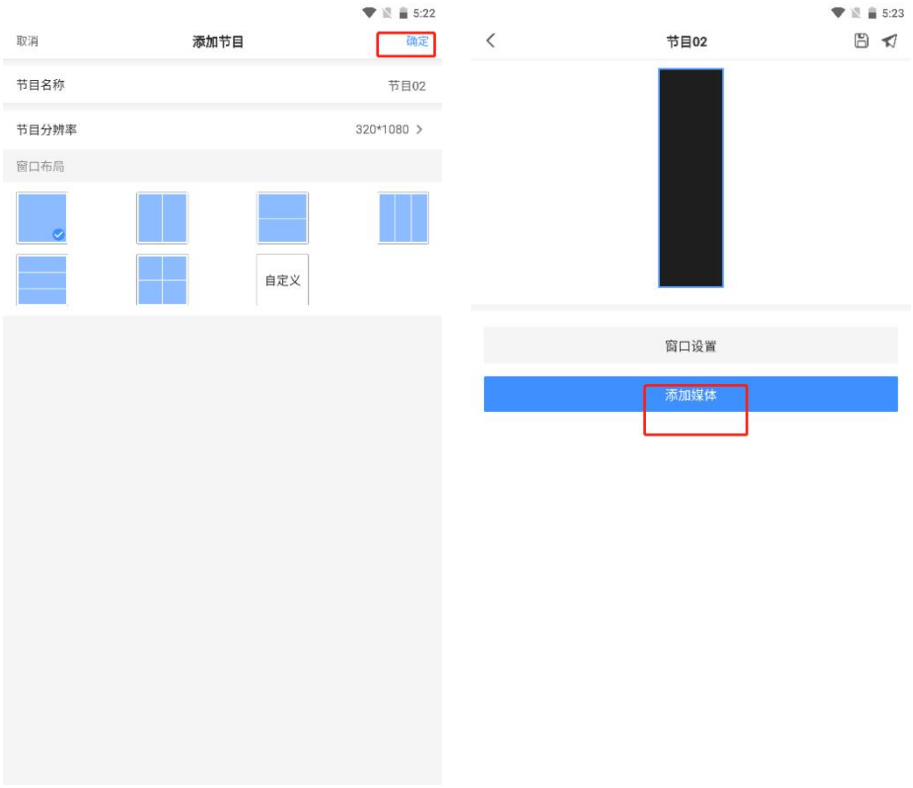
2. Select the Local Programs menu bar and click Add Program.



3. Click on the program resolution and set it to 416*1248.



4. Click OK to add media.



5. Select the multimedia content to add, then click Publish to play.



(3) Multi-Screen Mosaic

1. Prerequisites

- Devices to be used for the multi-screen mosaic must be PO Pro (V4.7.7 or later).
- Devices to be used for the multi-screen mosaic must be of the same model and same firmware version.
- The configured screen resolution of the devices to be used for the multi-screen mosaic must be the same and there is no need to set offset.
- PO Pro series multimedia players earlier than V4.7.7 do not support adaptive mosaic.
- For adaptive mosaic, the control mode of the video source must be set to the default option **HDMI preferred**.
- The total resolution of multiple screens in the mosaic setup can reach up to 2.33 million pixels (2160× 1080 pixels).

- The maximum width and height of each screen in the mosaic setup cannot exceed the maximum width and height of each PO Pro device’s load capacity.
- The pixel clock for the device’s custom resolution cannot exceed 153 MHz.

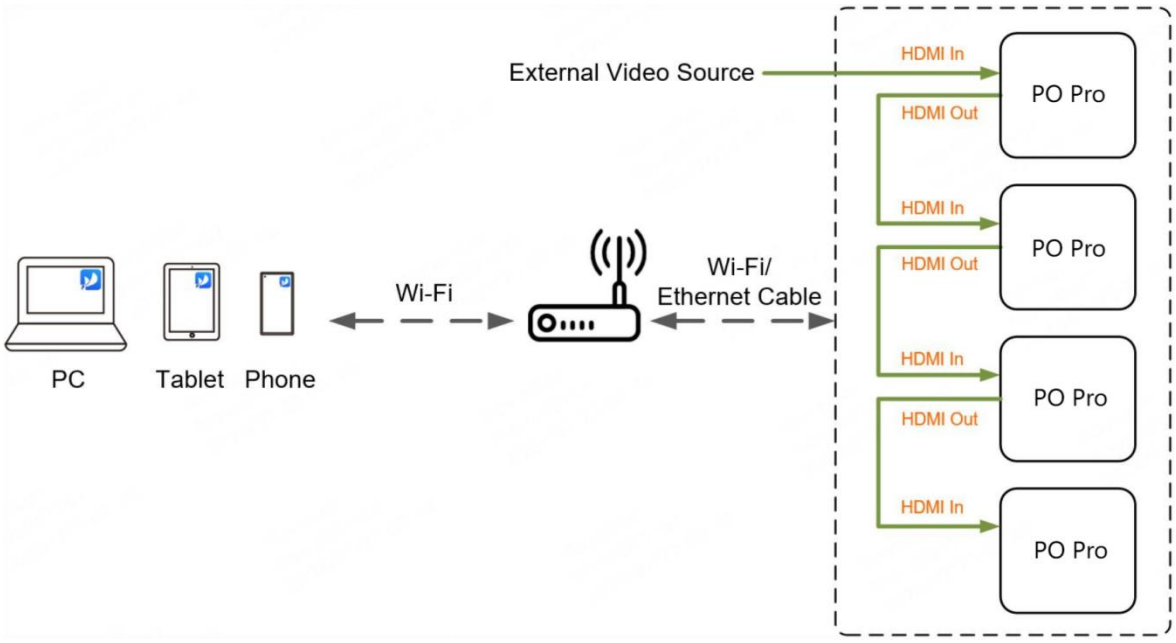
- Up to 10 devices can be used for multi-screen mosaic and the mosaic width is up to 4096 pixels.
- Only the PO Pro device at the starting position requires a video source and the internal source resolution (defaults to 1080p) of this device must be equal to or greater than the resolution of the mosaicked screens.
- Video Source Scaling

- When using the internal source for multi-screen mosaic, to ensure optimal display quality, it is recommended to set the solution resolution to match the resolution of the mosaicked screen. If display quality is not a concern, there is no need to worry about the solution's resolution, as it will be automatically scaled to fit the resolution of the mosaicked screen.
- When using the external source for multi-screen mosaic, the external video source resolution must match the resolution of the mosaic screen to display the external source image in full screen.
- After multi-screen mosaic is disabled in the software, each device will display the solution that was playing prior to mosaic. If there is no solution stored on the device, it will display a black screen.

2. Hardware Connections

Figure 3-1is an example of the hardware connections of four PO Pro devices that are used for a mosaic setup. A PC, tablet, or phone with ViPlex Handy or ViPlex Express installed is connected to the same WLAN as the PO Pro devices, and an external video source is used.

Figure 3-1 Example of hardware connections



3. Parameter Settings

3.1 Adaptive Mosaic

Adaptive mosaic is available by default. After the devices are connected via HDMI cable, the image will be stretched to display on the entire screens.

Operating Procedure

Step 1 Face the screen and designate the leftmost device as the master device.
Step 2 Connect the HDMI OUT from the master device to the HDMI IN of the device on the right using an HDMI cable, continuing the connection sequentially to the right.
Step 3 Create and publish content to the master device with ViPlex Express or ViPlex Handy.

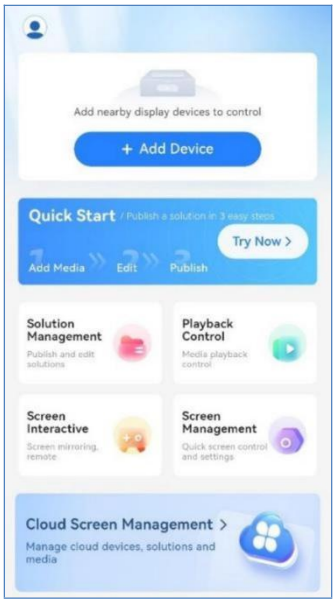
3.2 Automatic Mosaic

If Multi-Screen Mosaic is enabled in ViPlex Express or ViPlex Handy, the devices will be mosaicked according to the specified parameters. Users can specify mosaic parameters with ViPlex Express or ViPlex Handy. The mosaic parameters only of the starting device need to be configured. The specific steps are as follows.

3.2.1 ViPlex Handy

Operating Procedure

Step 1 Open ViPlex Handy and tap Add Device on the homepage. Figure 4-1 Adding device



Step 2 Connect to the Wi-Fi AP of the starting device (the default password can be found on the device's SSID label), or refer toFigure 3-1to ensure your phone and the devices are on the same LAN.

Step 3 On the Devices page, find the device and tap Connect.

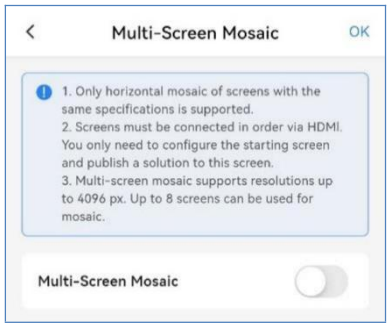
Step 4 Enter the password and tap Connect.

The default password can be found on the device's SSID label.

Step 5 Go to Screen Management > Multi-Screen Mosaic.

Step 6 Enable Multi-Screen Mosaic.

Figure 4-2 Enabling multi-screen mosaic

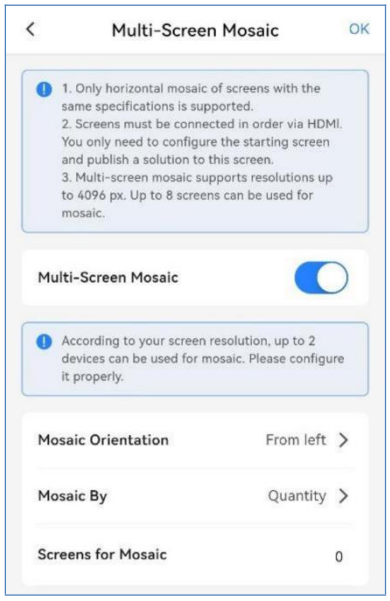


Step 7 Set relevant parameters as needed.

- Mosaic Orientation: Set the orientation of screen mosaic. Options include From left (default) and From right.

  Both orientations are supported, regardless of whether internal or external sources are used.
- Mosaic By: Supports mosaic by screen quantity (default) or by mosaic width (you need to enter the mosaic width).
- Screens for Mosaic: When Mosaic By is set to Quantity, you need to specify Screens for Mosaic, which indicates the number of screens involved in the mosaic setup.

Figure 4-3 Setting multi-screen mosaic parameters



Step 8 Once you are done, tap OK in the upper right corner to complete the settings.

4.2.2 ViPlex Express

Operating Procedure

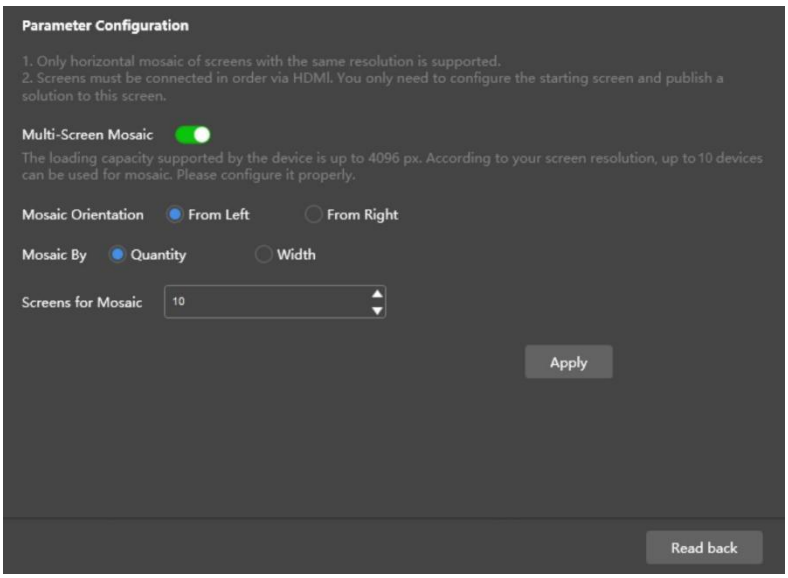
Step 1 Refer toFigure 3-1to ensure your computer and the devices are on the same LAN.

Step 2 Open ViPlex Express and log in to the device.
The default password can be found on the device's SSID label.

Step 3 Go to Control > Multi-Screen Mosaic.

Step 4 Enable Multi-Screen Mosaic.

Figure 4-4 Enabling multi-screen mosaic



Step 5 Set relevant parameters as needed.

- Mosaic Orientation: Set the orientation of screen mosaic. Options include From Left (default) and From Right.
  Both orientations are supported, regardless of whether internal or external sources are used.
- Mosaic By: Supports mosaic by screen quantity (default) or by mosaic width (you need to enter the mosaic width).
- Screens for Mosaic: When Mosaic By is set to Quantity, you need to specify Screens for Mosaic, which indicates the number of screens involved in the mosaic setup.
  When screen configuration parameters are changed, you need to click Refresh on the Screens page to obtain the latest screen configuration parameters andrecalculate the number of screens for mosaic.

Step 6 Once you are done, click Apply to complete settings.

4. Notes

- When the mosaicked screens use the internal video source, the source will be scaled to fill the entire mosaicked screens. To ensure optimal display quality, it is recommended to set the internal video source resolution to match the resolution of the mosaic ked screens.
- When the mosaicked screens use the external video source which cannot be scaled, the external video source resolution must match the resolution of the mosaic ked screens to display the external source image in full screen.
- After multi-screen mosaic is disabled in the software, each device will display the content that was

playing prior to mosaic. If there is no content stored on the device, it will display a black screen.

- If the video source of the devices other than the master device is changed to the internal source, the screens loaded by the devices will not display the mosaic image. After the video source control mode is set to HDMI preferred, the mosaic image will be displayed.

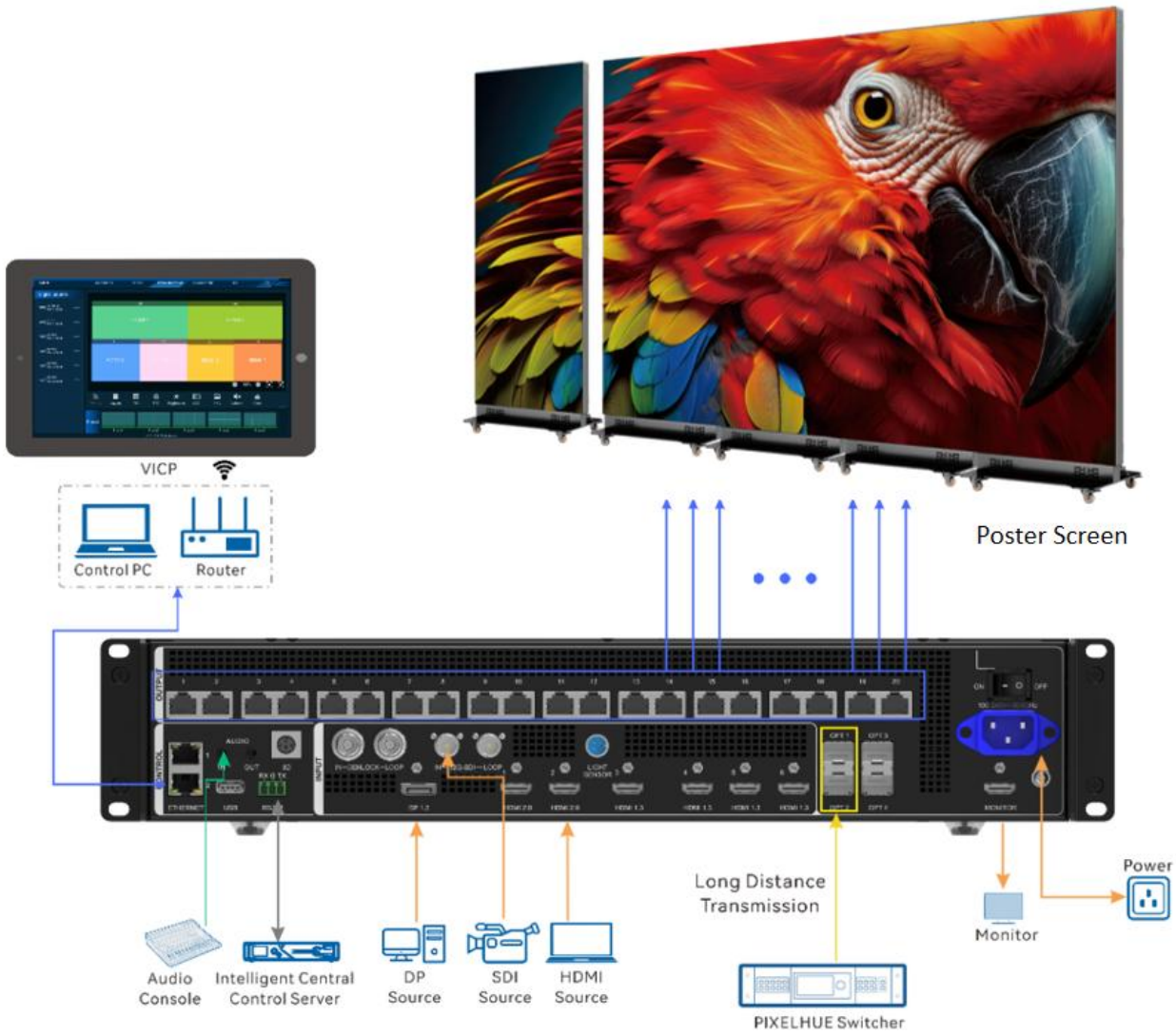
(4) Ultra Multi-Screen Splicing

1、Usage Instructions

When exceeding the own load capacity of the multi-screen splicing "233W (2160×1080 pixels)", the following steps for multi-screen splicing should be followed.

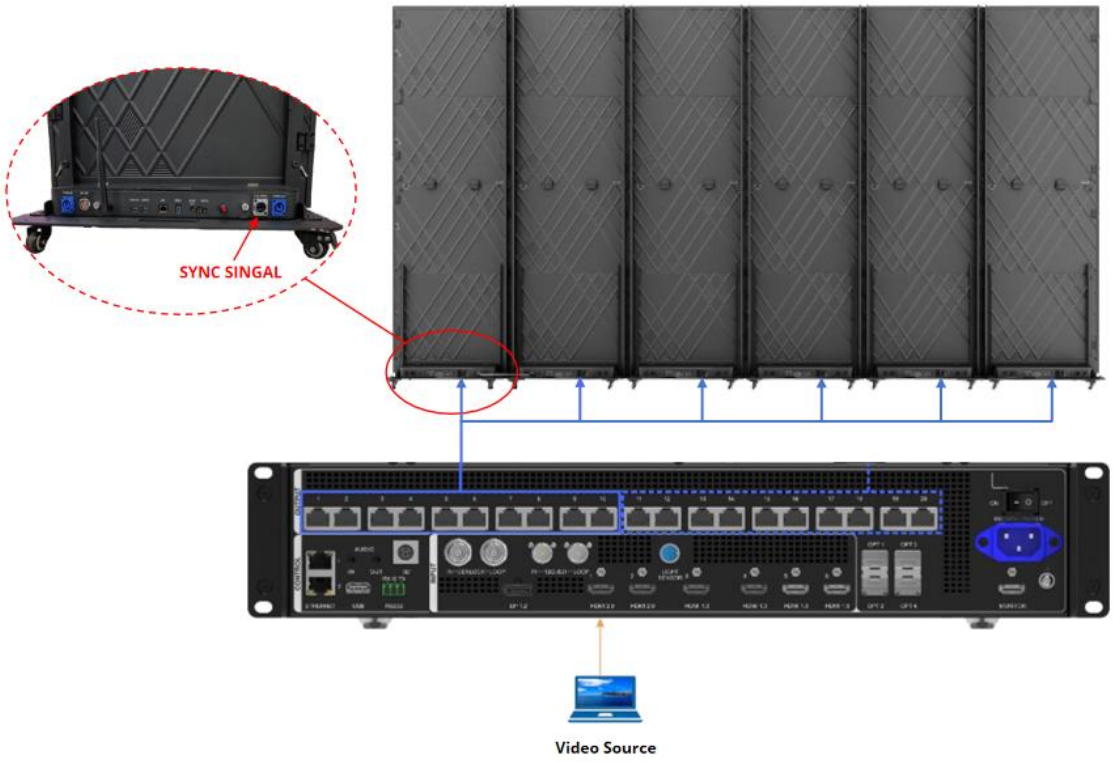
2、Application Scenarios

The application scenario diagram is drawn using the VX2000 Pro+PO1.5 Pro equipment as an example.



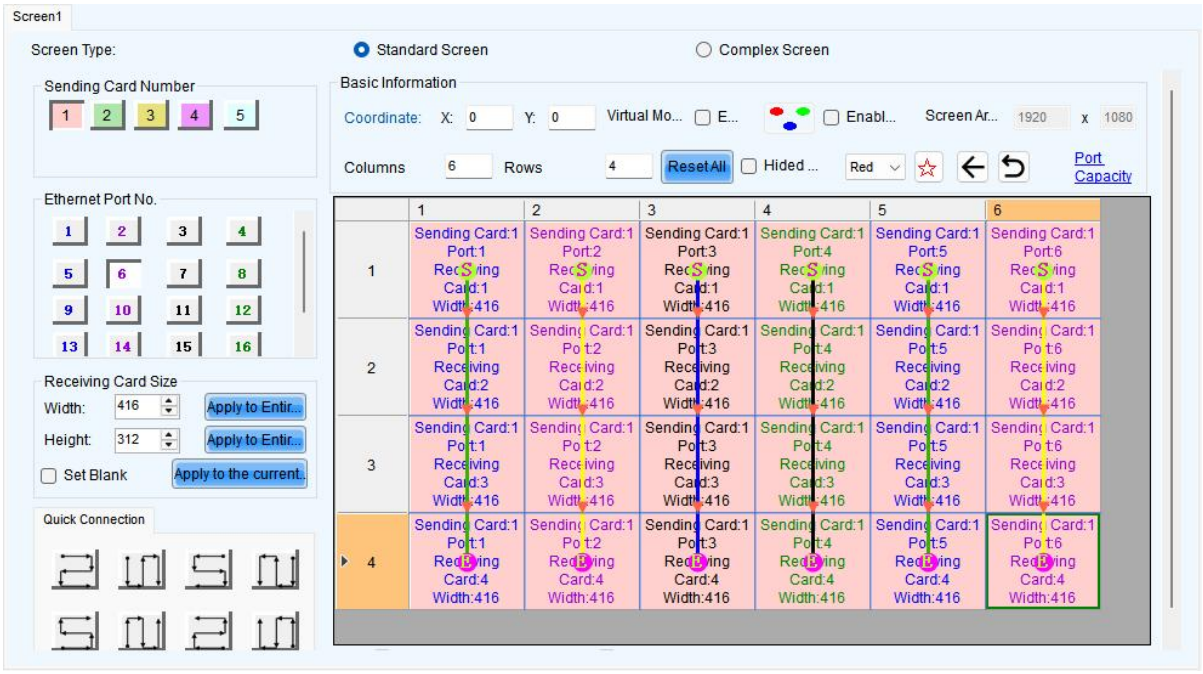
3、Hardware Connection

Take the VX2000 Pro + PO1.5 Pro equipment as an example for drawing.



Operating Procedure

- Step 1 Turn off the power of the control box and press the "ON/OFF" button.
- Step 2 The network port output of VX2000 Pro is directly connected to the "SYNC SINGAL" network port of PO1.5 Pro.
- Step 3 Launch NovaLCT and select "Login > Sync Advanced Login" to log in to NovaLCT.
- Step 4 Click "Display Configuration" to enter the display configuration interface.
- Step 5 Click "Next" to enter the "Display Configuration" interface.



10.0 Common Fault Analysis

specific circumstance

● No response when turning on, no screen display

Check if the power cord is connected or loose, and if the indicator light is working properly.

● The video is shaking and flickering

Check the power indicator status. If using a USB drive, verify the content size or 4K resolution. For HDMI playback, check for screen jitter, inspect the HDMI cable for looseness, and restart the computer.

● Screen is completely black

(1) Check whether the power supply is powered.

(2) Check whether the communication line is connected and whether there is any wrong connection.

● Displays missing pixels, color shifts in a column, or small color patches in the display

If missing pixels or a column of pixels is out of color, power off and replace the backup module. If color blocks appear on the display, check for missing correction coefficients or replace the backup module.

● Black screen in some areas

Check the surveillance footage for signal interruptions, inspect the internal network cables for looseness, verify the system's indicator lights function properly, and replace any faulty system cards. Contact the factory's technical team for guidance and collaboration.

11.0 Product Maintenance and Simple Repair

11.1 Product Maintenance and Precautions



matters need attention ：
The LED lights in the module are vulnerable to ESD (electrostatic discharge) damage.
To prevent damage, do not touch the module during operation or when it is turned off.



Matters need attention ：

1、Do not allow any part of the display to come into contact with any abrasive material.

2、Do not expose the display to an extremely hot or cold environment beyond the temperature specification.

3、Products should be checked regularly to see if they are safe and reliable, free from wear, deformation, corrosion, and other conditions that may affect the load handling capacity of the parts.

4、It is recommended to regularly inspect all installed components; for important components, the inspection frequency should be increased. If the components are damaged, the load handling capacity may be reduced, and they should be repaired or replaced immediately.

5、 New screen trial operation: New screens stored for less than 3 months can be used with normal brightness. For screens stored over 3 months, set the screen brightness to 30% during the first startup, run continuously for 2 hours, then turn off for 30 minutes. After restarting, set the brightness to 100% and run continuously for 2 hours. Check if the LED screen functions normally. If everything is fine, adjust the screen brightness as needed.

6、 LED displays are electronic devices. It is recommended to turn on the display regularly for operation. For installed displays that have not been powered on for more than 15 consecutive days, reduce the brightness when using them again to reduce aging. Refer to the test operation of new displays for the process. Do not run the display with high brightness or continuous white operation.

11.2 Spare Parts Replacement Procedure

(1) The suction cup is flatly attached to the LED module surface.



Note: The suction cup should be placed in the center of the module. Do not place it between the module and the joint of the module, or in the corner area of the module, so as to avoid deformation of the module and the occurrence of lamp collision.

(2) Lift the maintenance tool handle and gently pull the module outward to remove it.



(3) Open the spare parts package and remove the spare parts module. Check whether the surface of the spare parts module is not damaged or the lamp is knocked off.



(4) Replace the module vertically as much as possible, and pay attention to the direction of the module to be consistent with the direction of the original module removed.

(5) Replace and check the display.

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