



LDC1000XTSFP-COB-PLUS-L

User Manual



Security Information

 Warning! Before installation, connection, operation and maintenance, please carefully read the safety precautions listed in this section.	
	• This product is for professional use only.
	• In case of fire, fall and electric shock, the product has the risk of injury and death.
	• Please read the instruction manual carefully before installing, supplying power, operating or maintaining this product, understand the meaning of the signs marked in the instruction manual and on the product, and strictly follow the requirements listed in the safety protection measures.
 Electric shock prevention	• The product only allows access to 100V-240V, frequency in the range of 50-60Hz voltage.
	• The ground wire of the product is always on, please power off when not working.
	• Before using this product, ensure that all equipment is in good condition.
	• Do not use damaged, defective or overheated power cords or plugs
	• Please do not open any lid.
 Fire prevention	• Please do not use any method not described in the instruction manual to modify this product.
	• Please do not in the outside temperature higher than 40°C or below -20 °C in the outside environment, full power operation of this product
 Injury prevention	• Whenever you install, maintain, or move this product, block work areas or passages.
	• Check that all external masks and hardware are properly locked.
	• It shall be installed from top to bottom and disassembled from bottom to top during hoisting.
 Important Warning	• The external temperature range that this product can normally use: the maximum is 50 °C, and the minimum is -20 °C.
	• In order to avoid the risk of electric shock caused by high leakage currents, the installation process needs to be properly grounded as required.
	• To prevent electric shock, the product must be grounded.

 Power System	Power Cable	The power cable connected to the system has a special nature of protection, they are not available to the user. If the power cable is damaged, you can only replace it with a new one. Please do not try to repair it.
	Signal Line	The signal line connected to the system have a special nature of protection, they are not available to users. If the signal line is damaged, you can only replace it with a new one. Please do not try to repair it.

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1、 Introduction of LDC1000XXTSFP-COB-PLUS-L Series

1.1 About LDC1000XXTSFP-COB-PLUS-L Series

LDC1000XXTSFP-COB-PLUS-L Series delivers high-quality content with exceptional clarity and detail in indoor environments. Its flexible sizes and configurations allow it to adapt to virtually any space, including right-angle or inclined installations, enabling unique and visually striking setups. It offers a versatile, high-performance, and durable solution for a wide range of indoor video display applications.

2、 Product Features and Specifications

2.1 Product Display and Size

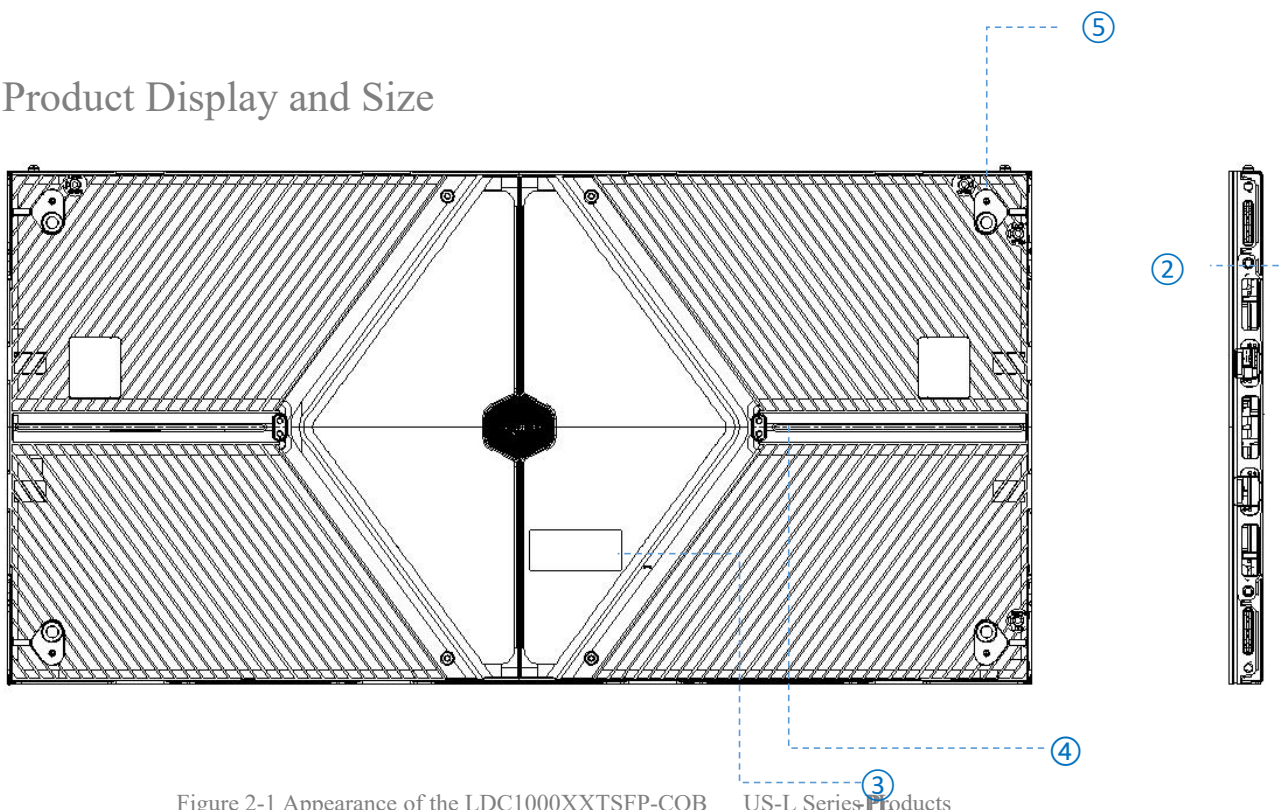


Figure 2-1 Appearance of the LDC1000XXTSFP-COB US-L Series Products

- ① Front-mounting screw holes
- ② Left and right cable-routing holes
- ③ Cabinet silkscreen and parameter label position
- ④ Rear bracket mounting holes
- ⑤ Cabinet lock connector hole positions

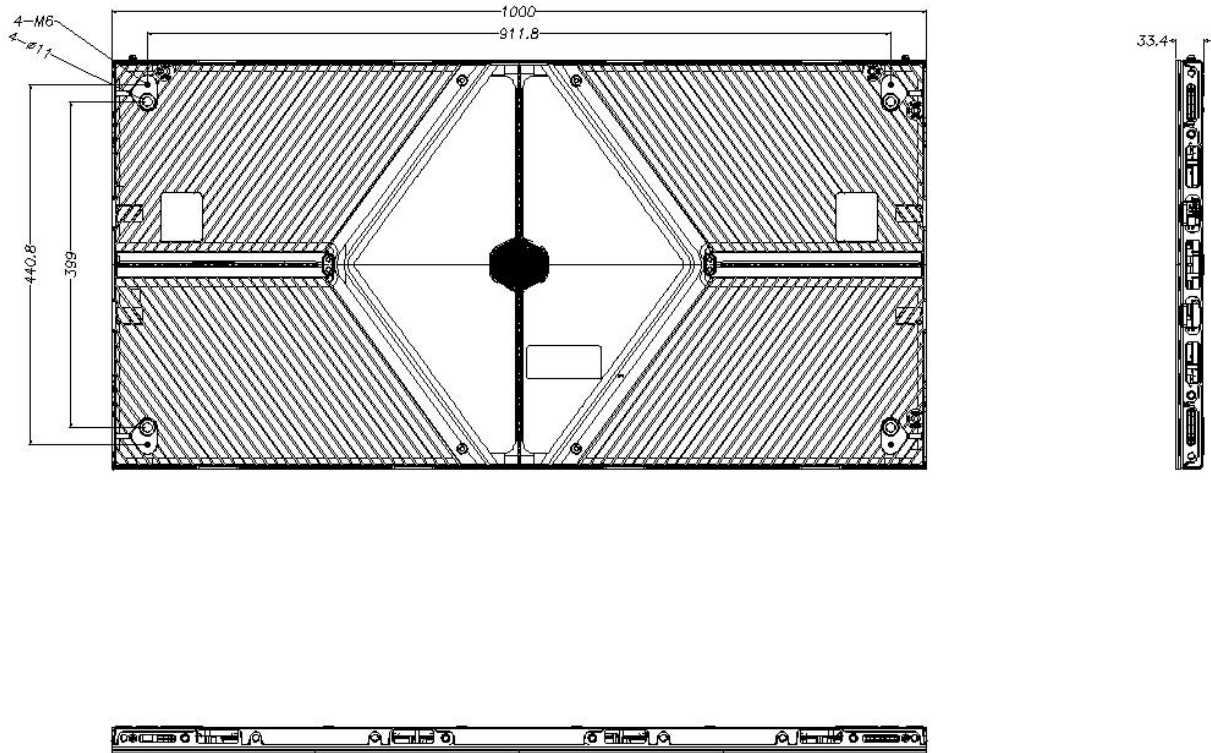
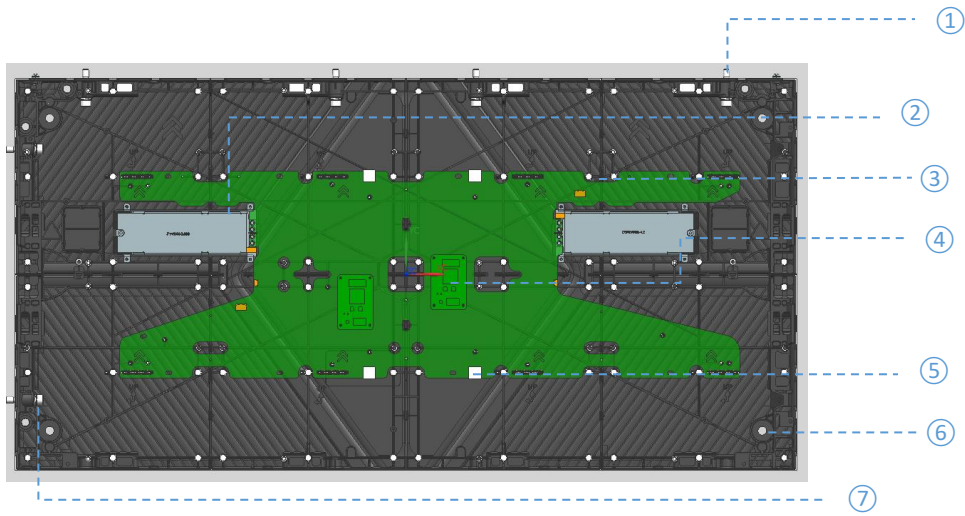


Figure 2-2 Cabinet Dimensions: 1000 × 500 mm

2.2 Features

- 1) 90° Rotational Design: The cabinet can be installed with a 90° rotation while the modules remain in the standard 0° orientation.
- 2) Magnetic Patented Design: Effectively resolves dust accumulation on magnets and prevents module-edge lifting.
- 3) Full Front Maintenance: Modules, power supplies, receiving cards, and HUB boards are all fully front-serviceable.
- 4) Diversified Sizes: Die-cast aluminum cabinets come in a wide range of dimensions to support customized configurations.
- 5) Multiple Installation Methods: Supports hanging, wall-mounted, ground-standing, and flush wall installations.
- 6) Redundancy: Supports dual signal and power redundancy (available only for 1000×500 and 1000×250 cabinets).
- 7) Intelligent Calibration: Enables automatic brightness, color, and geometric adjustments for improved uniformity.
- 8) Black-Screen Energy-Saving Design: Reduces energy consumption and operating costs while extending product lifespan and enhancing system stability.
- 9) Rotational Hard Connection: Cabinets can be rotated and hard-connected to achieve various creative shapes.
- 10) Cabinet Sharing: One cabinet design is shared for both COB and SMD configurations.

2.3 Cabinet Main Components



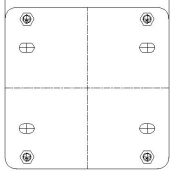
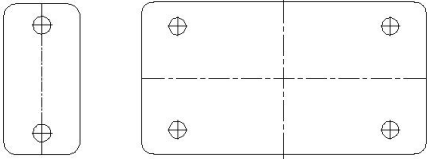
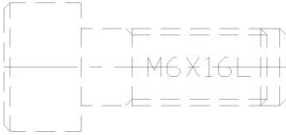
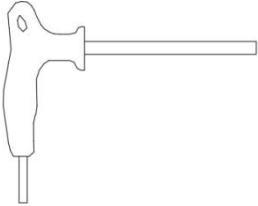
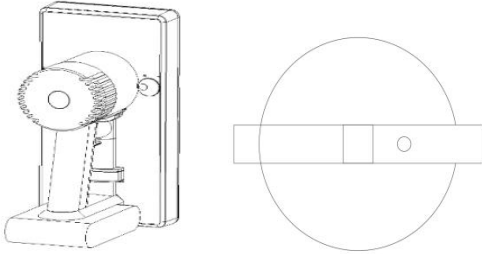
- ① Top and bottom mounting screws
- ② Power supply
- ③ HUB board
- ④ Receiving card
- ⑤ Network port
- ⑥ Front-mounting screw holes
- ⑦ Left and right mounting screws

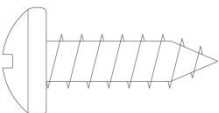
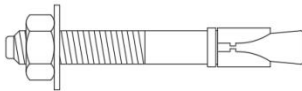
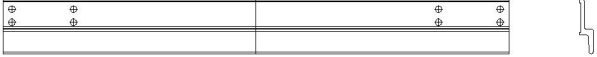
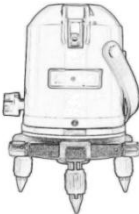
2.4 Specification Sheet

Model Name	P1.5	P1.9	P2.5	P2.6	P2.9	P3.9
Pixel Pitch (mm)	1.56	1.95	2.5	2.6	2.97	3.91
Pixel Density (dot/m ²)	409600	262144	160000	147456	112896	65536
LED Sealing Type	COB	SMD1212	SMD1515	SMD1515	SMD2121	SMD2121
Module Dimension (mm * mm)	250x250					
Module Weight (kg)	0.5					
Module Resolution(PX* PX)	160x160	128x128	100x100	96 x96	84x84	64x64
Drive Mode	Constant Current					
Horizontal Viewing Angle (Deg)	160	160	160	160	160	160
Vertical Viewing Angle (Deg)	160	160	160	160	160	160
Brightness (cd/m ²):	600-1000	800-1000	800-1000	800-1000	800-1000	800-1000
Grey Scale (bit) :	≥14	≥14	≥14	≥14	≥14	≥14
Refreshment (Hz):	3840-7680	7680	7680	7680	7680	7680
Max Power Dissipation(W/m ²)	400-540±3%	400-540±3%	400-540±3%	400-540±3%	400-540±3%	400-540±3%
Average Power consumption ((W/m ²)	120-180	120-180	120-180	120-180	120-180	120-180
Cabinet Size (mm * mm)	1000x500/750x500/500x500/1000x250/750x250/500x250/250x500/250x250					
Cabinet Weight (Kg/m ²)	17.4					
Cabinet Thickness (mm)	33.4					
Working Voltage (V)	AC100-240V					
Working Temperature Range (°C)	-20~ +55					
Working Humidity Range (RH)	10%~90%					
Storage Temperature Range (°C)	-40~ +80					
Storage Humidity Range (RH)	10%~85%					
Waterproof & Dustproof Level	IP20					
Working Environment	Indoor					
Maintenance Method	Front Maintenance					
Installation Method	Hanging / flush wall/ stacking/ wall-mounted					
Certification	CE (EMC A 、LVD) 、FCC、ET PROL、CB					

3. Installation Method

3.1 Materials Required Before Installation

Connecting plates (Used for cabinet installation during front maintenance)	
Top connecting plate (Used for fixing the cabinet to the hanging beam)	
Mounting plate screws (M6*55) (Used for securing the hanging beam to the connecting plate)	
Front-maintenance plate screws (M6*16) (Used for securing the cabinet to the connecting plate)	
Lock-plate tools (Allen wrenches M6 and M8)	
Module front-maintenance tool (Right-side tool for COB modules)	

PA5*25 self-tapping screws (Used for mounting on wooden walls)	
M8*100 expansion bolts (Used for mounting on concrete walls)	
1-meter wall-mount beam (Used for wall-mount installation)	
Wall-mount hook beam (Used for wall-mount installation)	
1-meter hanging beam (Used for hanging installation)	
Allen wrench	
Laser level	

3.2 Installation Methods

3.2.1 Direct Wall-Mount Installation (Wooden Wall & Concrete Wall)

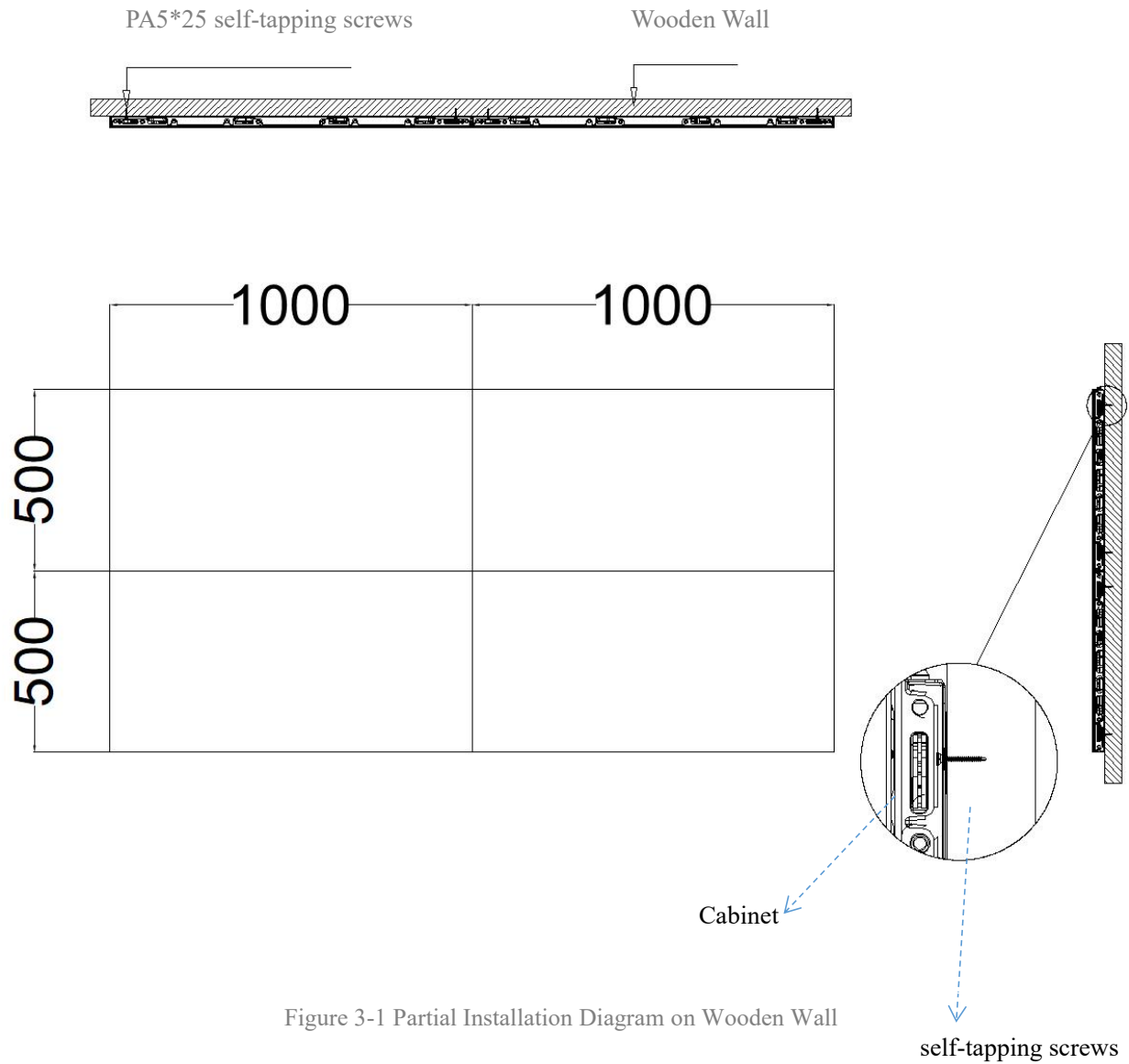


Figure 3-1 Partial Installation Diagram on Wooden Wall

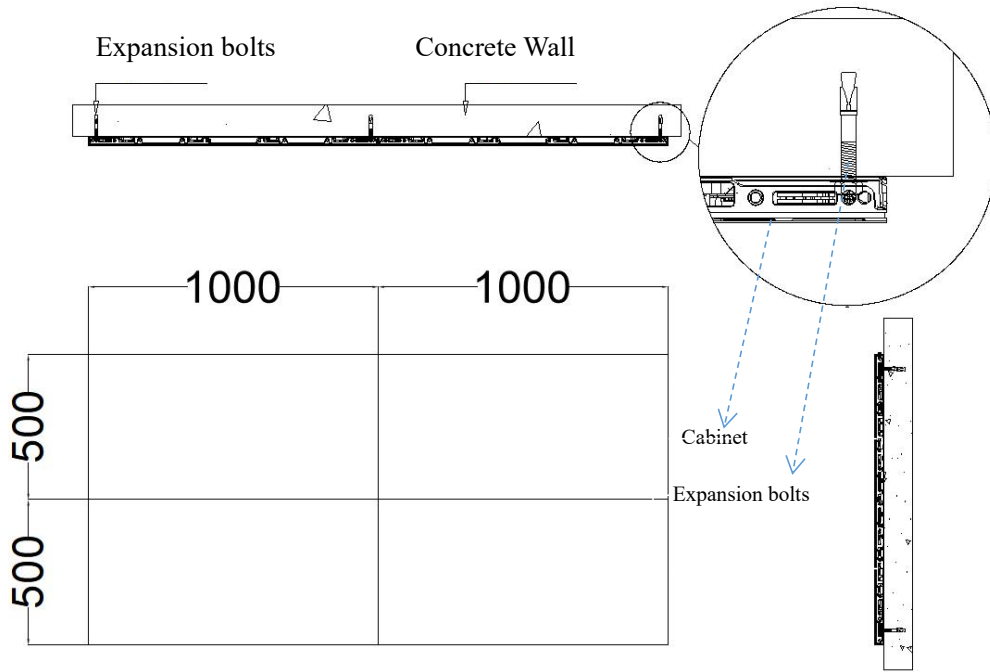


Figure 3-2 Partial Installation Diagram on Concrete Wall

Pre-Installation Preparation:

- Check whether the site wall meets construction requirements and whether the materials are standard.
- Use a laser level to inspect the installation surface and ensure the wall is flat.

Step 1: Remove the cabinet and use a vacuum suction tool to detach the modules from the cabinet. If the delivered cabinet does not come with modules installed, this step can be skipped.

Step 2: Use a hand drill to fix the cabinet to the wall with screws (Wooden Wall: self-tapping screws; Concrete Wall: expansion bolts). Install the four corners of the cabinet in sequence to complete the installation of a single cabinet. During installation, it is recommended to first install the bottom row of cabinets and secure the left and right connection screws of the cabinets.

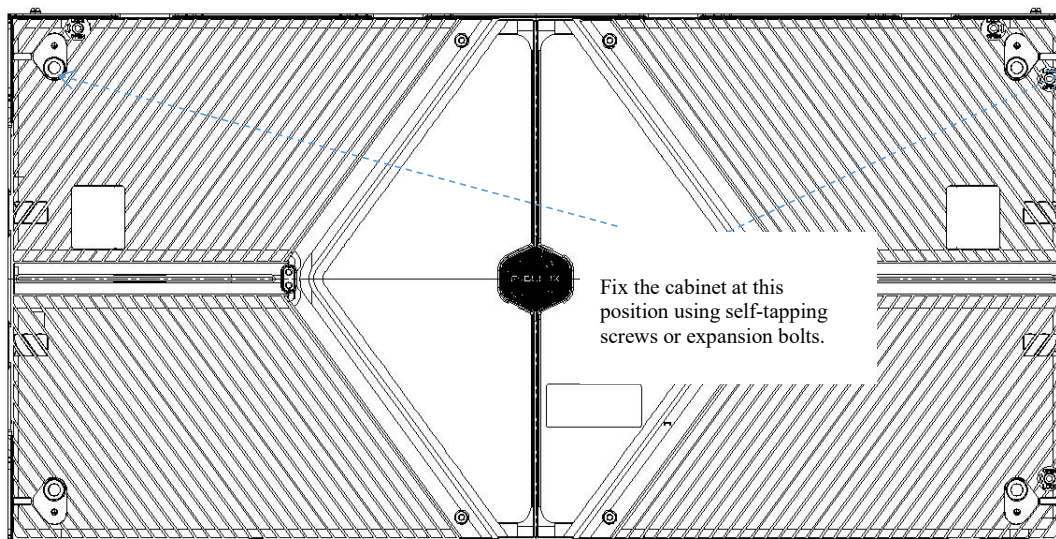


Figure 3-3 Wooden Wall Installation

Step 3: After installing the bottom row of cabinets, continue installing upwards row by row. Secure the top and bottom connection screws as well as the left and right connection screws between cabinets until the entire screen is fully installed.

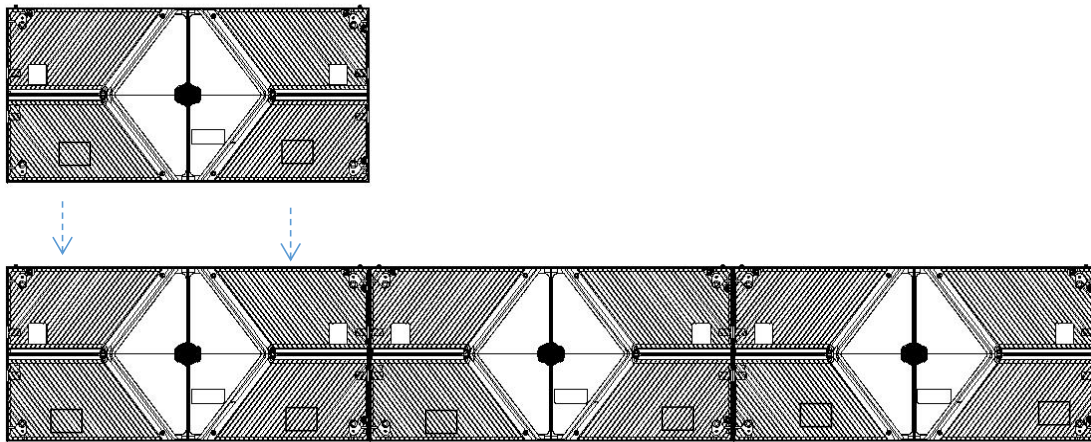
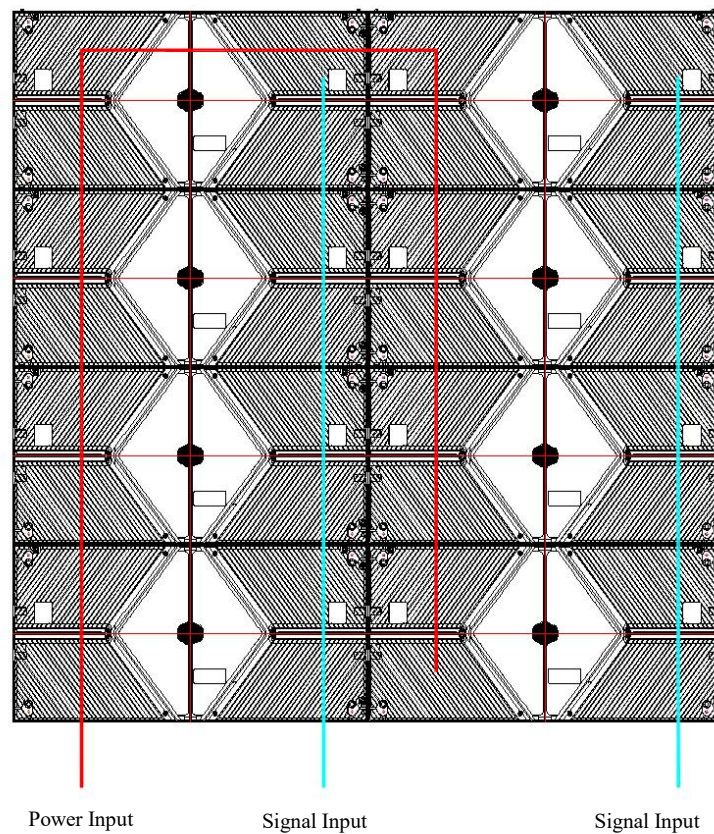


Figure 3-4 Securing the Top-Bottom and Left-Right Connection Screws

Step 4: Follow the wiring diagram provided by our company to connect all cables, ensuring consistency with the drawings. After completing all connections:

- At 220V, one circuit can power up to 8 cabinets.
- At 110V, one circuit can power up to 4 cabinets.
- Red wires indicate power lines, and blue wires indicate signal lines.



Step 5: Power on and check whether all cabinets are receiving power, confirm that the receiving cards are receiving signals, and verify that the indicator lights are functioning properly.

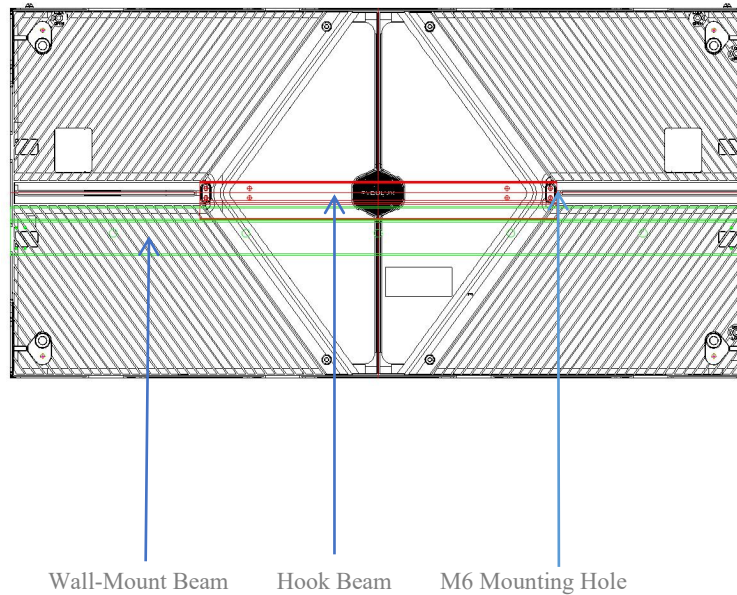
Step 6: Install the modules. First, hang the module safety rope on the designated installation point of the cabinet, then place the modules back in sequence. Ensure that the display surface is flat and there is no front-to-back misalignment.

3.2.2 Wall-Mount Beam Installation

Pre-Installation Preparation:

1. Check whether the site wall meets construction requirements and whether the materials are standard. Use a laser level to ensure the concrete installation surface is flat.
2. For screens composed of multiple cabinets, it is recommended to first remove all modules to facilitate cable routing and connection during cabinet installation. After all cabinets are installed, reconnect the cables according to the wiring diagram provided by our company before reinstalling the modules. If the delivered cabinets do not come with modules installed, this step can be skipped.

Step 1: Adjust the hook beam to align with the cabinet holes, then secure it in place using M6*20 screws.



Step 2: Drill holes at the corresponding horizontal positions on the wall and install the wall-mount beam using M8*100 expansion bolts.

Step 3: Place the pre-assembled cabinets along with the hook beam onto the wall-mount beam to complete the installation. After installation, check whether the setup is stable.

Step 4: Repeat the above steps to install the remaining cabinets. During installation, secure the top-bottom and left-right connection screws between cabinets, and check for stability once all cabinets are installed.

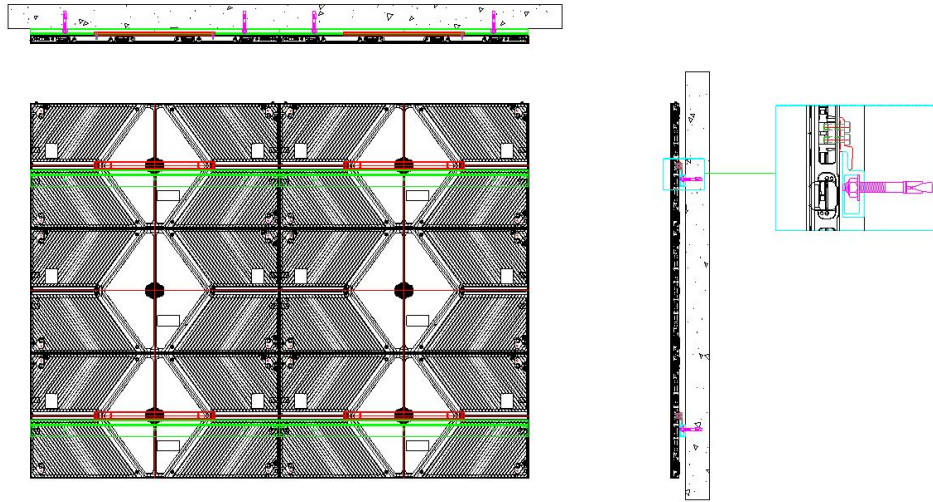
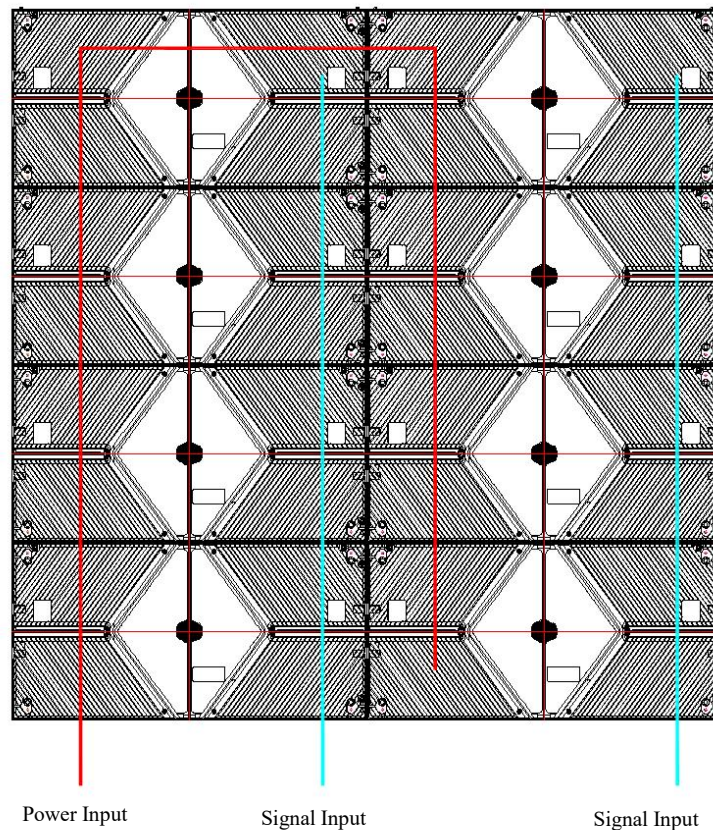


Figure 3-5 Wall-Mount Beam Installation Diagram

Step 5: Connect all cables according to the wiring diagram provided by our company, ensuring consistency with the drawings. After completing all connections, install the cabinet modules.

- At 220V, one circuit can power up to 8 cabinets.
- At 110V, one circuit can power up to 4 cabinets.
- Red wires indicate power lines, and blue wires indicate signal lines.



Step 6: Power on and check whether all cabinets are receiving power, verify that the receiving cards are receiving signals, ensure that the indicator lights are functioning properly, and confirm that the screen cabinets are aligned.

Step 7: Install the modules. First, hang the module safety rope on the designated installation point of the cabinet, then place the modules back in sequence. Ensure that the display surface is flat with no front-to-back misalignment.

3.2.3 Hanging Installation

Note: The hanging installation method can support up to 20 cabinets in height.

Pre-Installation Preparation:

- Check whether the site meets the requirements for hanging installation, and ensure that the hanging points, suspension ropes, and other equipment comply with installation standards.
- For screens with a large number of cabinets, it is recommended to first remove all modules to facilitate cable routing and connection during cabinet installation. After all cabinets are installed, reconnect the cables according to the wiring diagram provided by our company before reinstalling the modules. If the delivered cabinets do not come with modules installed, this step can be skipped.

Step 1: Locate the hanging beam corresponding to the cabinet, install it according to the designated holes, and adjust the flatness of the beam surface. Securely install the first cabinet.

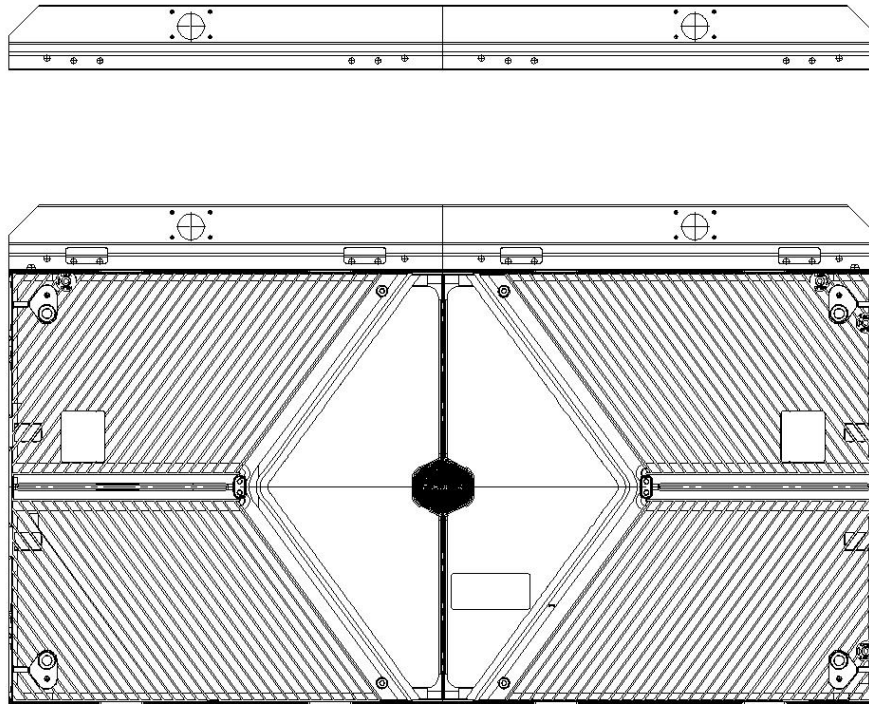


Figure 3-6 Single Cabinet and Hanging Beam Installation Diagram

Step 2: Using the same method as the previous step, install the second hanging beam and cabinet, and secure the left-right connection screws between the cabinets.

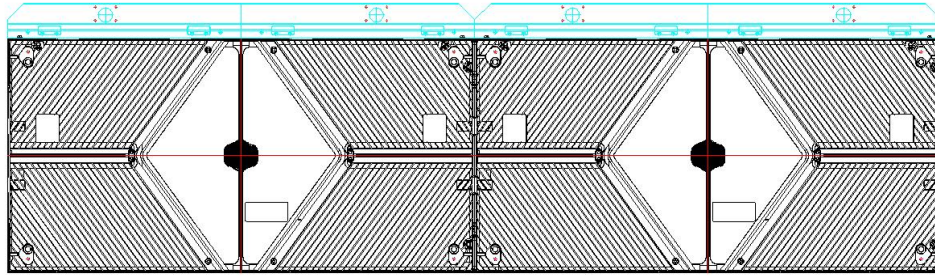


Figure 3-7 Multiple Cabinets and Hanging Beam Installation Diagram

Step 3: Using the same method as above, install the remaining cabinets. Secure the left-right and top-bottom connection screws between cabinets, install the corresponding connecting plates, and adjust for flatness.

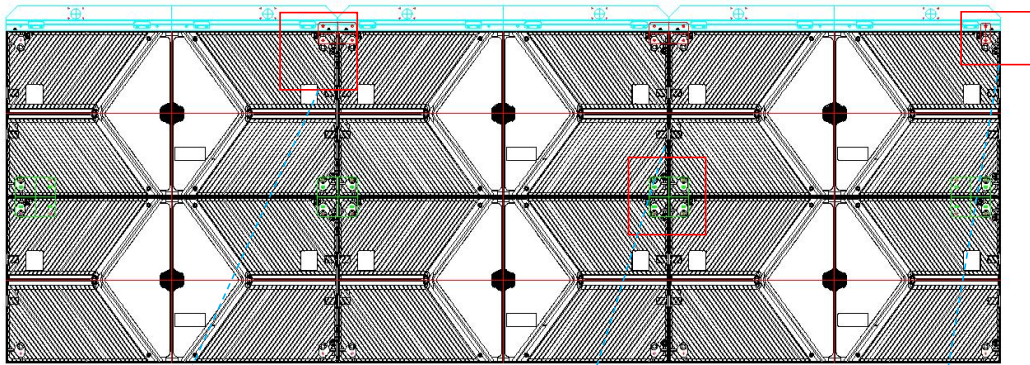
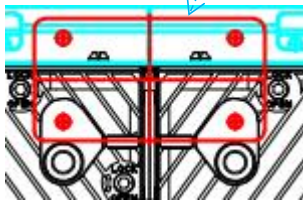
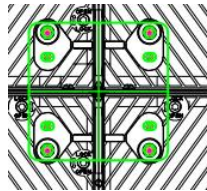
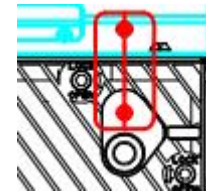
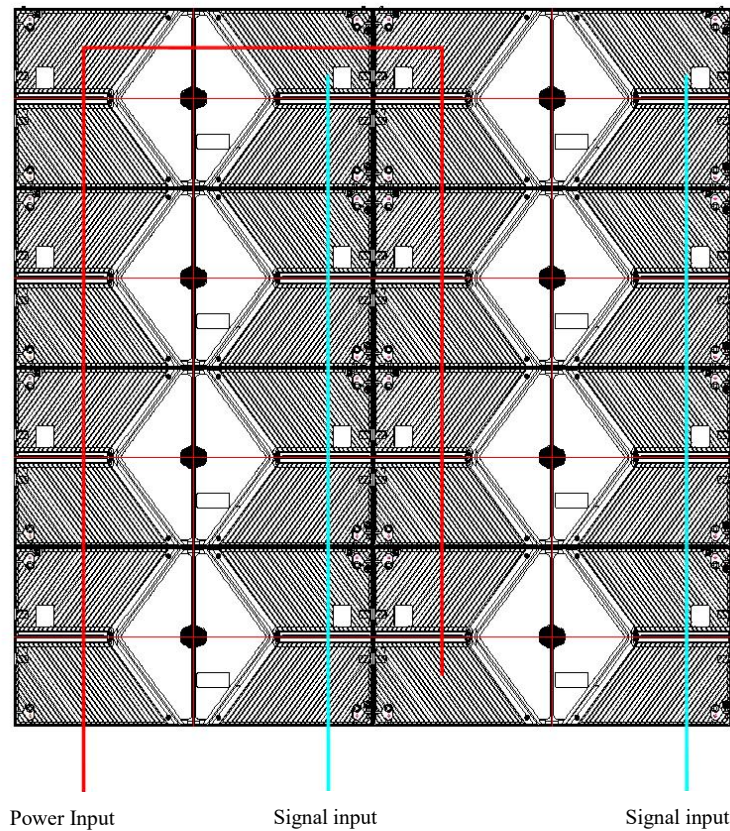


Figure 3-8 Rear View of Hanging Installation

Hanging Beam to Cabinet
Connecting PlateCabinet-to-Cabinet
Connecting PlateSide Hanging Beam to Cabinet
Connecting Plate

Step 4: Connect the power and network cables according to the wiring diagram provided by our company. Power on and check whether all cabinets are receiving electricity, verify that the receiving cards are receiving signals, and ensure that the indicator lights are functioning properly.

- At 220V, one circuit can power up to 8 cabinets.
- At 110V, one circuit can power up to 4 cabinets.
- Red wires indicate power lines, and blue wires indicate signal lines.



Step 5: Install the modules. First, hang the module safety rope on the designated installation point of the cabinet, then place the modules back in sequence. Ensure that the display surface is flat with no front-to-back misalignment.

3.2.4 Steel Structure Rear Installation

Pre-Installation Preparation:

- 1) Check whether the on-site steel structure matches the dimensions in the drawings, ensure the welds are solid, and verify that the materials are standard. Use a laser level to inspect the steel structure surface and ensure that the square tubes used for securing the screen are aligned on both vertical and horizontal planes.
- 2) Use a laser level and spirit level to check that the bottom structure of the display is horizontal and that the vertical rods are perpendicular. Once all inspections are completed and no issues are found, proceed with the installation.
- 3) For screens composed of multiple cabinets, it is recommended to first remove all modules to facilitate cable routing and connection during cabinet installation. After all cabinets are installed, reconnect the cables according to the wiring diagram provided by our company before reinstalling the modules. If the delivered cabinets do not come with modules installed, this step can be skipped.

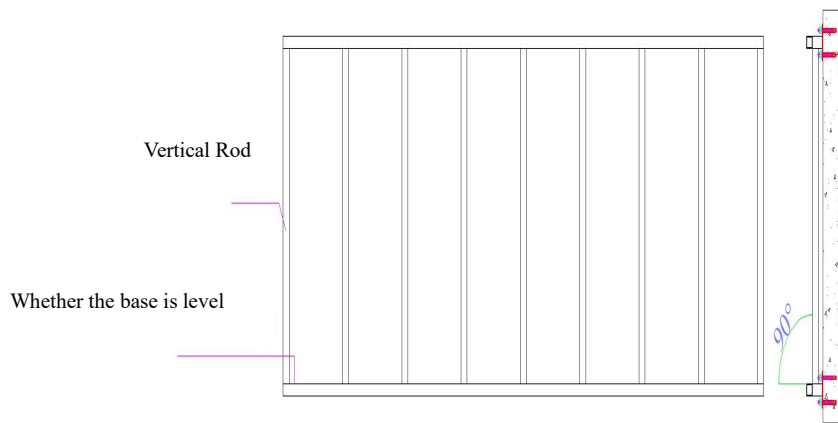


Figure 3-9 Inspection for Steel Structure Rear Installation

Step 1: Place a row of cabinets (approximately five) evenly on the horizontal square tube, aligning both sides as closely as possible with the center of the vertical rods. Secure the corresponding connecting plates and tighten the cabinet-to-connecting-plate screws.

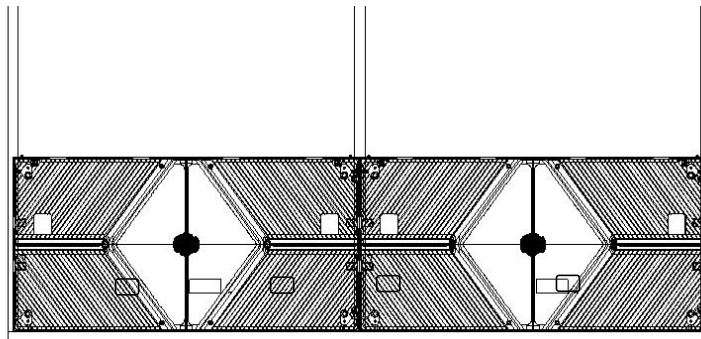


Figure 3-10 Connecting Plate Installation Diagram

Step 2: After installing the bottom row of cabinets using the same method, continue installing the upper rows. Secure the connection screws between cabinets and tighten the connecting plates at the back of the cabinets.

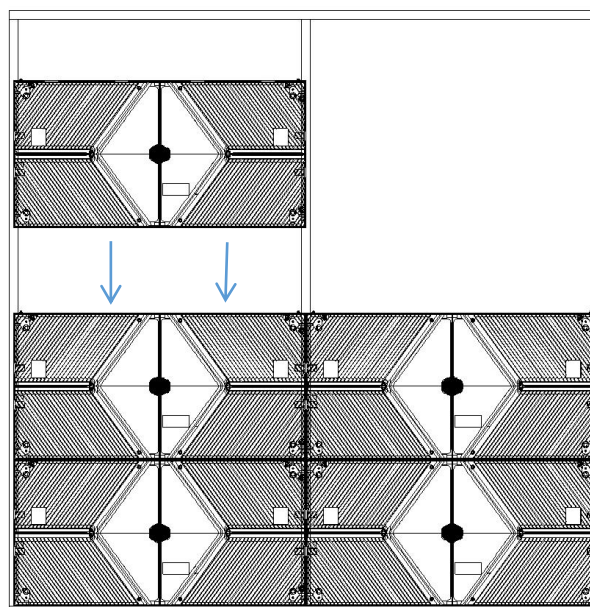


Figure 3-11 Sequential Cabinet Installation

Step 3: Repeat Steps 1 and 2 until the entire screen installation is completed.

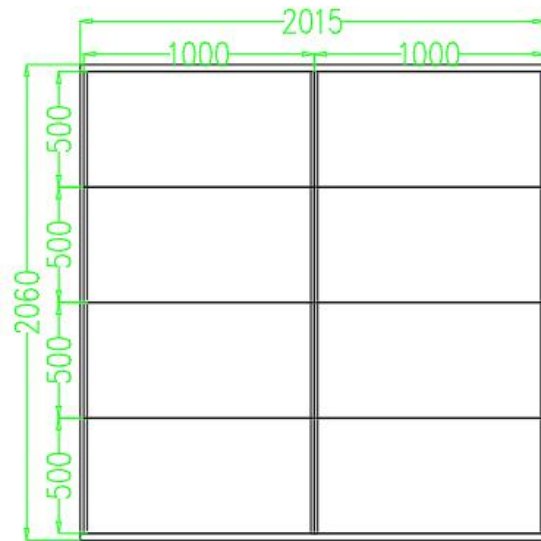
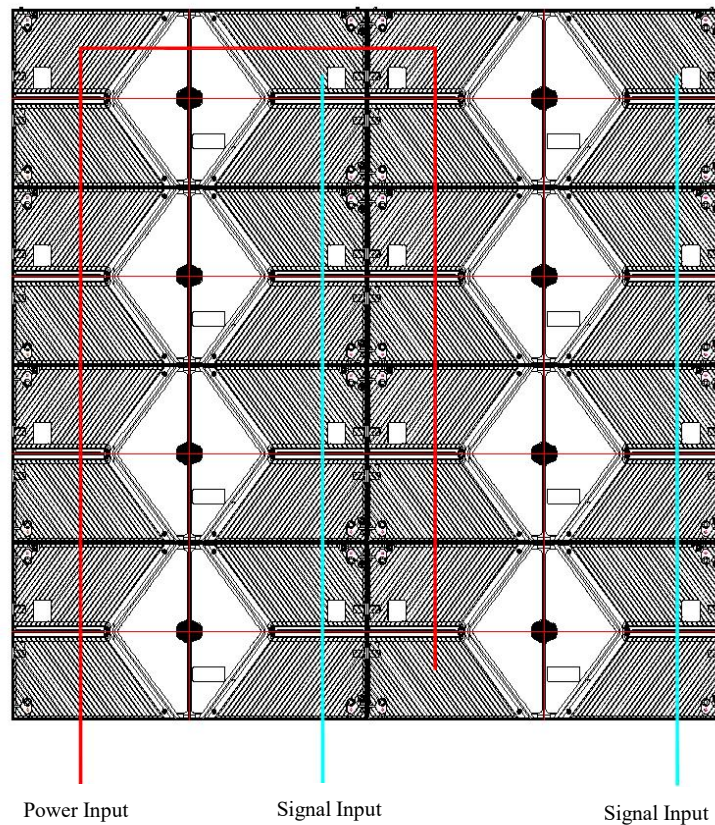


Figure 3-12 Partial Installation Diagram of the Entire Screen

Step 4: Connect the power and network cables according to the wiring diagram provided by our company. Power on and check whether all cabinets are receiving electricity, verify that the receiving cards are receiving signals, and ensure that the indicator lights are functioning properly.

- At 220V, one circuit can power up to 8 cabinets.
- At 110V, one circuit can power up to 4 cabinets.
- Red wires indicate power lines, and blue wires indicate signal lines.



Step 5: Install the modules. First, hang the module safety rope on the designated installation point of the cabinet, then place each module carefully onto the cabinet, ensuring the display surface is flat and that no LEDs are misaligned front-to-back.

4、 Front Maintenance of Cabinets

4.1 Use of Maintenance Tools

Turn on the front-maintenance tool and align it with the center of the module. After approximately 3 seconds, pull the module out along the vertical direction relative to the module.

- If the suction is insufficient, press the MAX button to increase to maximum suction.
- Catch the module by hand, turn off the maintenance tool, and handle the module carefully.

Then, use a screwdriver to remove the fixing screws and take out accessories such as the power supply, receiving card, and HUB board.

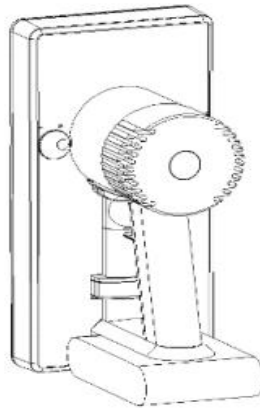


Figure 4-1 Front Maintenance Tool

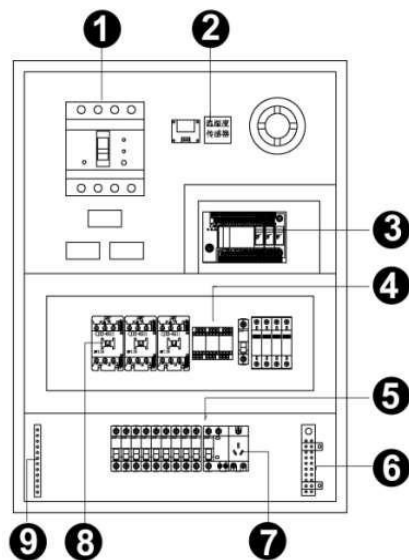
Note:

Hold the magnetic suction tool with your right hand and support the module with your left hand after suctioning it out to prevent it from falling.

When installing the module, ensure that the arrow on the back of the module aligns with the orientation on the HUB board slot.

4.2 Intelligent Power Distribution Cabinet

The power distribution cabinet is used to distribute electricity to the LED display and features real-time monitoring of external environmental parameters such as temperature, humidity, smoke, and input voltage. The control software includes scheduled start/stop functionality, allowing the LED display to be remotely powered on or off at any set time.



No.	Component	Remarks
1	Main Switch	MCCB
2	Temperature Sensor	For temperature monitoring
3	PLC	For intelligent control
4	Relay	Controls the AC contactor on/off
5	Circuit Breaker	MCB, connected to display live lines
6	Neutral Socket	Connects the neutral line
7	Power Port	/
8	AC Contactor	Controls current on/off
9	Grounding Socket	Connects the ground line

The PLC communication system uses RS485 and employs an RS232-to-RS485 converter from the control computer. For more detailed information, please refer to our Intelligent Power Distribution Management System Manual.

5. Nova Control System

5.1 Overview of The System

This product uses Nova's receiving card, with the control software Nova LCT, the user can control all the key information of the display screen through the control software, and realize the various settings of the LED display screen.

5.2 Working Environment Requirements

In order to ensure the stability and safety of the system during operation, the working environment has the following requirements:

- (1) Hardware requirements: Brand computer, I7 processor/16G memory/1T hard disk/4K discrete graphics card/23 inch display
- (2) system requirements: Operating system for win10 and above.
- (3) Network requirements: The display needs to be connected to the network when online calibration.

5.3 Installation of Nova LCT

The installation method of Nova LCT is the same as that of ordinary software. Just install it according to the prompts of the installation wizard.

If you encounter an anti-virus software or firewall pop-up prompt, please select Allow, because the serial port driver may need to be installed during the installation process.

If there is no serial port driver on the client computer or the serial port driver version is too low, the installation program will automatically update the serial port program on the client computer to the version of the serial port driver in the installation package.

5.4 Operation of Nova LCT

5.4.1 Preparation

Before operating Nova software, please connect the computer and send the card and large screen as shown in the figure.

5.4.1.1 Connection of synchronous control system:

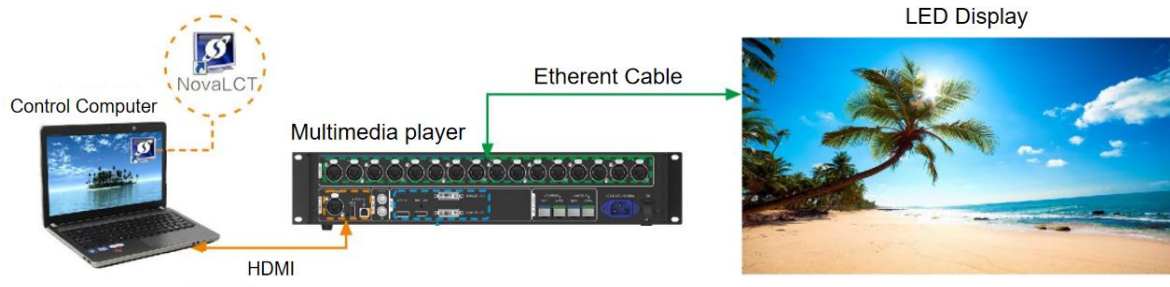


Fig 5-1 Direct connection

5.4.1.2 Connection of asynchronous control system:

Direct connection of network cable: please open DHCP on the software Vip lex express and select the network

card, and refresh the asynchronous device after confirmation; Wi Fi connection: connect Wi Fi at the beginning of AP on the computer, e.g. AP10001066, password: SN2008@+

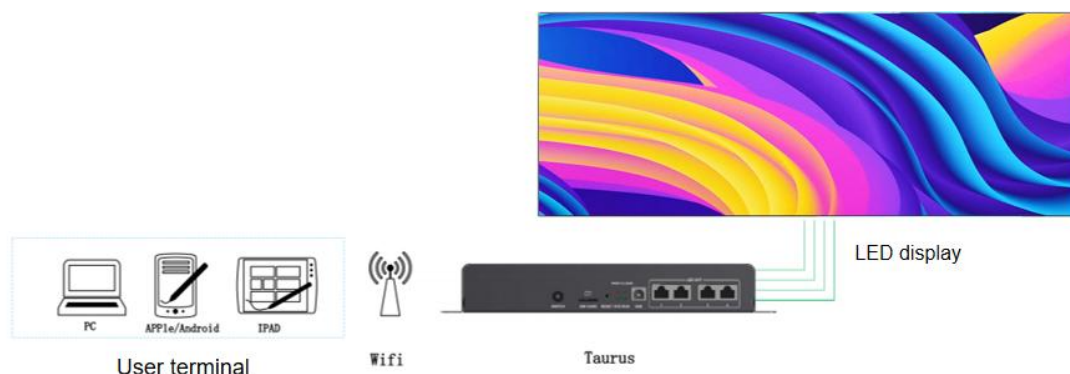


Fig 5-2 asynchronous control

5.4.2 Software Installation

Visit the official website of Nova Nebula, select "Download Center> Software and Materials", and click "Display Debugging Software NovaLCT". In the download list, download the required version of the software installation package.



5.4.2.1 Installation method

1) Before installing the NovaLCT, please prepare a computer with the Windows system on and close the antivirus software.

2) Software installation package decompression, run ". exe" file, according to the installation wizard prompts to complete the software installation. If prompted by the firewall, select Allow. If there is no serial port driver on the computer, the NovaLCT installer will automatically install or update the serial port driver.

5.4.2.2 Installation results

If the installation is successful, the shortcut  If the installation is successful, the shortcut  and  icons appear on the taskbar.

5.4.3 Connection of Equipment

5.4.3.1 Connecting PC and Transmit Card

The PC on which the NovaLCT is installed is connected to the sending card through a control line (USB cable or network cable), as shown in the figure 5-3, wherein the sending device is shown in MCTRL4K. All control commands, parameters and configuration files are transmitted via the control line.

The PC may also be separately connected to a plurality of transmission cards via a control line. Select a target communication port in the NovaLCT to operate.

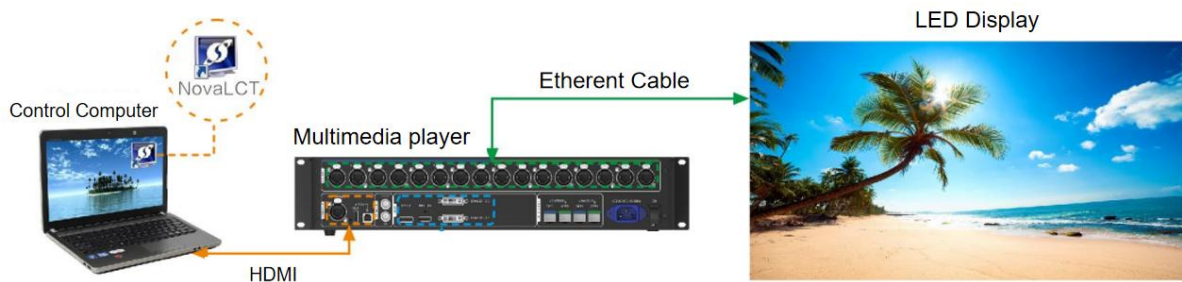


Fig 5-3 Hardware connection example

When the receiving card supports the non-sending card mode, the computer with the NovaLCT installed can be directly connected to the receiving card through the network cable.

5.4.3.2 Connection NovaLCT and sending card

When the hardware connection is normal, NovaLCT will automatically connect to the sending card as long as the sending card is operating normally. After the connection is successful, the main window displays the number of sending cards and the monitoring information of the control system, as shown in Fig 5-4.

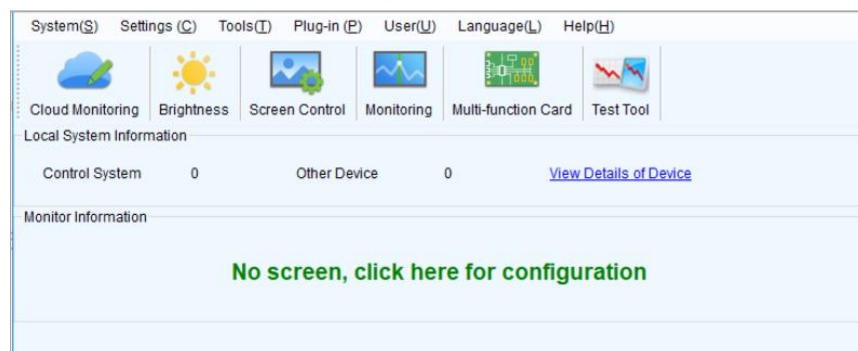


Fig 5-4 Main window (not logged in)

Click View Device Details to view the port, device name, quantity, and SN. The information of the communication port includes an IP address indicating that the network port is used for communication, and the character "USB" indicates that the USB interface is used for communication. The SN is the unique identification of the sending card.

Connection-related operations:

- ❖ **Reissue card**

Select System> Reconnect .

- ❖ **Restart service**

5.4.4 User Login

5.4.4.1 Connected sending card

When the sending card is connected, the user can directly use the functions visible in the software without logging in. If you need to use advanced features, you need to log in to the NovaLCT.

Method of operation:

Choose Login> Synchronize Advanced Login, enter the password, and click Login ". The default passwords are "admin" and "666". After successful login, the main window is shown in fig 5-5.

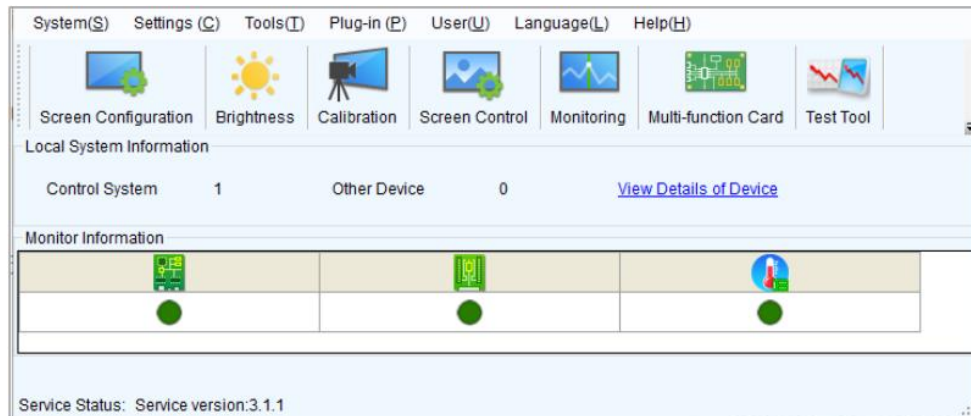


Fig 5-5 Main window (logged in)

Other operations:

- 1) To log out, select Login> Log Out ".
- 2) To modify the login password, select Login> Modify Password ".

5.4.4.2 Send card not connected

When the sending card is not connected, if the user wants to know the specific function of the software, he can log in to the demo mode.

Method of operation:

Choose Login> Demo Mode Login, enter admin or 888, and click Login ".

5.4.5 Display Configuration

Note: The NovaLCT only supports the configuration of the regular display screen, and does not support the configuration of the special-shaped screen.

❖ Load from Local

- a. Select Local Recovery Profile .
- b. Click Browse, select the profile, and click Open .
- c. Click Next .

- If the local configuration file is in .zip format, see the figure and steps in Loading from the cloud platform.
- When the local configuration file is in ".scfg" format, the interface displays the loading progress. When the load is complete, the dialog box will automatically close as shown below.

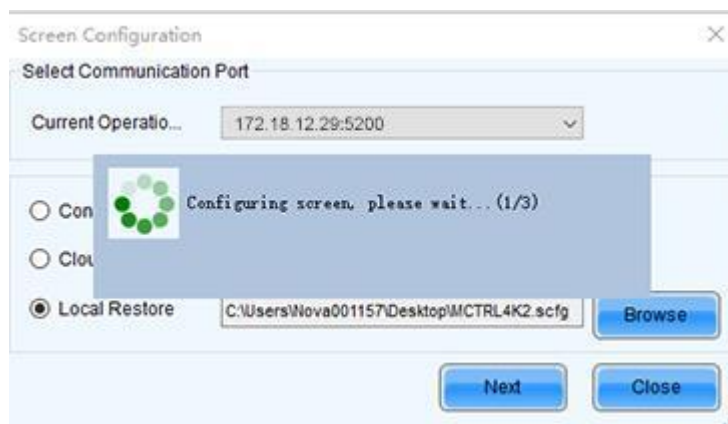


Fig 5-6 Display screen configuration interface

5.4.6 Manual Screen Matching

For the usual display screen, the basic screen matching operation can be completed by setting the input source, lighting the display screen and connecting the display screen in turn.

(The NovaLCT will send the card and receive the card according to the functions supported by the display screen configuration interface.).

5.4.6.1 Setting input source

Step 1: Select "Login> Sync Advanced Login" from the menu bar, enter the password and click "Login". The default passwords are "admin" and "666".



Fig 5-7 Main window (logged in)



Step 2: Click , or select "Settings> Display Configuration" from the menu bar to open the as shown in Figure 5- 7 dialog box.

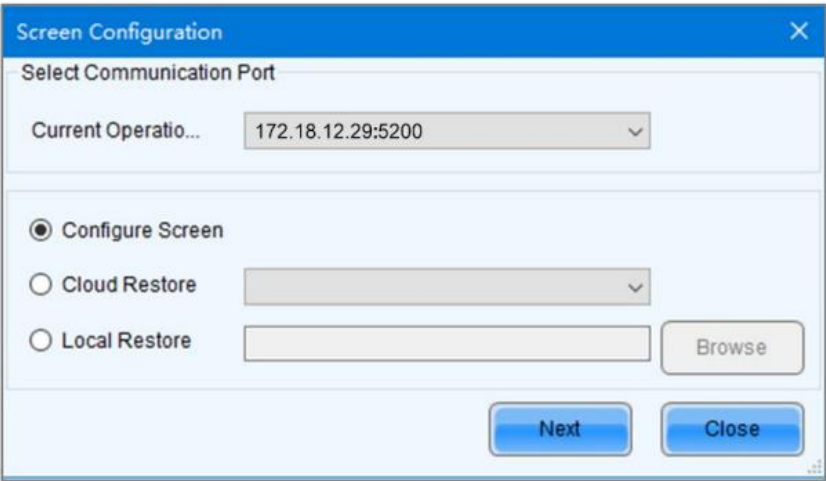


Fig 5-8 Screen configuration

Step 3: Select a communication port.

When the computer is connected to multiple sending cards through the control line, there will be multiple drop-down items.

Step 4: Select "Configure Display" and click ‘Next’ to open the ‘Display Configuration’ dialog

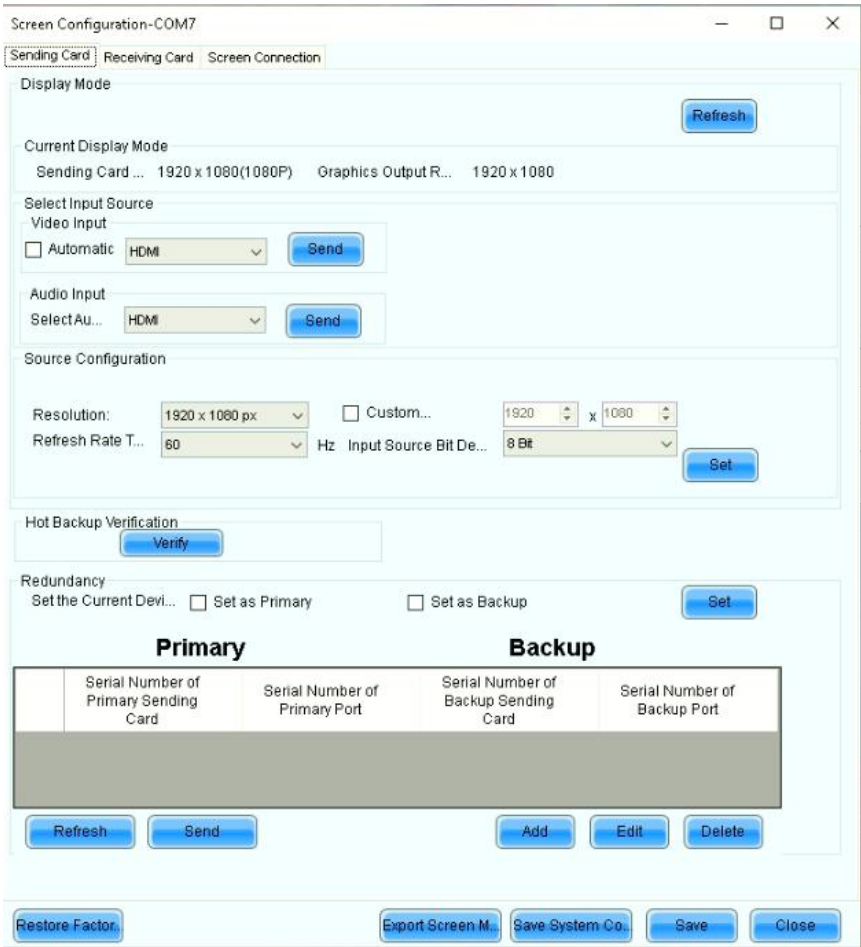


Fig 5-9 Display Configuration

Step 5: In the ‘Send Card’ interface, check the current display mode, as shown in Figure 5-10.

Fig 5-10 Input Source Information

Step 6: Check 'Auto Select' to automatically select the input source according to the actual input signal, or manually select the 1 input source from the drop-down box.

Step 7: Click Send to send the configuration information to the hardware.

Step 8: In the Source Configuration section, select the input source type and set the corresponding resolution. The resolution can be selected from the drop-down box or customized.

Step 9: Set the refresh rate and the number of bits in the input source.

After changing the refresh rate, we recommend that you resend the performance parameters on the Receiving Card tab to avoid the situation that the receiving card cannot adapt to the refresh rate. It is recommended to set the number of input source bits to "8 bit".

Step 10: Click Settings to send the configuration information to the hardware.

Step 11: Click Refresh to confirm the setting result of the input source.

Step 12: Click 'Cure' to cure the configuration information to the hardware

5.4.7 Connecting The Display

Step 1: In the Display Configuration dialog box, select the Display Connection tab.

Step 2: Set the number of displays and click Configure ".

When multiple output ports of the sending card carry different areas of a large screen, the number of display screens is set to 1; When multiple output ports carry different screens, the number of display screens is set to the number of screen loads.

Step 3: in the "standard display screen" interface, set the number of receiving card columns and rows, for example, in the of Fig 5- 11, the is set to 10 columns and 5 rows.

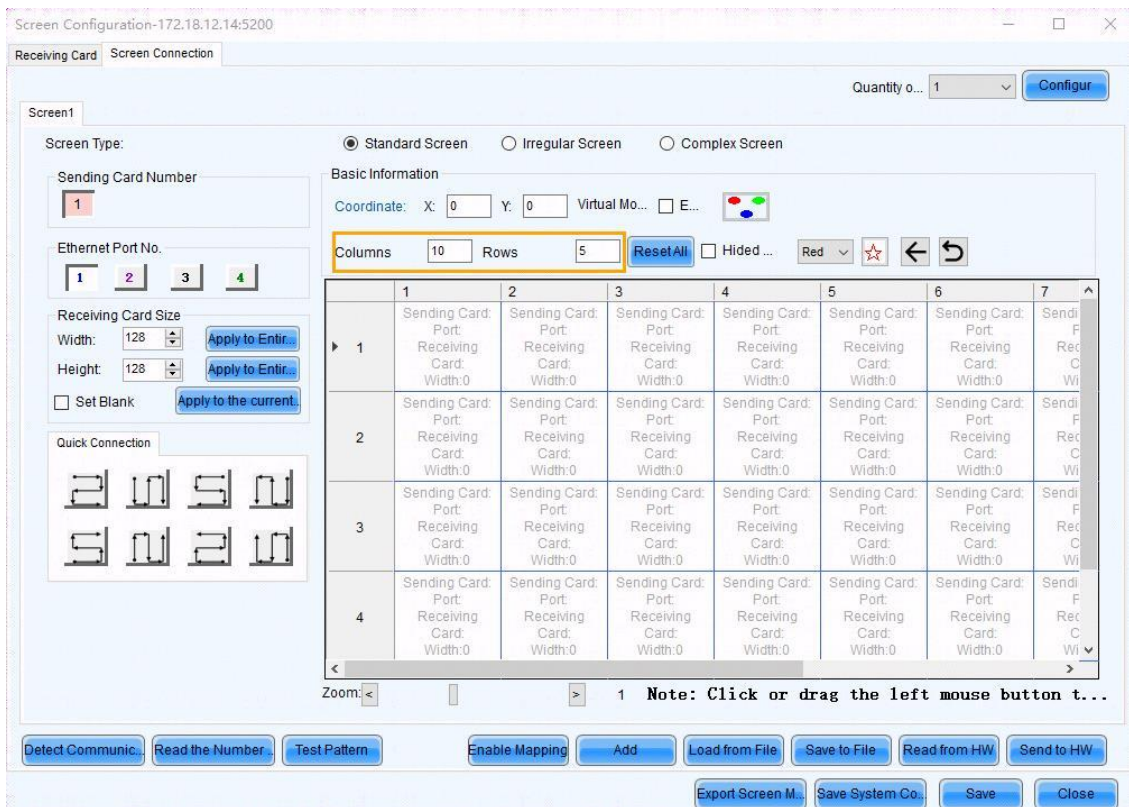


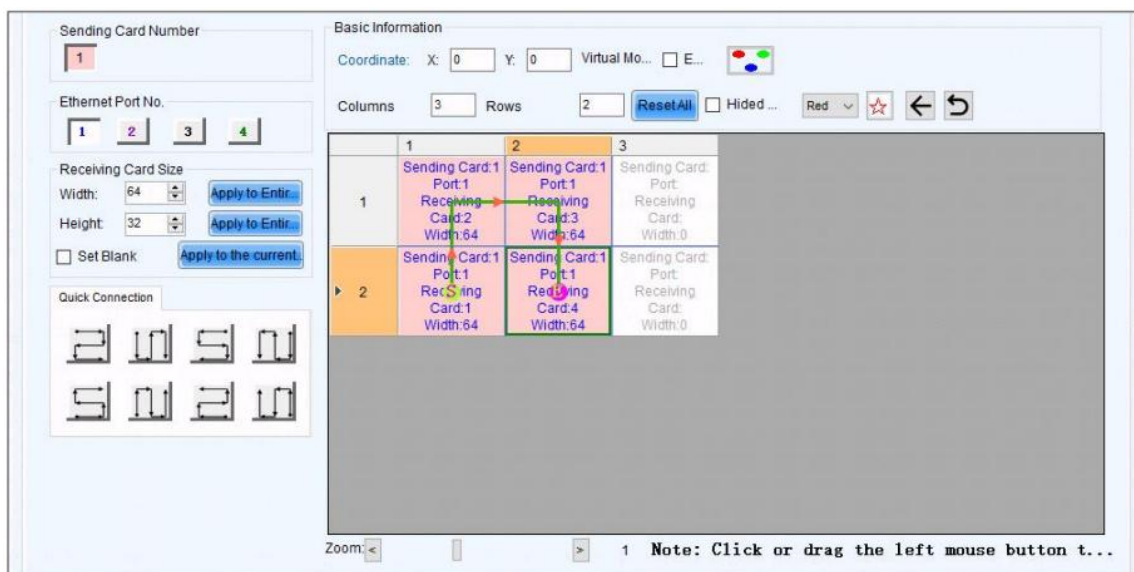
Fig 5-11 Column and row quantity of receiving cards

Step 4: Select an outlet.

Step 5: Set the receiving card routing and tape load size. For example, the in the of Fig 5-12 is the receiving card with the load of the output port 1.

- Custom Route: Click or drag the mouse in the table.
- Quick Route: Click the 1 quick route style and drag the mouse to select an area in the table.

When routing, the load size defaults to the current value. If necessary, you can modify the load width and height on the left side of the interface. You can unconfigure a receiver card right-clicking it.



Description:

1. [Configuration] Number of display screens 1
2. Set [Number of rows and columns of receiving card]]
3. Set the number of carrier points for each receiving card
4. Click all receiving cards according to the network port of the sending card connected to the signal line and the actual routing direction
5. Send it to the hardware. Click [Cure] after the screen displays normal

6、Packaging Transportation and Storage

6.1 Package

Standard Configuration: Modules and cabinets are packaged separately.

- Cabinets: 1 unit per wooden box, 16 units per box
- Modules: 1 unit per wooden box, 64 units per box

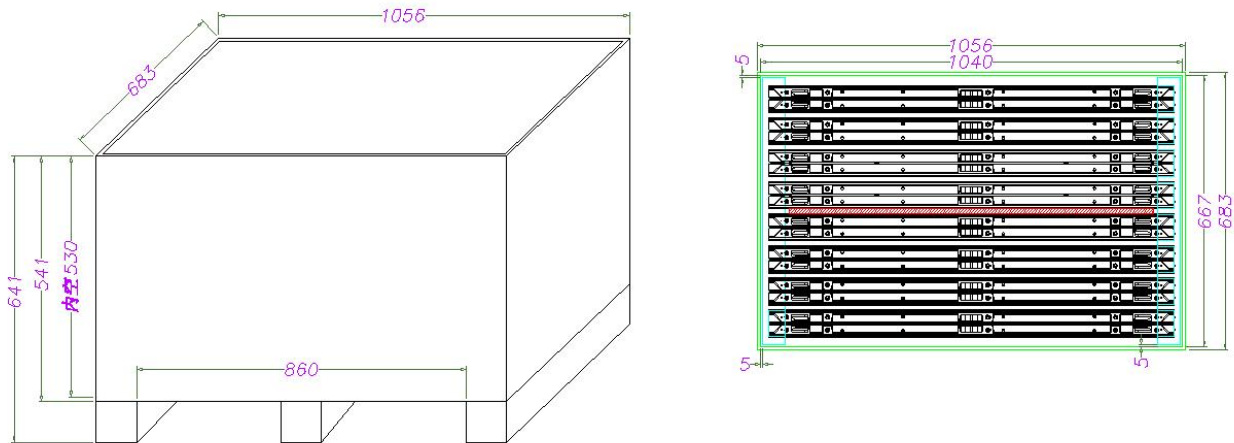


Figure 6-1 Wooden Box Rendering

6.2 Transportation

Cabinets must be properly packaged before transportation. Products should not be placed upside down or horizontally. During transport, protection must be provided against wind, rain, direct sunlight, and corrosive liquids. Stacking of plywood boxes must not exceed three layers.

6.3 Storage

Cabinets should be stored in an environment with a temperature range of -30°C to $+60^{\circ}\text{C}$ and relative humidity of 10% to 60% RH. Do not store cabinets in areas containing volatile, corrosive, or flammable chemicals.

7、 Maintenance and Service

7.1 LED Display Maintenance

Issue 1: The entire display does not light up

- Check whether the display has power and whether the indicator lights on the power supply are functioning normally.
- Check whether the green signal LED on the sending card is flashing.
- Confirm whether the graphics card outputs an image signal.
- Check whether the signal LED on the receiving card is flashing normally.
- Verify that the receiving card configuration file is correct.
- Check the output signal from the previous cabinet's receiving card, or replace the signal cable.

Issue 2: The display shows misaligned images, noise, or flickering

- Check whether the DVI cable is properly connected.
- Verify that the receiving card configuration file is correct.
- Confirm that the display refresh rate is set to 60 Hz.

Issue 3: Video files cannot be played

- Check whether the computer has a suitable media player installed.
- Confirm that the media player supports the file format being used.

Issue 4: Some modules within a cabinet cannot be lit

- Check whether the dark modules correspond to a full load area of one receiving card, and verify whether the receiving card indicator light is flashing and whether the network cable input to the receiving card is functioning properly.

Troubleshooting:

- Check whether the connectors supplying input to the module are loose.

Issue 5: Images are incomplete or appear in incorrect positions

- The screen connection (mapping) file is incorrect.
- Poor contact between signal cables of receiving cards across cabinets.
- Incorrect display position or screen size settings.

Troubleshooting:

- Check whether the signal cable connections match the configuration file (xxxx.scr) that has been loaded.
- Confirm that the signal cable is properly connected to the receiving card. If the receiving card is faulty,

replace it.

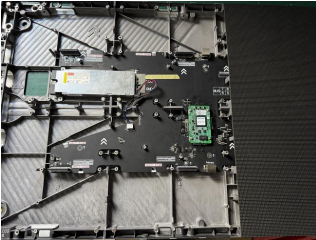
- Verify that the display position and screen size in the software match the actual screen size.

7.2 Major Replaceable Components

Before performing maintenance on the LED display, please disconnect the power supply to ensure both personal safety and equipment safety.

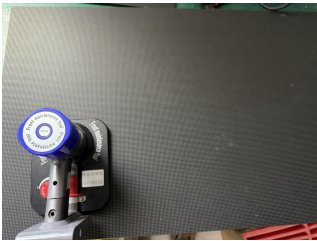
7.2.1 Module Replacement

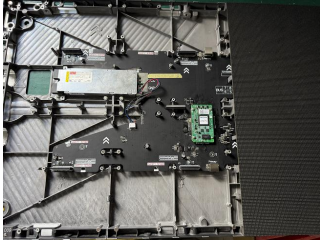
After cutting off the display power, replace a single LED module by following the steps below:

Front Maintenance Steps	Image	Description
Step 1		Locate the faulty cabinet and disconnect the power. Use the vacuum suction tool to remove the module.
Step 2		Use the vacuum tool to extract the faulty module and replace it.

7.2.2 Power Supply Replacement

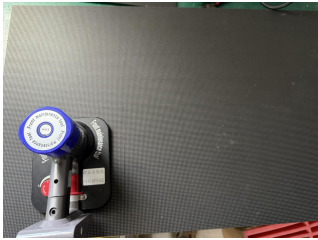
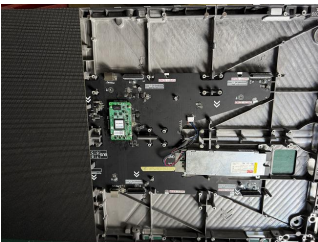
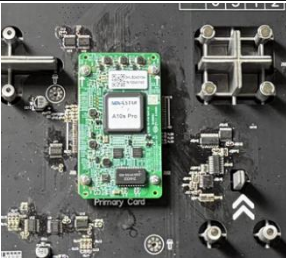
Turn off the display power before performing any operation, follow the steps below to replace the power supply of the LED display:

Front Maintenance Steps	Image	Description
Step 1		Locate the faulty cabinet and disconnect the power. Use the vacuum suction tool to remove the module.

Step 2		Remove the module.
Step 3		Loosen the DC output connector and the power supply mounting screws. Gently slide the power supply to the right to remove it, then replace it with a new one.
Step 4		Remove the power supply and replace it.

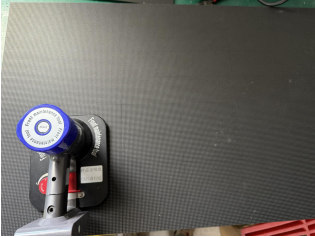
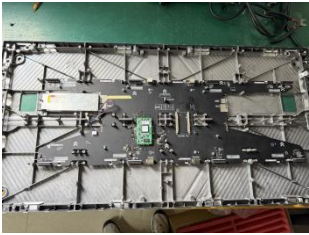
7.2.3 Receiving Card Replacement

Turn off the LED display power, follow the steps below to replace the LED display receiving card:

Front Maintenance Steps	Image	Description
Step 1		Locate the faulty module and disconnect the power. Use the vacuum suction tool to remove the module.
Step 2		Remove the module from the faulty cabinet.
Step 3		Take out the faulty receiving card and replace it with a new one.

7.2.4 HUB Card Replacement

Turn off the LED display power, follow the steps below to replace the LED display HUB card:

Front Maintenance Steps	Image	Description
Step 1		Locate the faulty cabinet and disconnect the power. Use the vacuum suction tool to remove the module.
Step 2		Remove the module from the faulty cabinet.
Step 3		Remove the HUB card and replace it with a new HUB board.