AURORA SIGNAGE

LDC600 Super Fine Pitch

All pictures in this user manual are for reference only. Actual product may vary

User Manual

V1.0

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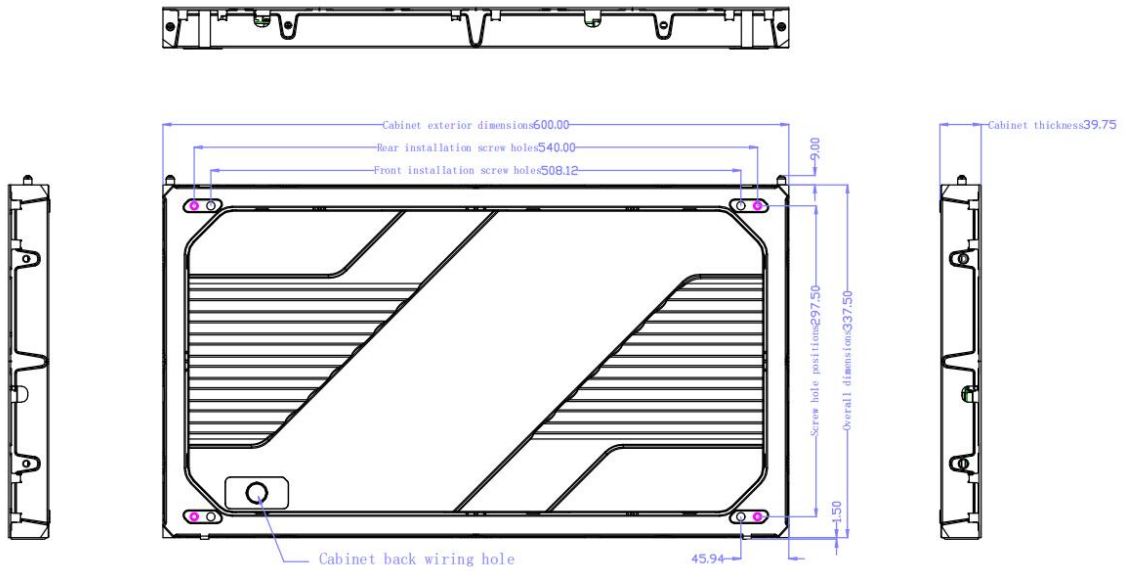
I. Product Introduction

1.1 Product Features

The indoor LED display cabinet is made of die-cast aluminum alloy, offering the advantages of being lightweight, highly precise, slim, easy to install, and convenient to maintain. The product boasts a high refresh rate, energy efficiency, low heat dissipation risk, and is widely used in indoor media advertising, stage performances, conference monitoring, and other applications.

- The display has a standard size design of 600×337.5×39.75mm with a 16:9 golden ratio, easily achieving 2K/4K/8K ultra-high-definition resolutions;
- The cabinet is made of die-cast aluminum, with each cabinet weighing 4.2kg and the entire screen weighing 21kg/ ㎡. The ultra-thin design provides high strength, strong toughness, and high precision;
- The modules feature automatic detection, no configuration, and no debugging required, enabling quick installation and maintenance of the screen with front maintenance of the cabinet. The module has a hard link with magnetic safety to prevent falling;
- The installation is fast and simple, supporting wall-mounted installation without a steel structure. Three installation methods are supported: wall-mounted, hanging-mounted, and floor-mounted;
- Customization options include dual power supplies, dual system cards, and dual backup;

1.2 Product Dimensions



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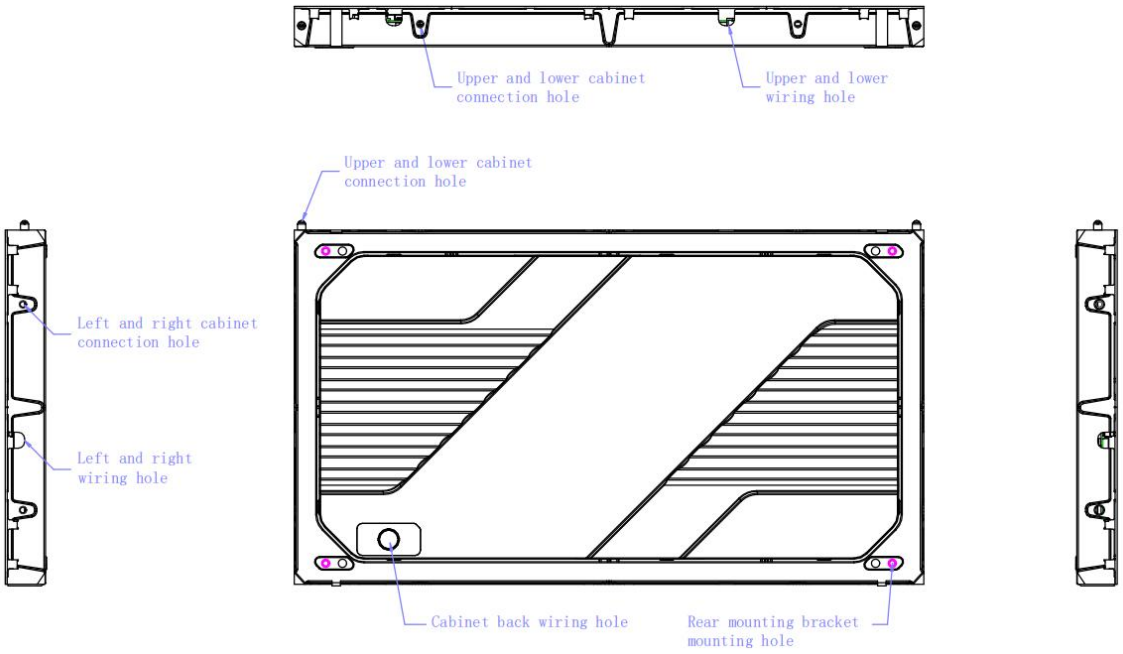
II. Product Components

2.1 Cabinet Structure and Hole Position Description



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III. Product Installation

3.1 Preparation Before Installation, Check the Installation Site

Before installing the indoor fixed LED display, ensure the following:

- Confirm the installation method according to the site conditions;
- Verify that the construction drawings have been reviewed by relevant departments before proceeding;
- Ensure the surrounding environment and the installation surface are flat, solid, and strong enough to bear the load.

3.2 Precautions for the Screen installation Environment

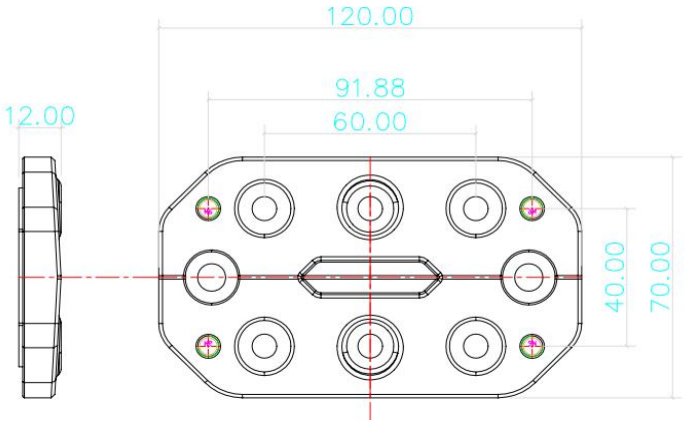
- Indoor fixed LED displays typically cover a large area. The design of the steel structure must consider factors such as load-bearing, waterproofing, dust-proofing, moisture-proofing, and ambient temperature. Therefore, during implementation, the entire display's steel structure should have design drawings that have been approved by the relevant authorities to ensure the reliability and safety of the structure.

3.3.1 Key Points to Note

- Ensure the floor, truss, or wall where the display will be installed can support the entire load of the display. Level Surface: The installation surface and truss for the display must be level. Do not install the display on a slanted truss. **Secure the steel structure first, confirm its qualification, and then proceed with the subsequent installation of the display.**
- The LED display has high consistency. During installation, ensure no paint, dust, welding slag, or other contaminants stick to the module lights or screen surface to avoid affecting the display quality.
- The LED display should not be installed near the sea or water bodies, as high salt fog, high temperature, and high humidity can easily cause components to become damp, oxidized, and corroded. If necessary, discuss with the manufacturer to apply special three-proofing treatments and ensure proper ventilation, dehumidification, and cooling.

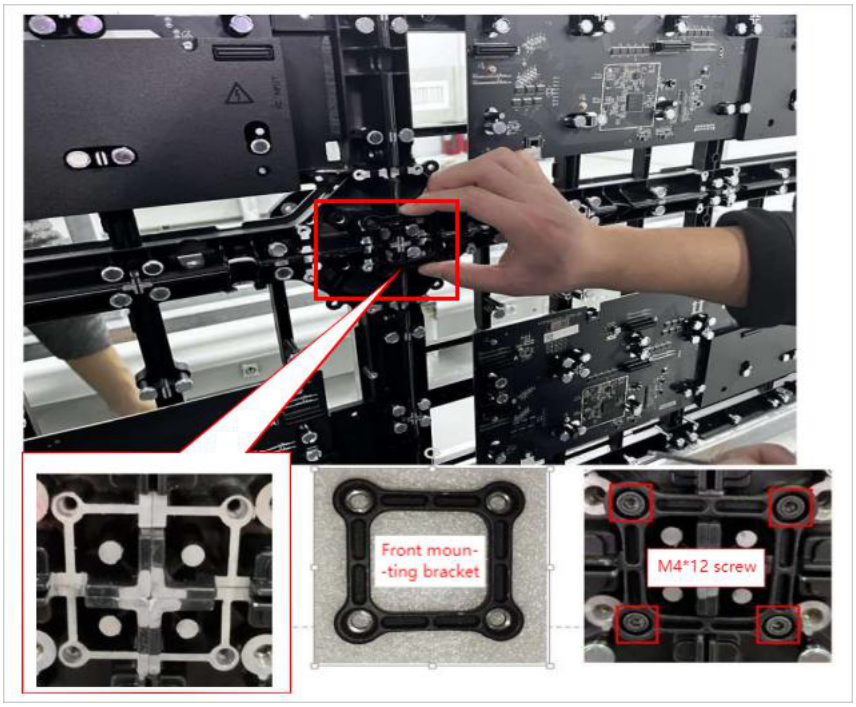
3.4 Installation Steps

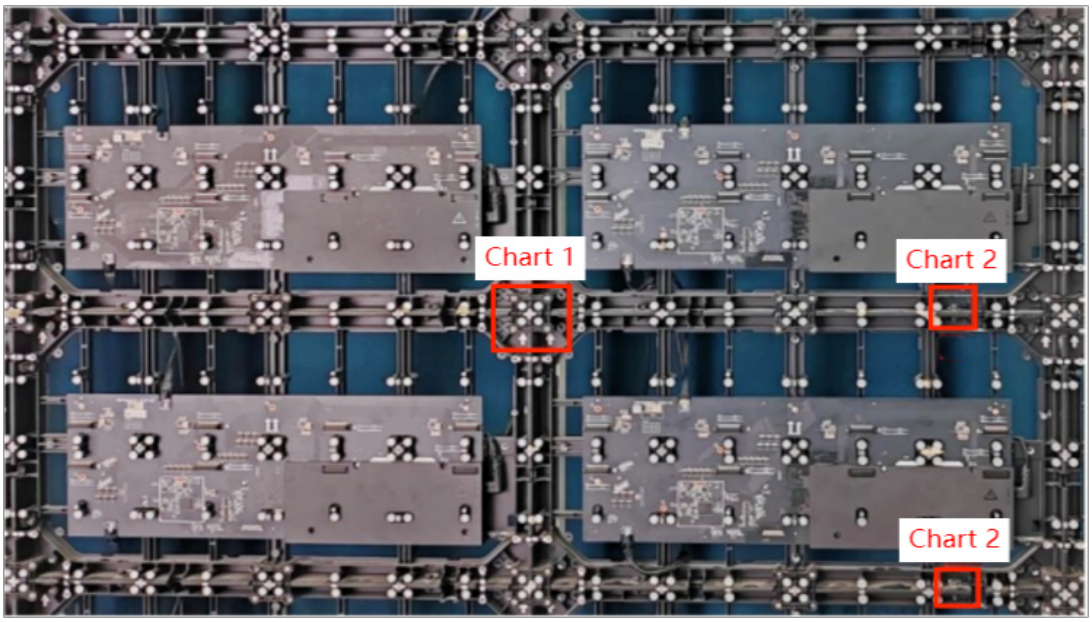
3.4.1 Mounting Brackets and Screws



Rear mounting bracket

3.4.2 Front Mounting Bracket Mounting Diagram

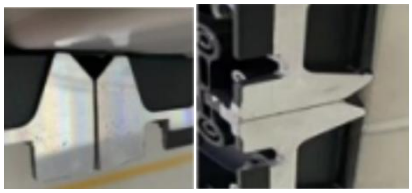




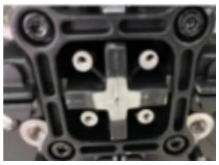
Step 1: Use M6*16 screws to fix adjacent cabinets (do not tighten them yet)

See Chart 2 in the Figure

Step 2: Adjust the left and right sides and the upper and lower sides of adjacent cabinets to be level

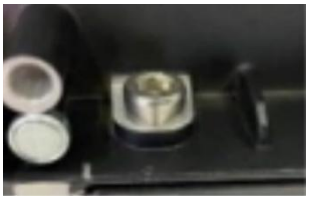


Step 3: Secure the front mounting bracket with M4*8 screws



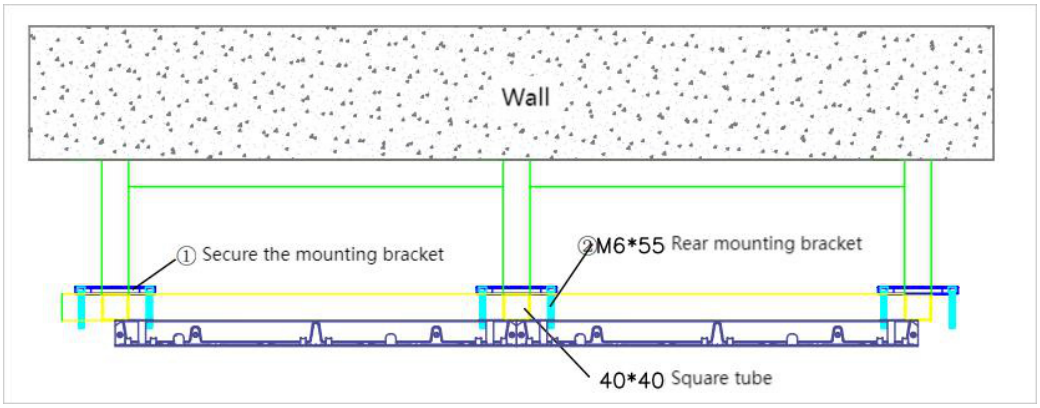
See Chart 1 in the Figure

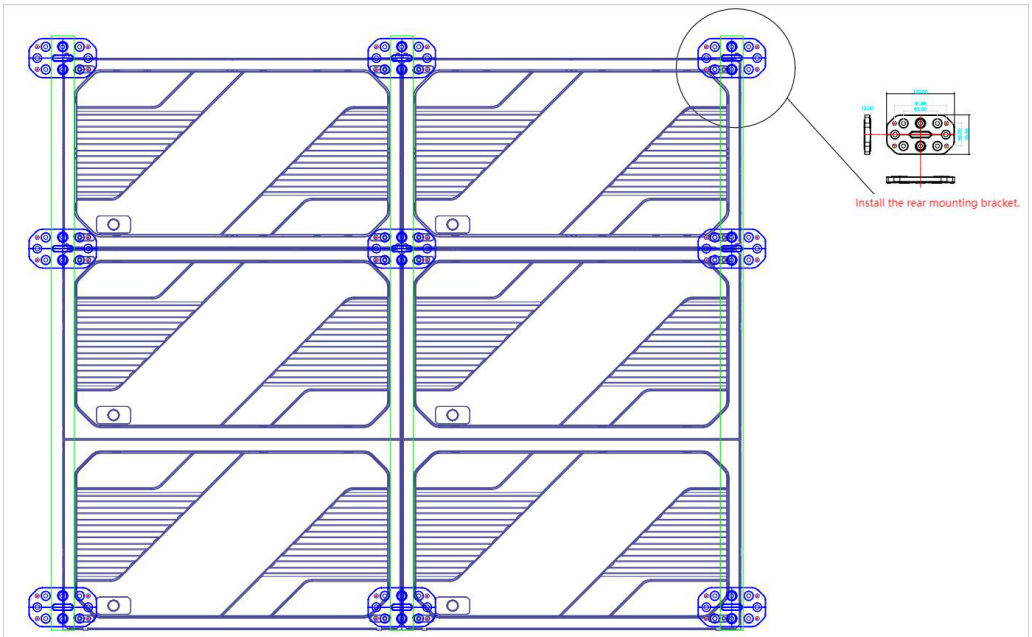
Step 4: Tighten the M6*16 screws between cabinets (left and right + upper and lower)

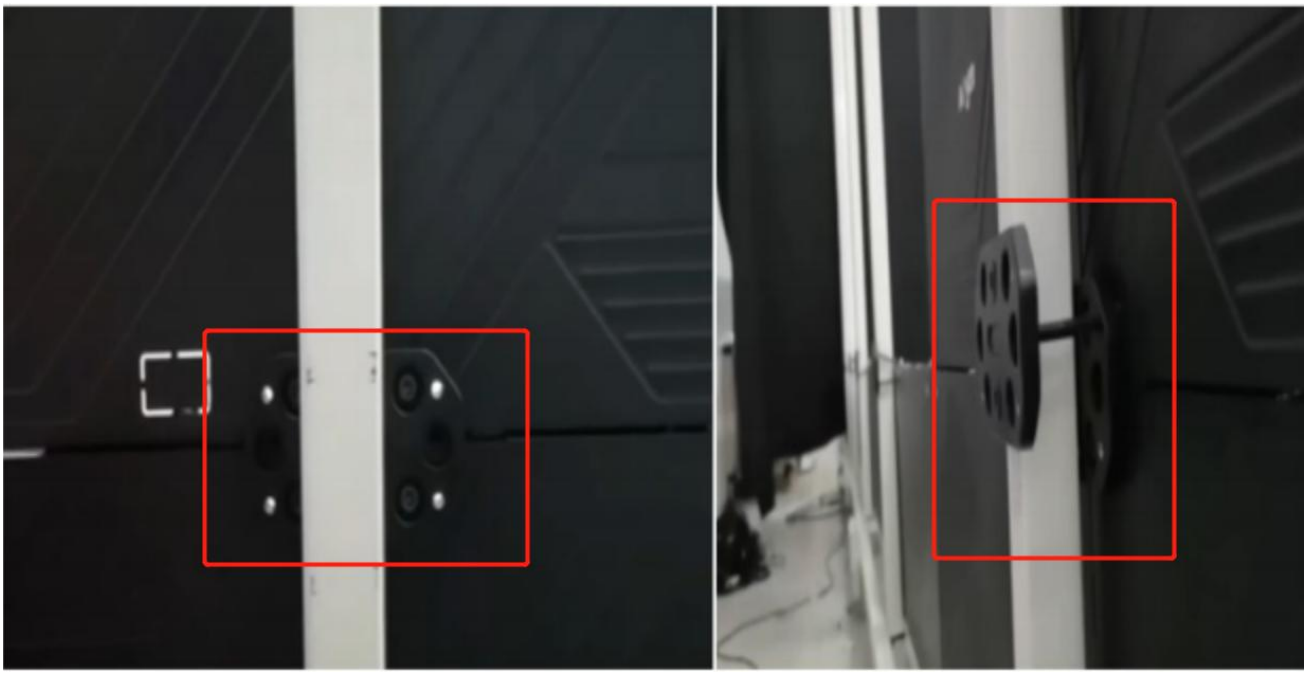


See Chart 2 in the Figure

3.4.3 Rear Mounting Bracket Mounting Diagram







First, use one rear mounting bracket to fix four cabinets together, then use another one to fix

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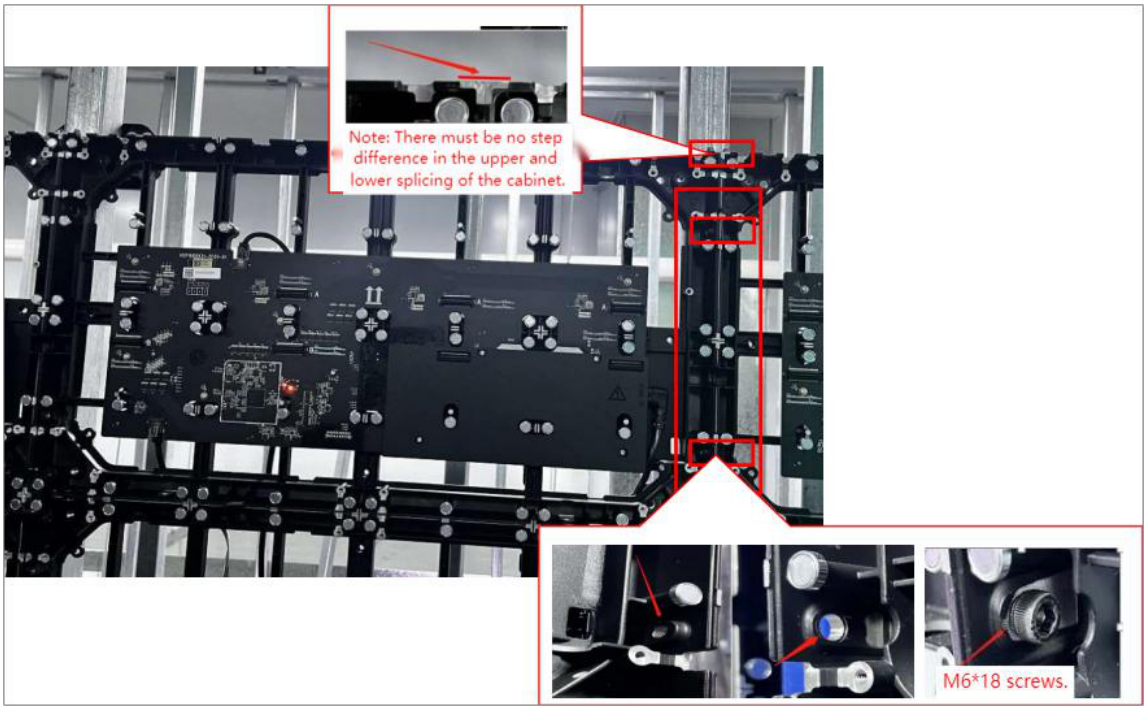
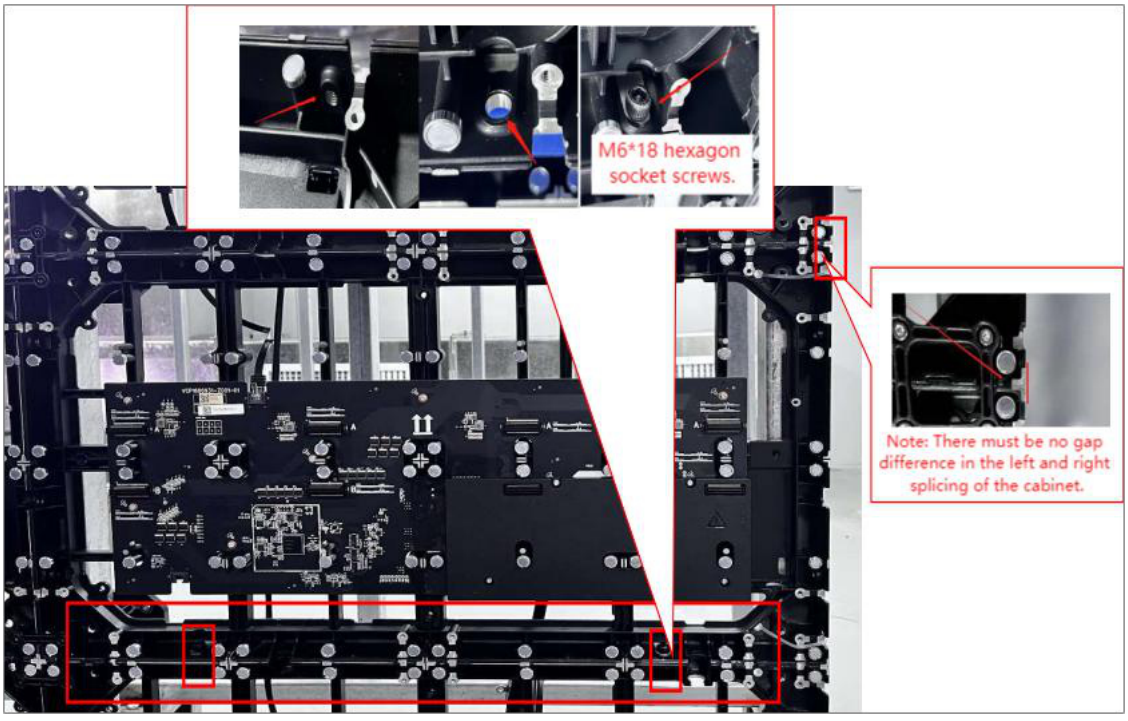
it to the wall bracket, as shown in the diagram.

3.4.4 Fixing Between Cabinets Using Side Lock Screws

Use **twoM6x18** hexagon socket screws to connect and secure two cabinets together.





3.4.5 Screen Frame Edge Treatment

1. Remove the positioning posts from the top layer cabinet. Use M6 screws to fix the edging on the top cabinet.
2. For the left and right edging, use M3-M4 locating pins and M4 nuts to secure them to

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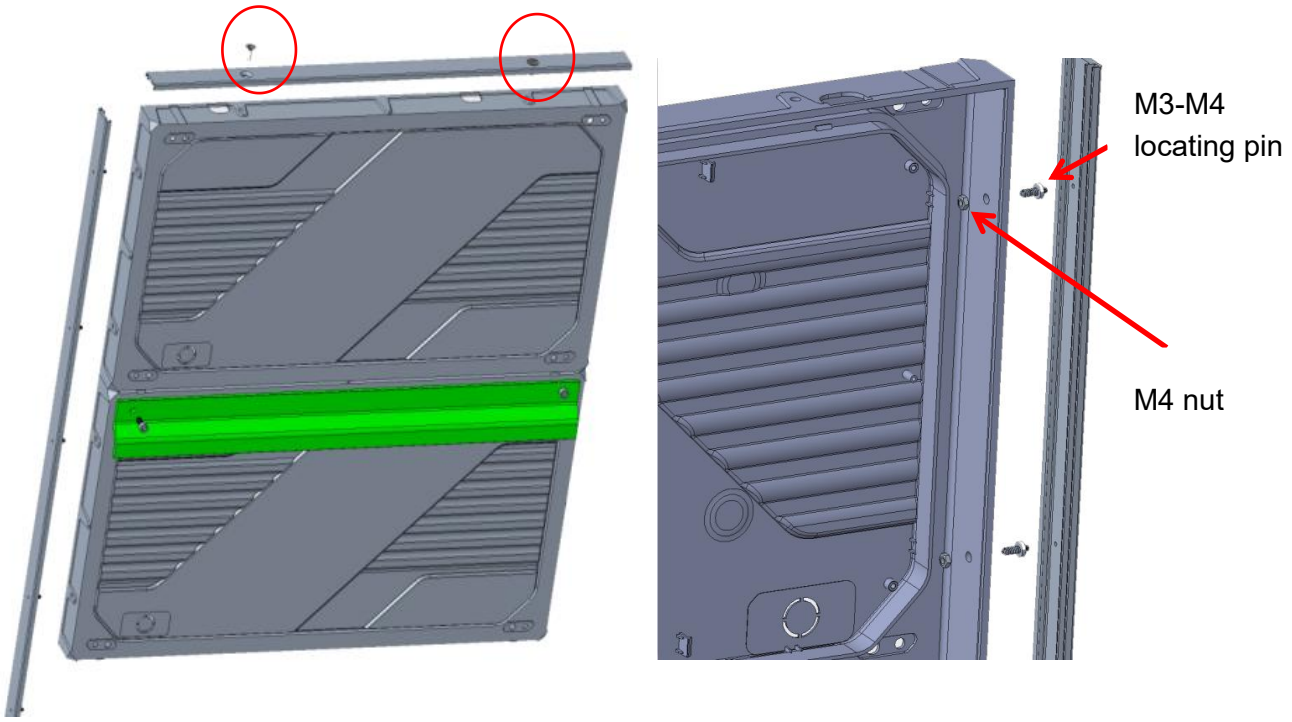
the cabinet.

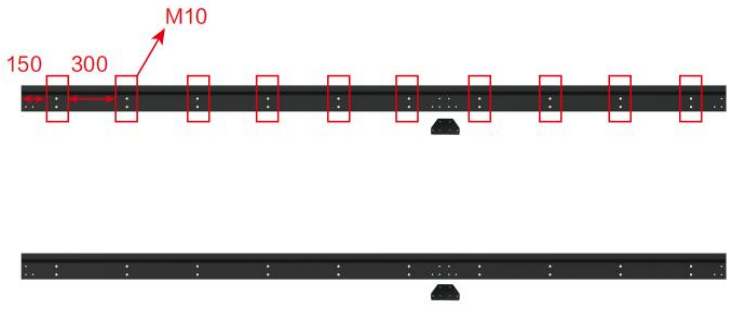


3.5 Wall-mounting Installation Diagram

① Locate the positions to drill holes for upper and lower wall-mounting bars according to onsite environment and distance requirement between screen and floor, and use level instrument to ensure position precision;

② The upper and lower wall-mounting bars are respectively composed of the wall-mounting bar 1 and the wall–mounting bar 2, which are joined by connection plates. Use six M6*14 countersunk head screws to fix connection plates;

③ The mounting holes for wall-mounting bar 1 and wall-mounting bar 2 are shown below:



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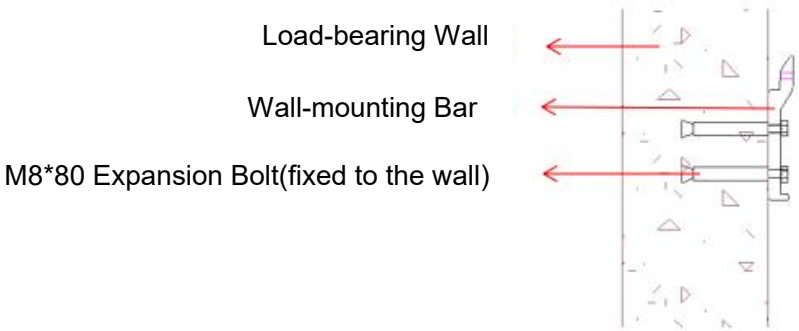
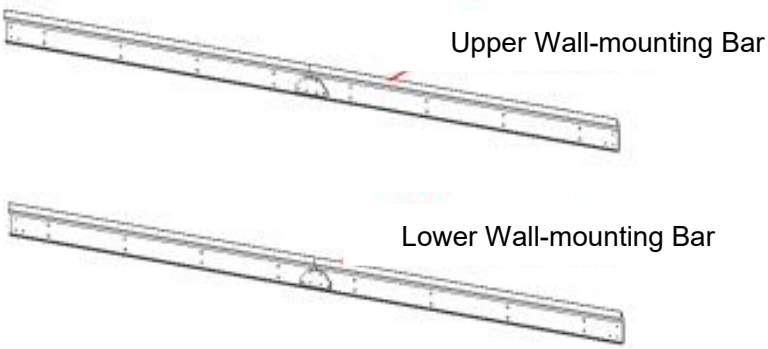
④ Draw dowel points on the wall and drill 10mm hole at each point;

⑤ align wall-mounting bars to holes drilled in previous step and fix bars with M8* 80 expansion bolts as shown below:

⑥ Side profile diagram of installed wall-mounting bar:



⑦ Front view diagram of installed wall-mounting bars:



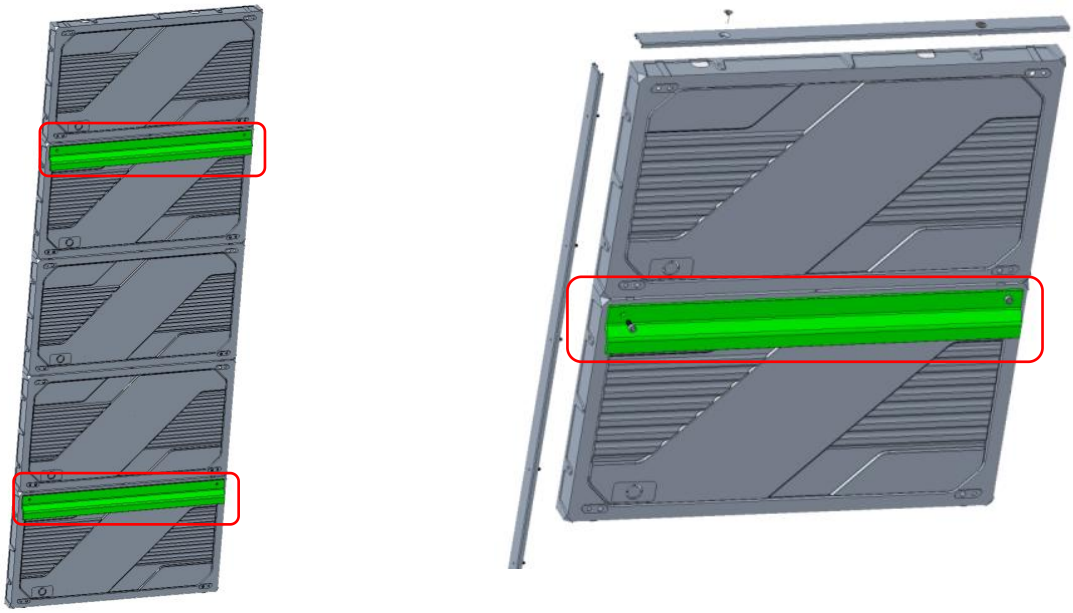
⑧ Check whether the wall-mounting bar is properly installed, which requires: a. levelness check ; b. spacing check, by following steps:

1) Use a level instrument to measure the horizontalness of wall-mounting bar. If it is not horizontal, make adjustment by loosening the expansion bolt and gently pushing wall-mounting bars. And then tighten the wall-mounting bar with screws.

2) Use a tape measure to check the spacing between the upper and lower rows of wall-mounting bars. If the spacing is not ideal, make adjustment by loosening the

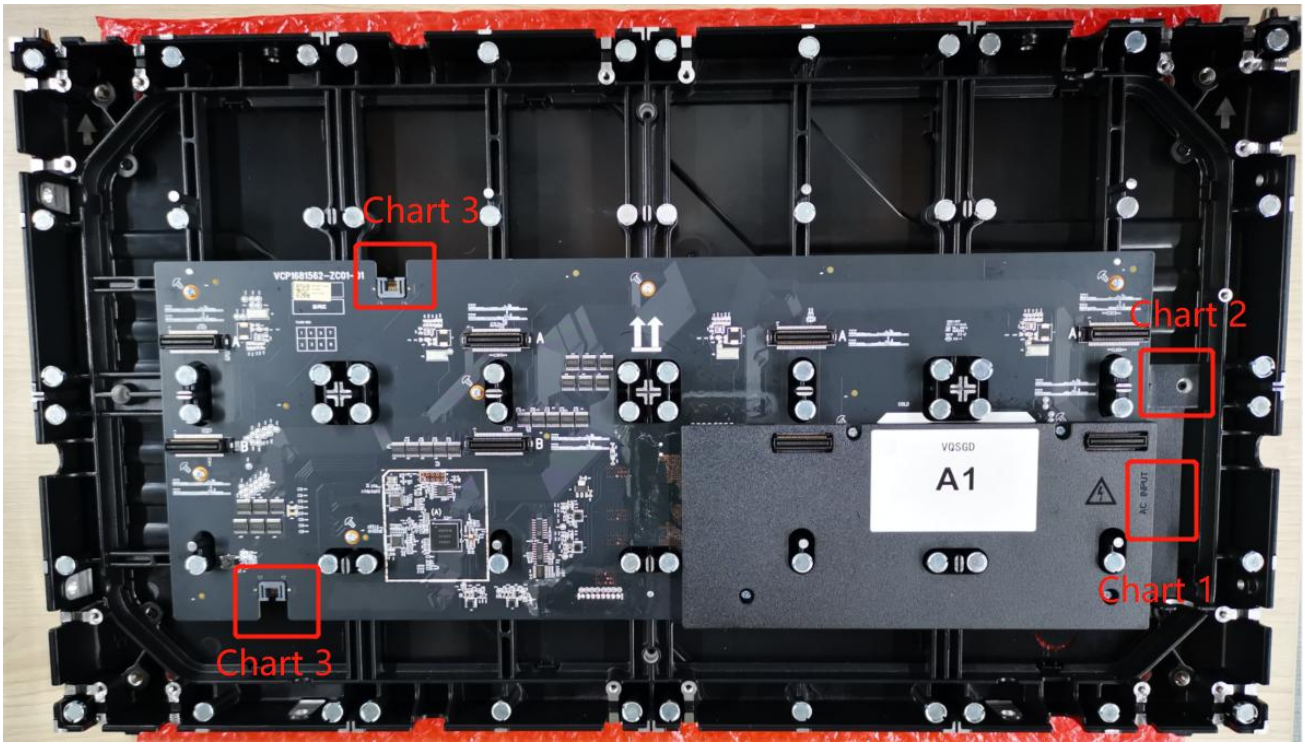
expansion bolt and gently pushing wall-mounting bars. And then tightenthe wall-mounting bar with screws.

⑨ Fix the hook to the corresponding cabinet using two M6 bolts, as shown in the figure below:



3.6 Cabinet Wiring

3.6.1 Internal Power and Network Cable Wiring



Step 1: Properly connect the figure-8 adapter to the power interface

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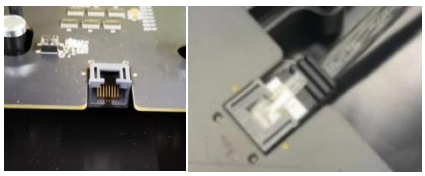
See Chart 1 in the Figure

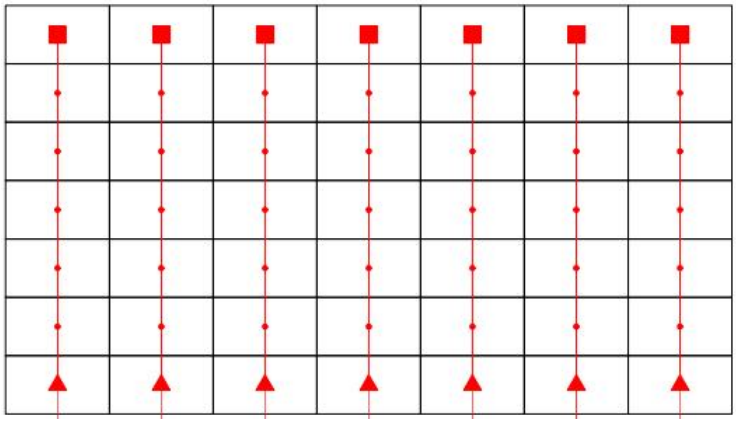
Step 2: Fix the cable branch connector to the cabinet using M4*8 hexagon socket screws

See Chart 2 in the Figure

Step 3: Connect the Ethernet cable

See Chart 3 in the Figure 

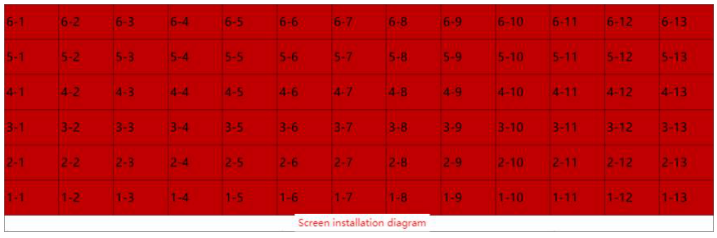
3.6.2 Screen Power Cable Wiring Diagram



Note: Do not work with power on during installation!!!

3.7 Lamp Board Installation

3.7.1 Screen Diagram



Note: This is an illustrative diagram. Please refer to the actual engineering screen

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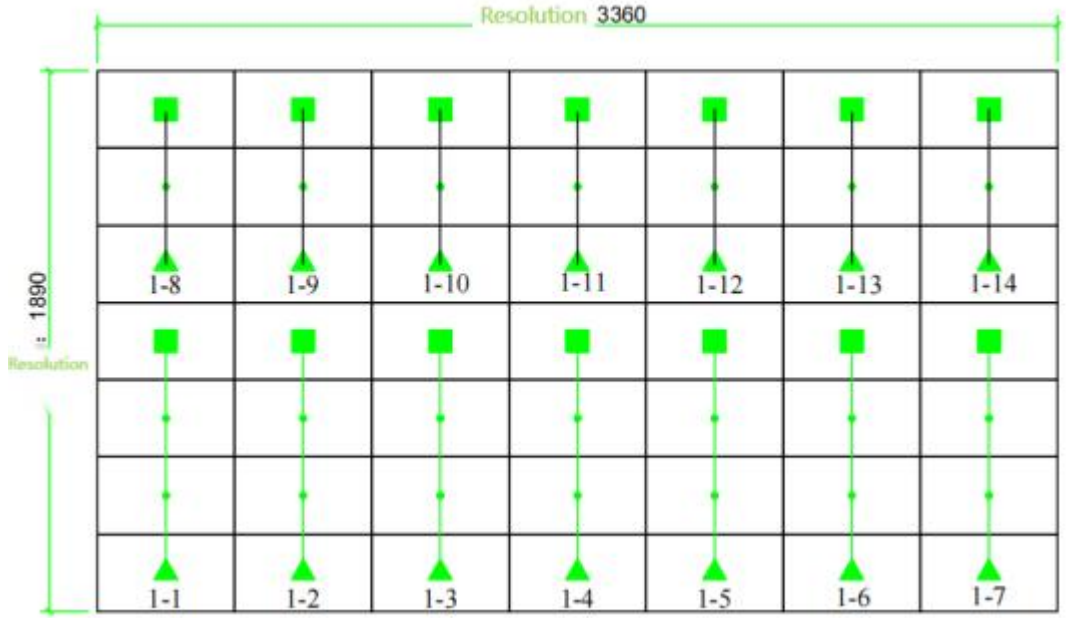
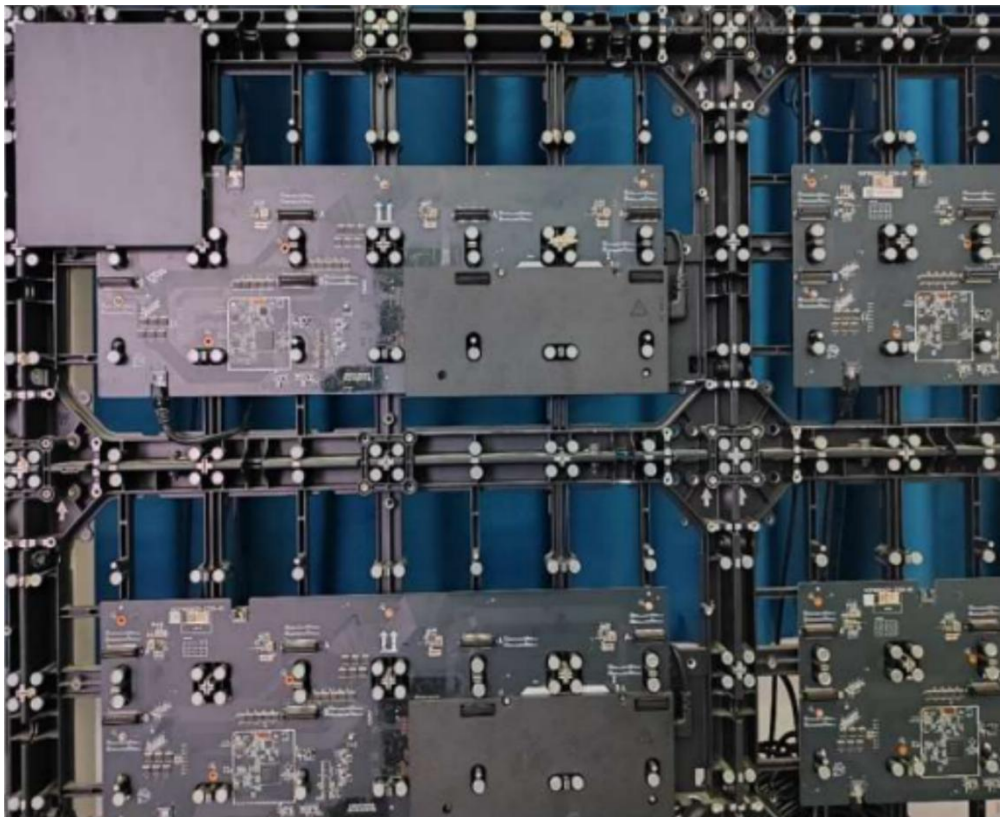
installation diagram.



Note: This is an illustrative diagram. Please refer to the actual engineering screen Ethernet cable wiring diagram.

3.7.2 Single Cabinet Lamp Board Installation



Step 1: Install the modules around the screen, ensuring the module edges are flush with the cabinet edges

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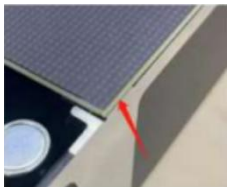
As shown in diagram 

Step 2: Install the upper, lower, left, and right modules, using the first module as the reference surface for all installations

Step 3: Use maintenance tools to remove and adjust the panel position if necessary, avoiding bump against the edges of the panel

As shown in diagram

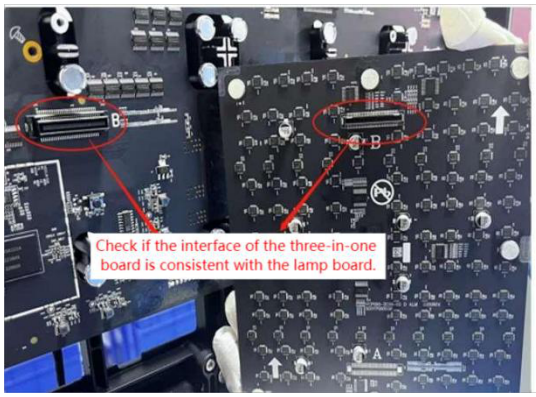
Cabinet internal modules numbering as follows:

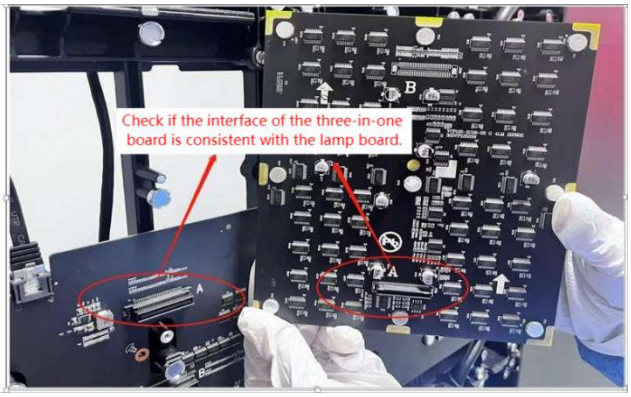
1-1-1	1-1-2	1-1-3	1-1-4
1-1-5	1-1-6	1-1-7	1-1-8

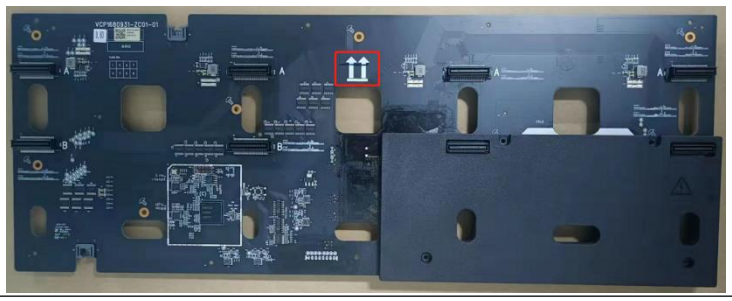
Single cabinet module schematic diagram.

e: The front “1-1” in "1-1-1" represents the single cabinet in the first row and first column, and the end "1" represents the first lamp board of this cabinet, corresponding to the first lamp board in the front view.

Note: This is an illustrative diagram. Please refer to the actual engineering single cabinet lamp board installation diagram.







Note: Before installing the lamp board, confirm that the arrows on the lamp board and HUB board are facing up, and install the light board with the arrow facing up!!!

The A/B board of the light board must correspond with the A/B interface on the HUB board

3.8 General Installation Method Diagram

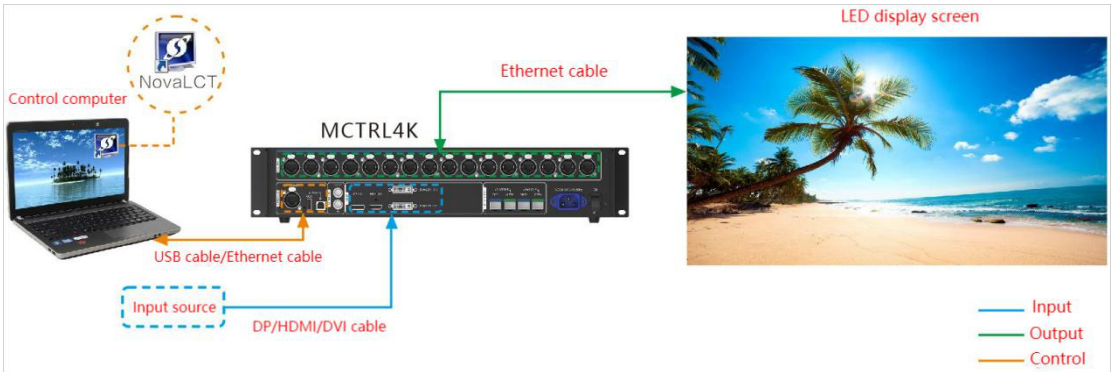
Figure Frame Mounting

Note: The above is just an example. Please choose the specific installation method based on actual needs.

IV. Control System

System Wiring

System Wiring Diagram:



Note:

- Turn off the power of all screens and devices before connecting.
- When all connections are finished, first power the controller and computer or other devices, and then connect the power of other devices.
- Before the screen is powered on, check the connections of the cables between cabinets and the main cable. There shall be no wrong connection, reverse connection, short circuit, open circuit, looseness, etc. Test and verify with a multimeter and other tools. Before performing any maintenance on the display, please cut off all power supplies inside the screen to ensure the safety of you and the equipment. All devices and connecting wires are prohibited from being operated with power on.
- Do not directly pull or place heavy objects on power cables, signal cables, communication cables, and other cables when unplugging or plugging them. Avoid stepping on or squeezing cables. Do not connect or arrange cables privately inside the screen.
- To avoid fire caused by overload of power cables, do not run the device with overload. Please refer to the maximum power consumption of the product and avoid turning on all load switches at the same time, otherwise the peak voltage may be too high, and overload of the power cable may cause fire hazards.

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V. Quick Troubleshooting

5.1 Common Screen Fault Diagnosis

(1) Part of the display is not lit after power on

① Check whether the Ethernet cables inside the cabinets are in good contact;

② Check whether the power cables inside the cabinets are in good contact.

(2) Indicator light is not on

① Check whether the power supply is normal;

② Check whether the power switch of the system is turned on.

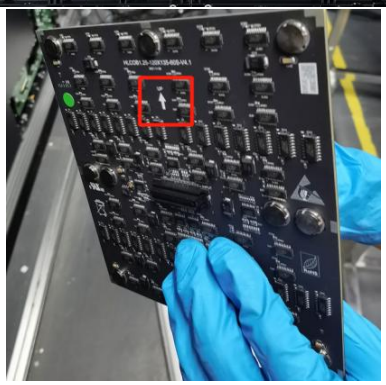
(3) No image on the display after connecting its to the computer with HDMI cable

① Check whether it is currently on HDMI channel;

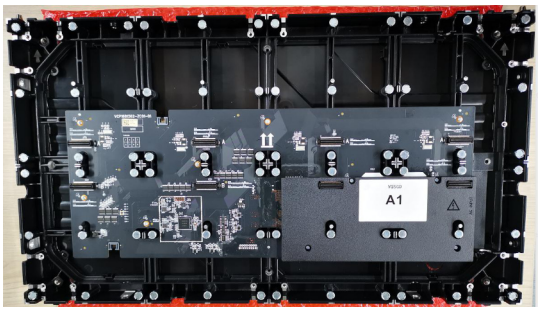
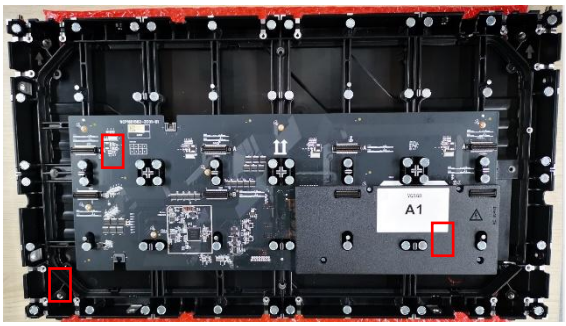
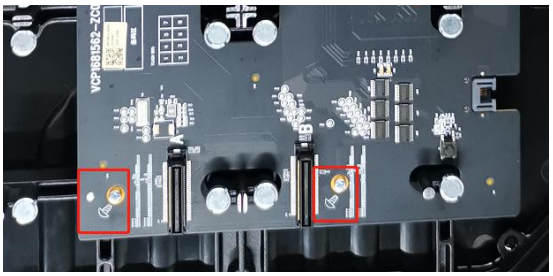
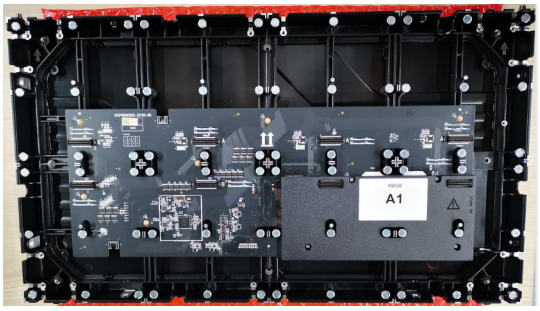
② Check whether the HDMI cable on the system and the external computer falls off or is defective.

VI. Parts Replacement

6.1 Lamp board replacement (front maintenance)

Steps	Illustration	Method
Step 1		Locate the faulty lamp board. Use a suction cup to hold the lamp board, then remove it parallelly.
Step 2		Hold the light board with your hand and firmly hold it with the suction cup.
Step 3	 	When installing the lamp board, pay attention to the direction of the arrow

6.4 HUB board replacement

Steps	Illustration	Method
Step 1		Locate the faulty cabinet and remove all lamp boards
Step 2		Disconnect the power cable and Ethernet cable
Step 3		Remove the screws from the HUB board
Step 4		Take out the faulty HUB board and replace it with a new one

Note: All operations must be performed with the power off

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VII. About This Manual

- This manual is for use with multiple models of products; the product appearance and functions are subject to the actual product.
- This manual is equipped with multiple software versions; the product interface and functions are subject to the actual software.
- The content of this manual may include technical errors or printing errors, subject to the final interpretation by the company.
- Any loss caused by not following the guidance in this manual is the responsibility of the user.