Hisense

XIH009FE
XIH012FE
XIH015FE
XIH018FE

USER MANUAL

Read the manual carefully and ensure you have fully understood its contents before operating this device for the first time.

Version：2025-6

CONTENT

Precautions for use

- **During the use of the product, moisture may also cause a short-circuit inside the device.**
- **If the device experiences the following situations during use, please carry out dehumidifi- cation treatment:**
  - **If the usage environment exceeds the requirements for using the device, that is, the indoor temperature goes beyond the range of 0°C - 40°C and the humidity goes beyond the range of 10% - 80%.**
  - **The screen has not been used for more than 10 days.**
- **If the device is damaged due to the usage environment exceeding the product standards, the warranty service will not be provided.**
- **Even if the usage environment meets the product standards, the rapid inflow of external hot and humid air can still cause condensation on the device surface. In this case, you should wait for the device to dry completely.**
- **Condensation will occur if the surface temperature of the product is lower than the ambi- ent air temperature, or if the product surface is cooled in the presence of hot and humid air.**
- **If condensation occurs on the product, it may lead to product malfunctions. In this case, the warranty service cannot be provided.**
- **Please do not let the air outlet of the air conditioner blow directly on the screen surface.**
  - **If the air outlet of the air conditioner blows directly on the screen surface, it may cause condensation on the screen surface.**
  - **If the air outlet of the air conditioner is too close to the screen, you can install a wind deflector as shown in the following figure to prevent the air from the air - conditioner outlet from affecting the screen.**

1. **Scope of Application**

The XIHFE series features a cabinet with a versatile 16:9 aspect ratio, seamlessly integrating into displays of 2K to 8K and beyond, making it ideal for a wide range of applications, such as broadcasting studios, security monitoring rooms, control centers, educational settings, and retail and exhibition spaces.

2. **Key Features**

High refresh rate, high gray scale:

Revel in the exquisite detail and lifelike visuals, stable and even brightness, without the distraction of flickering.

Drive Type:

Constant Current PWM, characterized by low power consumption and blanking function, high refresh rate, improved first-row dimming and low gray-scale color deviation improvement function.

Wide viewing angle, high contrast:

Pixel-level uniformity, good consistency and high contrast.

Superior reliability and high protection:

Flip chip COB package, IP65 protection of the luminous surface, high reliability and long lifespan.

Intelligent storage:

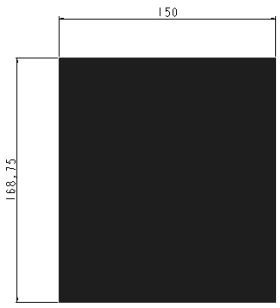
This model comes with built-in memory, supporting read-back and storage of individual light board correction parameters.

High compatibility:

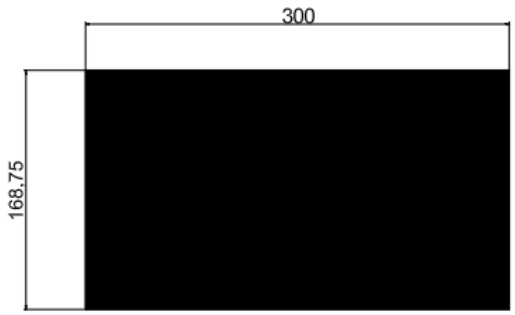
Front maintenance, with options for power and signal redundancy.

3. **LED Module Images**

Images for reference only. Actual appearance may vary slightly depending on configuration.



XIH009FE/XIH012FE



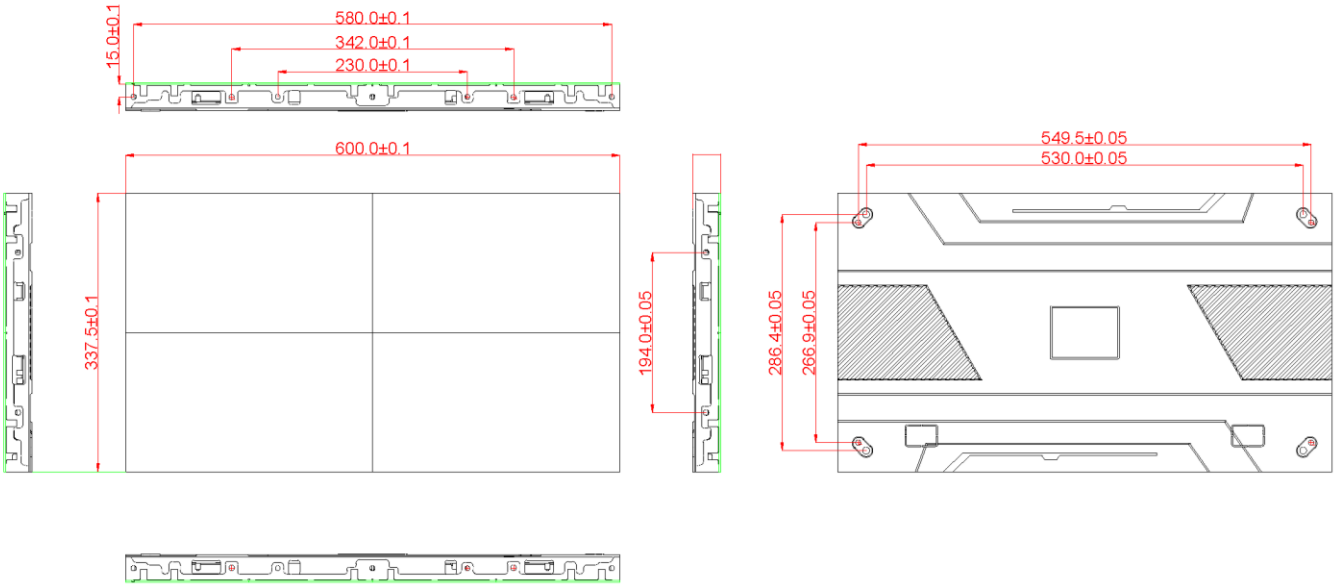
XIH015FE/XIH018FE

4. **Technical Parameters**

	Model	XIH009FE	XIH012FE	XIH015FE	XIH018FE
Physical Parameter	**Pixel Pitch**	0.9375 mm	1.25 mm	1.56 mm	1.87 mm
	Pixel Configuration	Filp-chip COB (1 red,1 green,1 blue)			
	Module Resolution (W x H)	160 x 180	120 x 135	192 x 108	160 x 90
	Module Dimension (W x H)	150 x 168.75 mm 5.91 x 6.64 inch			
	Cabinet Resolution (W x H)	640 x 360	480 x 270	384 x 216	320 x 180
	Cabinet Dimension (W x H x D)	600 x 337.5 x 34.6 mm 23.62 x 13.29 x 1.36 inch			
	No. of Modules per Cabinet (W x H)	4 x 2		2 x 2	
	Cabinet Weight	3.5 kg 7.71 lbs			
	Cabinet Materials	Die-cast aluminum			
Optical Parameter	**Brightness (Typ.)**	600 nits (100~800 nits Adjustable)		600 nits	
	Contrast Ratio	10,000 : 1			
	Visual Viewing Angle (H x V)	x			
	Bit Depth	14 bit			
	Color Temperature	3,000 ~ 18,000 K (Adjustable)			
	Color Gamut	＞90% BT.2020			
	Brightness Uniformity	98%			
	Color Uniformity	± 0.003 Cx,Cy			
Electrical Parameter	**Video Frame Rate**	60 Hz		60Hz / 120 Hz * At 120 Hz, maximum loading capacity is reduced by 50% compared to 60 Hz.	
	Max Power Consumption	398 (W/㎡) 330 (W/㎡)	346 (W/㎡) 283 (W/㎡)	265 (W/㎡) 205 (W/㎡)	195 (W/㎡)
	Avg Power Consumption	140 (W/㎡) 116 (W/㎡)	122 (W/㎡) 100 (W/㎡)	93 (W/㎡) 72 (W/㎡)	69 (W/㎡)
	Max Heat Generation	1,358 (BTU/㎡) 1,126 (BTU/㎡)	1,181 (BTU/㎡) 966 (BTU/㎡)	904 (BTU/㎡) 699 (BTU/㎡	665 (BTU/㎡)
	Avg Heat Generation	478 (BTU/㎡) 396 (BTU/㎡)	416 (BTU/㎡) 341 (BTU/㎡)	317 (BTU/㎡) 246 (BTU/㎡)	235 (BTU/㎡)
	Power Supply	100~240 V AC			
	Refresh Rate	3,840 Hz			
Operational Parameter	**Operating Temp / Humidity**	-10~40° C / 10~90% RH			
	Storage Temp / Humidity	-20~60° C/ 10~90% RH			
	IP Rating	IP20			
	Lifetime	100,000 Hrs			
Service	**Maintenance**	Front Access			

* According to the current Hisense test environment
** Product specifications may vary per region, and specifications are subject to change. This material may include corporate names and trademarks of third parties which are the properties of the third parties respectively.

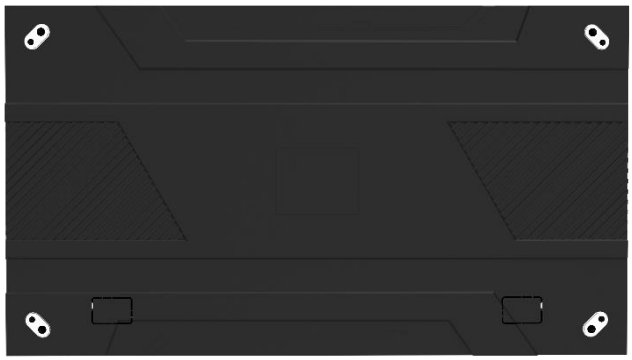
5. **Mounting Holes**

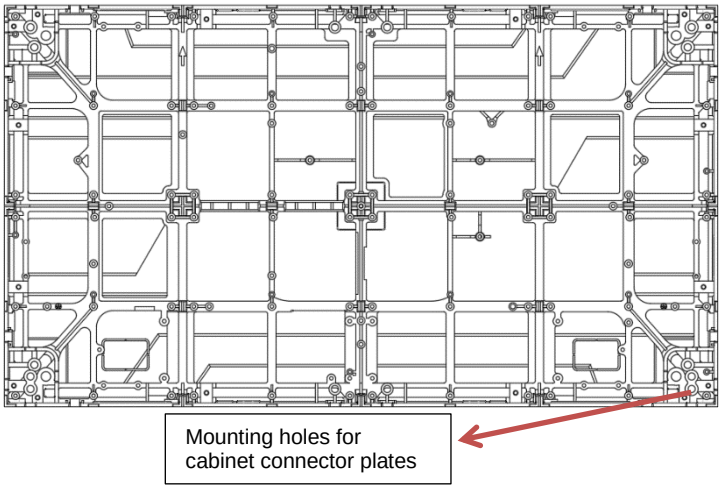


Example: The above shows the mounting holes for XIH015FE/XIH018FE. The XIH009FE/XIH012FE models differ only in the number of LED modules.

6. **Cabinet Overview**

The cabinet is equipped with dedicated **screw holes** for mounting **connecting plates**. These are used during on-site installation to join adjacent cabinets securely.



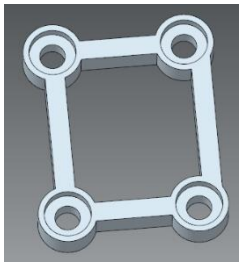


Cabinet Mounting Connectors

During cabinet installation, **mounting connectors** are used to join the cabinets together.
The standard mounting components include:

- **Connecting plates**
- **M6×12mm hex socket screws** (for connecting plates)

These components ensure precise alignment and secure fastening of each ca binet unit.



Inter-Cabinets
Connecting plates

Structural
Connecting plate

M6×12mm hex socket screws

If the product is not installed and used promptly, long-term storage conditions: -20~60° C / 10~90% RH
For the first time installation, if the LED Module has been stored for more than 6 months (calculat- ed from the date of manufacture) without installation, or if the vacuum packaging is found to be damaged and leaking air, the light board needs to be baked in an oven before installation. Bake COB products at 80°C for 48 hours and GOB products at 60°C for 48 hours. If the equipment is damaged due to the use environment exceeding the product standards, failure to dehumidify as required, or product condensation, etc., warranty services will not be provided.

7. **Installation Instructions**

7.1 **Product installation**

To ensure optimal display performance, COB cabinets and LED Modules must be installed in their designated positions according to the following numbering rules:
Cabinet numbering rule: XX (column number) - YY (row number)
Installation sequence: Start from the center column and proceed outwards to both sides

Example layout:

3-1	3-2	3-3
2-1	2-2	2-3
1-1	1-2	1-3

LED Module numbering rule: XX (column number) - YY (row number) - ZZ (LED Module number)

Example layout:

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

XIH009FE/XIH012FE

1-1-1	1-1-2
1-1-5	1-1-6

XIH015FE/XIH018FE

Note: If the shipment is calibrated per LED Module, installation does not need to follow the serial numbers, and cabinets may be installed in any order.

7.2 **Steel Structure Installation**

Using a 2×2 configuration as an example:
Begin by aligning two cabinets in a row, and install row by row. When installing, align the positioning pins of the cabinet with the corresponding holes. First adjust the flatness between cabinets, and then tighten the connecting screws

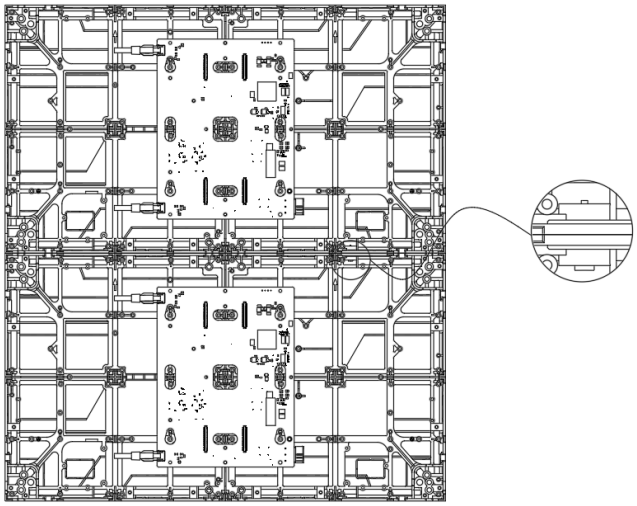
Step 1:

Place the cabinet with the screen-printed arrow facing up. Use a leveling strip to ensure the left side is aligned, then tighten the upper and lower connecting screws. After that, connect adjacent cabinets through the top and bottom openings using network cables.

Notes:

Ensure that the positioning pins match the positioning holes one-to-one.

Insert the network cable gently and in the correct orientation.



Two vertically stacked cabinets

Tighten the upper and lower M6×20 connecting screws.

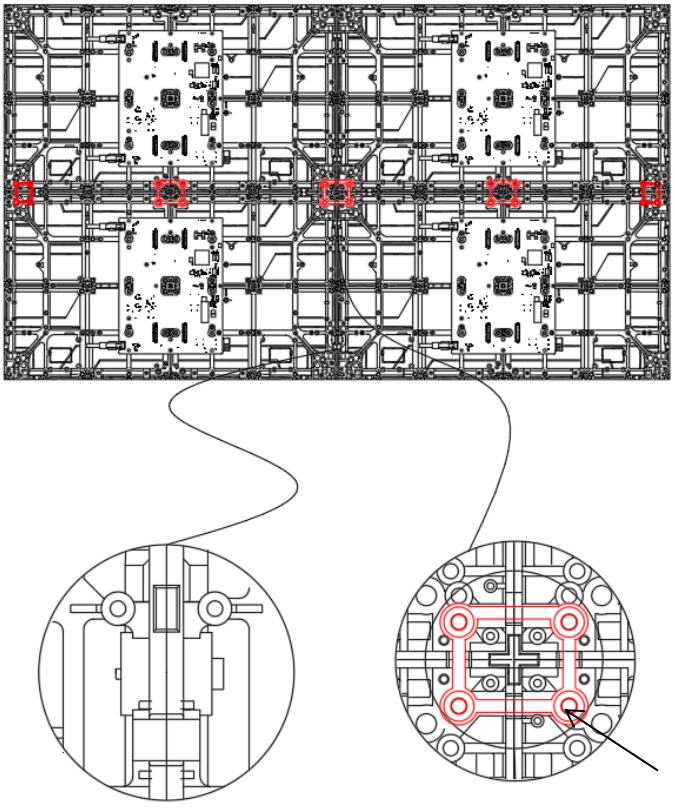
Step 2:

Install the cabinets column by column. Use a straight leveling bar to align the top edges of the cabinets. Follow the installation sequence (e.g., Column 1 → Column 2), and use M6×20mm screws along with connecting plates to secure the cabinets together.

Notes:

When tightening the M6 screws, start with the cabinet that has a lower surface height.

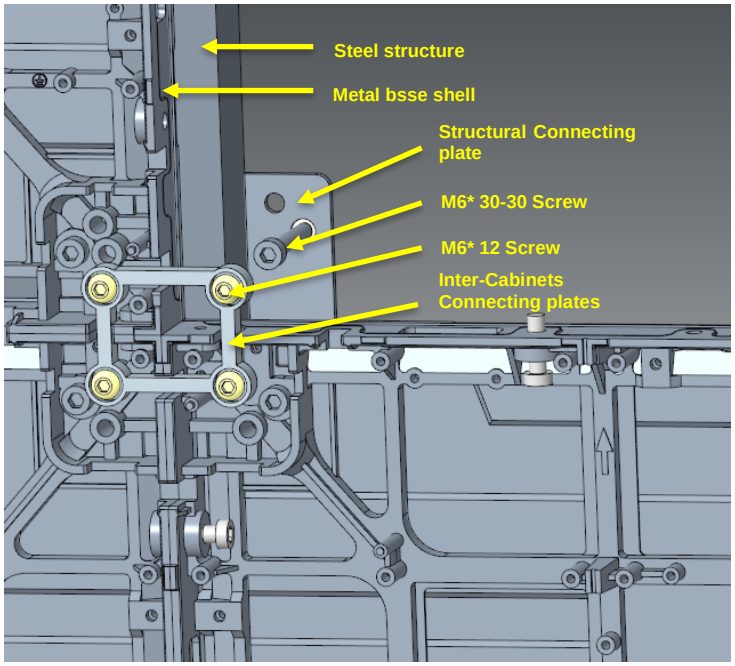
If the connecting plate does not align as expected after tightening, slightly loosen the surrounding M6 screws, readjust the connecting plate, and then retighten all the loosened screws.



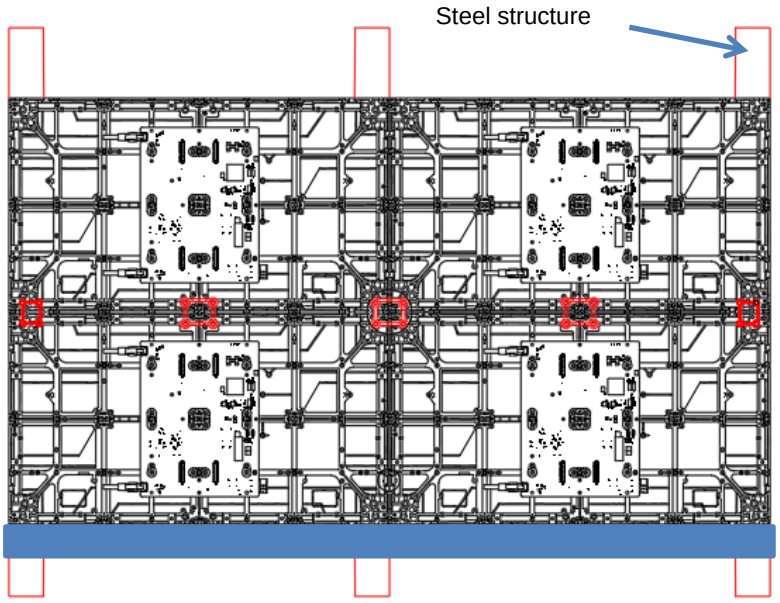
M6*12

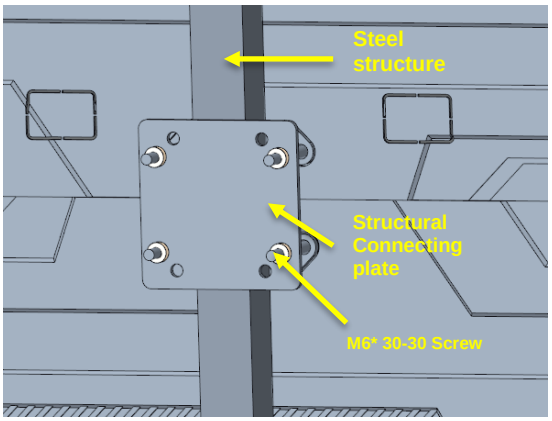
Sequence 1:Tighten the left and right M6 connecting screws.

Sequence 2:Install the connecting plates using M6×12mm screws.



Step 3:
Secure the 2×2 cabinet assembly to the steel structure according to the on-site conditions. For example, as shown in the diagram on the right, use screws to fix the cabinets to the steel frame.





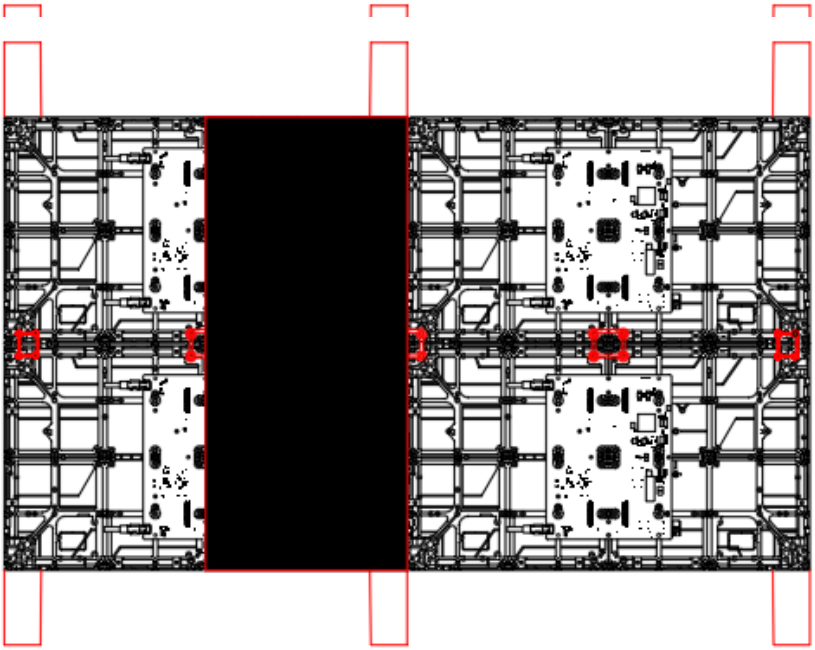
Step 4:
After installing the cabinets, connect the external network cables and power cables.
For detailed instructions, refer to **Section 7.3.1 – Power Cable Connection and Section 7.3.2 – Signal Cable Connection.**

Step 5:
Once all cabinets are installed, check that all screws are properly tightened and that both power and network cables are correctly connected.

Step 6:
Take out the LED Modules and begin installation from the center column, moving outward to both sides. Ensure that each LED Module is installed in accordance with its designated cabinet and serial number.

Notes:

1. LED Modules must be installed in the exact positions indicated by the full-screen labeling.
2. Handle the LED Modules with care during installation. Avoid impact, especially on the edges.
3. All installers must wear gloves during the installation process.



Installation sequence: Start with the center column, then install adjacent columns one by one. After each column is installed, check whether all edges and surfaces are flush and level.

Caution: Handle the LED modules gently during installation to prevent

7.3 **Electrical and Signal Connections**

Pre-Wiring Preparation

Before supplying power and control signals to the entire screen, carefully check that all power and signal connections are correct.

Inspect the **L (Live), N (Neutral)**, and **PE (Protective Earth)** terminals on the AC power input port of each cabinet to ensure there are **no short circuits between them** (use a multimeter to verify).

When connecting power cables, calculate and select the appropriate distribution box or socket **based on the maximum power consumption**. For specific configurations, consult your electrician or distribution cabinet supplier.

The input voltage of the cabinet is **100–240V AC.**

Use **3×2.5mm² power cables** between the distribution box and the cabinets. Please verify the actual input voltage.

Note that **the number of cabinets supported by each power cable may vary depending on voltage and product model**.

(If you are unsure, please contact your regional distributor.)

7.3.1 **Power Cable Connection**

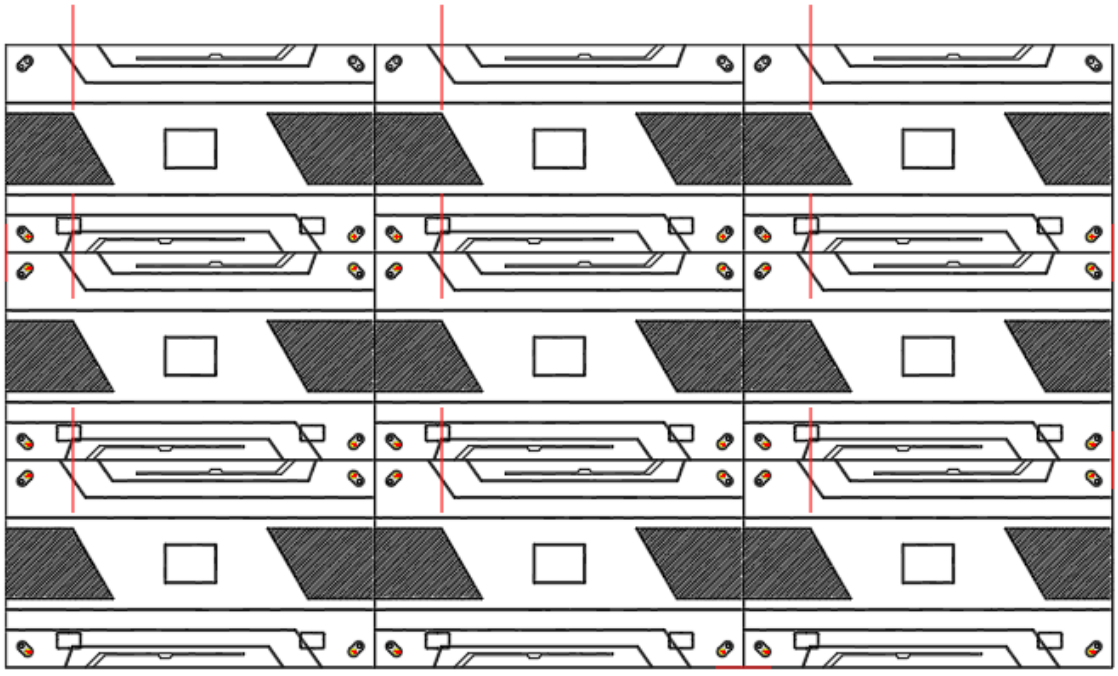
Taking **XIH009FE** as an example, the total power consumption per cabinet group is calculated as:

4 × 0.6 × 0.3375 × 310W × 1.5 = 0.283kW,

where **1.5** is a safety factor to account for power fluctuations and peak load.

First, connect the cabinets in series using **inter-cabinet power cables**.

Then, use a **3×2.5mm² main power cable** to connect the first column of cabinets to the distribution box or power socket.



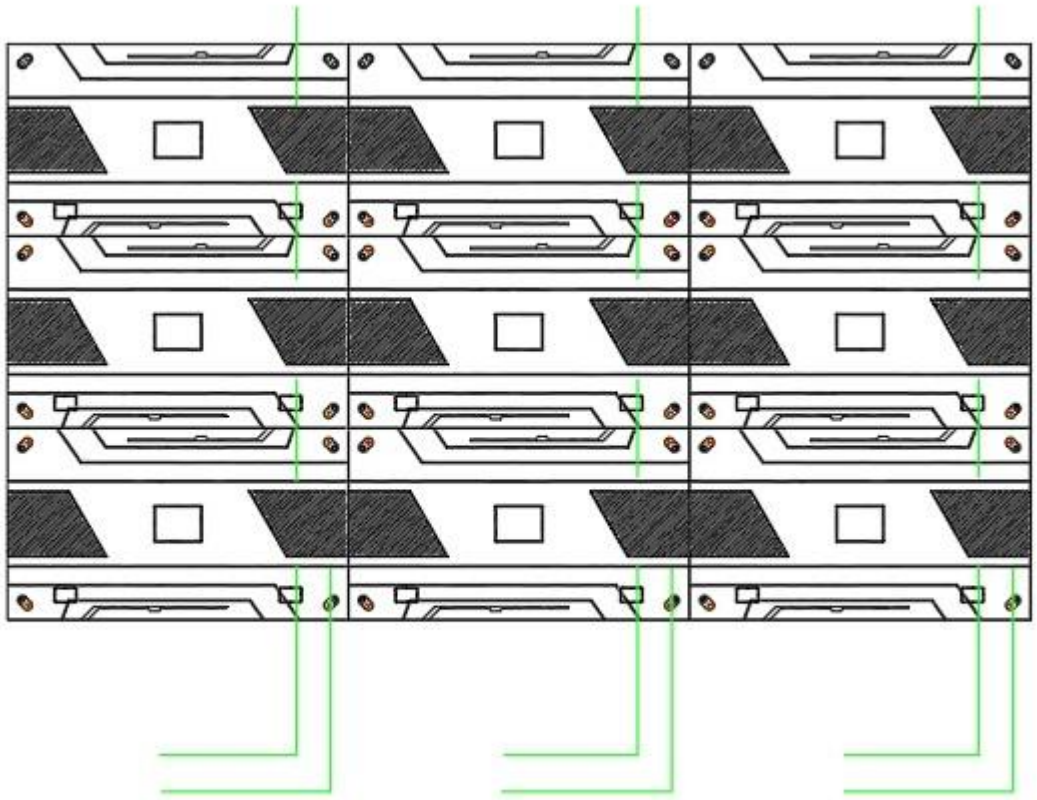
Note:

When the input voltage is **220V**, a single 3×2.5mm² power cable can support up to **20 cabinets**; when the input voltage is **110V**, each power cable can support up to **10 cabinets**.

7.3.2 **Signal Cable Connection**

The cabinets' signal connections use specially supplied STP (Shielded Twisted Pair) Category 5e cables.

The number of cabinets connected in series must not exceed the maximum load capacity of a single network port on the sending card.



7.3.3 **Power-On Testing**

After completing the cabinet wiring, use a multimeter to check for any short circuits at the AC power input terminals (**L/N/PE**) and DC output terminals (**VCC/GND**).

If any short circuit is detected, carefully inspect and troubleshoot the wiring.

Do not power on the cabinets until you have confirmed all wiring is correct and safe.

8. **LED Module Maintenance**

8.1 **LED Module Maintenance**

When a cabinet malfunctions, **front maintenance** can be performed. A **dedicated suction tool** must be used for this procedure. During operation, handle the LED Module with care — do not apply force or strike the LED surface. Pay particular attention to **preventing the LED Module from dropping** during removal or installation.

To remove the LED Module, press the suction tool firmly and vertically against the LED Module surface. Activate the suction, then gently pull the LED Module outward to detach it from the cabinet.

Note: Before maintenance, clean the surface of the suction tool with a **dust-free cloth** to avoid contaminating the LED Module.

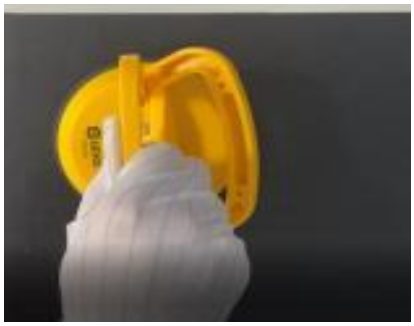
8.2 **Maintenance Procedure:**

1. Identify the location of the faulty LED Module.
2. Place the suction tool at the center of the faulty LED Module.
3. Pull up the handle to engage the suction, then gently pull outward to remove the LED Module.
4. Install the replacement LED Module with the **top side facing up**, ensuring it matches the screen orientation.
5. Carefully align the LED Module connectors during installation.

Important Notes:

- Always wear **gloves** during LED Module maintenance.
- Handle LED Modules gently to avoid any collision or damage to the edges.
- If **mixing LED Modules from different production batches** is unavoidable, **please carefully verify the visual consistency after installation**.

A diagram of the LED Module maintenance process is shown below.



9. **Common Faults and Troubleshooting**

No.	Common Issue	Troubleshooting Steps
1	Some LED Modules not lighting up	Check if the LED Modules are installed in the correct orientation. Check for faulty LED Modules. Check whether the cabinet's power supply is outputting correctly. Check if the LED Module-to-adapter board connection is secure. Replace the adapter board and receiving card. Re-send receiving card parameters.
2	Entire screen not lighting up	Check if the screen power is turned on. Check if the DVI or HDMI cable is loose. Check if the main network cable is properly connected. Check whether the sending card is powered and the LED is blinking. Replace the sending card. Connect an LCD to check if the graphics card outputs a signal. Replace the computer.
3	Screen displays garbled content	Check if the receiving card power connector is secure. Check if the power cable is damaged. Check the power supply output. Check the network cable. Re-send receiving card parameters. Upgrade the receiving card firmware. Replace the receiving card.
4	LED Module color inconsistency	Check if the power connector is securely connected. Replace the power supply. Replace the LED Module.
5	All cabinets display the same image	Check display screen connection settings. Check if sending card ports are connected correctly.
6	Control system not detected	Check USB cable. Check PC USB port. Update USB driver. Replace USB cable. Replace sending card.
7	Multi-function card not detected	Check if the power box is in Auto mode. Replace the power supply of the multifunction card. Check if the network cable is plugged into the correct port. Replace the multifunction card or sending card.
8	Display not full screen	Check window settings of the playback software. Check the output resolution of the video processor.

10. **Precautions**

Temperature range:
The ambient operating temperature should be kept between -10℃~40℃
The storage temperature should be kept between -20℃~60℃; Humidity range:
The operating humidity should be kept between10%-90%RH; no condensation.
The storage humidity should be kept between 10%-90%RH; no condensation.

Dust-proof and waterproof:
The light board surface is rated IP65. Water infiltration from the sides or back can cause electrical short circuits, resulting in damage to the circuit boards and electronic components.

Electrostatic Discharge Electrostatic Discharge (**ESD**) protection
The power supply, cabinets, and the metal shell of the screen body must be effectively grounded with a grounding resistance of less than 10 Ω to prevent electrostatic discharge that could damage electronic components.

Electrical Safety:
Main plug is used as the disconnect device, the disconnect device shall remain ready for operating. Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Maintenance instructions：
The interiors of the cabinets pose an electrical hazard and shall not be opened by individuals who are not qualified professionals.

LED Module Cleaning：

Tools	**Recommended choices**	**No use**
Wiping cloth	Lint-free and soft microfiber cloths (such as lint-free cleaning cloths and eyeglass cleaning cloths); they must be brand - new or thoroughly cleaned to avoid adhering hard particles.	Rough towels, paper tissues, chemical fiber fabrics.
Cleaning fluid	Special screen cleaner or distilled water (tap water should not be used as water scale will remain).	Solutions containing alcohol, ammonia, strong acids or strong alkalis.
Auxiliary tools	Soft brush, compressed air canister (cold air).	Hard brush, heat gun, blade, high-pressure water gun, etc.

Necessary preparations before cleaning
Power off and cool down: Turn off the power, unplug the plug, and wait for the screen to cool down completely (at least 30 minutes). This helps avoid the risks of static electricity or short-circuits and prevents the cleaning agent from evaporating and leaving marks.

Environment selection
Operate in a dust-free and low-humidity environment to avoid secondary pollution during the cleaning process.
Screen cleaning
1.Cleaning of surface dust
Use a soft brush or a compressed air canister (keep a distance of ⩾ 20 cm from the screen) to gently remove
the dust in the gaps and on the surface. Direct wiping is prohibited! Dust particles may scratch the screen.
2.Wet wiping for stain removal
Step 1: Fold a slightly damp cleaning cloth and gently wipe the screen in one direction (e.g.,

horizontally). Step 2: For stubborn stains, dip the cloth in a small amount of cleaning agent and soften the dirt by making small circles. Then wipe it clean in one direction.
Step 3: Immediately dry the water marks with a dry microfiber cloth to avoid leaving stains after drying.
Notes:
•The cleaning agent or distilled water must be sprayed on the microfiber cloth (never spray directly on the
screen).
•Gently wipe in one direction (e.g., horizontally), avoiding circular motions or pressing hard.
•For stubborn stains, you can increase the amount of cleaning agent, but make sure the cloth is slightly damp rather than dripping wet.
3.Drying and inspection
Let it air - dry naturally for 5 minutes, or pat dry the remaining water marks with another dry microfiber cloth.
Check for water stains or scratches under strong light

11. **User Instructions**

Dehumidification

LED displays are products sensitive to temperature and humidity. During use, the temperature and humidity of the environment need to be controlled:

When the environmental humidity is within the range of 35% - 55%RH, it is recommended to turn on the display screen once a week and use it normally for more than 4 hours each time to remove the moisture from the display screen.

When the environmental humidity is above 55%RH, dehumidification treatment of the environment is re- quired. It is recommended to use the display screen normally for more than 8 hours per week to prevent the display screen from being affected by moisture, which may cause malfunctions.

When the display screen has not been used for a long time, pre-heating and dehumidifying the display screen are necessary before use to avoid malfunctions of the light tubes caused by moisture. The specific method is as follows: light up the screen at 0% brightness for 2 hours, then at 10% brightness for 2 hours, 20% brightness for 2 hours, 40% brightness for 2 hours, 60% brightness for 2 hours, and gradually increase the brightness for aging. This product can perform the automatic dehumidification function to assist in achieving dehumidification.

Condensation problem

In the event of the presence of condensation on the LED display, it is imperative that the LED display not be Power ON. Prior to any operational initiation, the area must be subjected to

dehumidification utilizing an air conditioning system. The display screen may only be safely energized once all internal condensation has been thoroughly evaporated. Neglecting to adhere to this procedure may result in intractable damage to the LED display screen, thereby potentially voiding any warranty coverage and incurring liability for associated repair or replacement.

Electrostatic Discharge (ESD) protection:

The installation personnel must wear anti-static wriststrap and gloves, and all tools must be strictly grounded during the assembly process.

Operation method:

It is strictly forbidden to assemble LED Modules, cabinets, or the entire screen while electricity is on. Operations must be performed with the power completely turned off to ensure personal safety.

Disassembly and Transportation:

Do not drop,push,crush or compress the package to,so as to prevent the LED Module from falling and bumping and avoid such problems as kit breaking, LED Module damage,scratching and breakage,or component fall-off.

Environmental Safety Check:

A thermometer and hygrometer must be installed at the display screen site to monitor the surrounding environment of the screen body, in order to promptly detect any dampness, moisture, and other related issues.

Use of the Display Screen：

A. The ambient humidity should be strictly controlled to fall within the range of 35% Relative Humidity (RH) to 55% RH. It is advisable to activate the display screen a minimum of once per week, with each operational session extending beyond four hours to facilitate the removal of residual moisture from the display.

B. When the environmental humidity exceeds 55% RH but does not surpass 90% RH, it becomes necessary to implement dehumidification measures. To mitigate the risk of dampness affecting the screen and precipitating operational issues, it is recommended that the screen be utilized for a minimum of eight hours per week under normal conditions.

C. Should the display screen remain dormant for an extended period, it is essential to undertake a process of preheating and dehumidifying the screen prior to reactivation to preempt any lamp-related moisture issues. The recommended procedure is as follows: Initially, set the screen at a 0% brightness level for a duration of two hours, followed by increments to 10%, 20%, 40%, and 60% brightness levels at respective two-hour intervals, thereby progressively enhancing the brightness throughout the aging process. Adherence to this protocol is crucial to ensure the display screen's optimal performance and to maintain the integrity of the warranty.