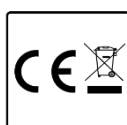


A27 Plus Series User Manual



CCC



CE



FCC



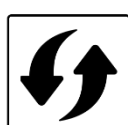
ETL



Front service



High contrast ratio



High refresh rate



Easy installation



FHD/4K

Catalogue

1、 Product Introduction	- 4 -
1.1 Product Main Features	- 5 -
1.2 Product Specifications	- 7 -
1.3 Cabinet Dimension Figure	- 8 -
1.4 Module Dimension Figure	- 8 -
2、 Product Components	- 8 -
2.1 Cabinet Introduction	- 9 -
2.2 Product Component Drawing	- 9 -
3、 Product Installation	- 12 -
3.1 Front Installation	- 13 -
3.2 Installation of Frame against Wall	- 13 -
3.3 Rear Installation	- 16 -
3.4 Rigging	- 16 -
4、 Product Cabling	- 17 -
4.1 Power Supply Wiring	- 18 -
4.2 Signal Cable Wiring	- 18 -
4.3 The Test of Setting up an Electric Circuit	- 20 -
5、 Maintenance	- 20 -
5.1 Preparation Tools	- 20 -
5.2 Maintenance Instructions	- 20 -

Safety Information



WARNING!

Please read the safety measures listed in this section carefully before installing, powering on, operating, or doing maintenance on this product.

The following marks on the product and in this manual indicate important safety measures.



WARNING!
Safety risk! Might cause equipment damage or safety risk.



WARNING!
Please read the manual before operating.



WARNING!
Dangerous voltage! Might cause equipment damage or electric shock.



WARNING!
Hot surface! Do not touch.



WARNING!
Flammable!



WARNING!
Possible damage to eyes.



WARNING: Be sure to understand and follow all safety guidelines, safety instructions, warnings and precautions listed in this manual. This product is for professional use only! This product may result in serious injury or death due to fire hazard, electric shock, and crushing hazard.



Please read this manual carefully before installing, powering up, operating and maintenance of this product. Follow safety instructions in this manual and on the product. If you have any questions, please seek help from Absen.



Beware of Electric Shock!

- To prevent electric shock the device must be properly grounded during installation. Do not ignore using the grounding plug, or else there is a risk of electric shock.
- During a lightning storm, please disconnect the device' s power supply, or provide other suitable lightning protection. If the equipment is not in use for a long time, please unplug the power cord.
- When performing any installation or maintenance work (e.g. removing the fuses, etc.,) make sure to turn off the master switch.
- Disconnect AC power when the product is not in use, or before disassembling, or installing the product.
- The AC power used in this product must comply with local building and electrical codes, and should be equipped with overload and ground fault protection.
- The main power switch should be installed at a location near the product and should be clearly visible and easily reached. This way in case of any failure the power can be promptly disconnected.
- Before using this product check all electrical distribution equipment, cables and all connected devices, and make sure all meet current requirements.
- Use appropriate power cords. Please select the appropriate power cord according to the required power and current capacity, and ensure the power cord is not damaged, aged or wet. If any overheating occurs, replace power cord immediately.
- For any other questions, please consult a professional.



Beware of Fire!

- Use a circuit breaker or fuse protection to avoid fire caused by power supply cables overloading.
- Maintain good ventilation around the display screen, controller, power supply and other devices, and keep a minimum 0.1 meter gap with other objects.
- Do not stick or hang anything on the screen.
- Do not modify the product, do not add or remove parts.
- Do not use the product in case ambient temperature is over 55 °C.



Beware of Injury!



- Warning: Wear a helmet to avoid injury.
- Ensure any structures used to support, fix and connect the equipment can withstand at least 10 times the weight of all the equipment.
- When stacking products, please hold products firmly to prevent tipping or falling.
- Ensure all components and steel frames are securely installed.
- When installing, repairing, or moving the product, ensure the working area is free of obstacles, and ensure the working platform is securely and stably fixed.
- In the absence of proper eye protection, please do not look directly at the lit screen from within a 1 meter distance.
- Do not use any optical devices that have converging functions to look at the screen to avoid burning the eyes.



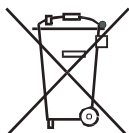
WARNING: Beware of suspended loads.



LED lamps used in the module are sensitive and can be damaged by ESD (electrostatic discharge). To prevent damage to LED lamps, do not touch when the device is running or switched off.



WARNING: The manufacturer shall not bear any responsibility for any incorrect, inappropriate, irresponsible or unsafe system installation.



Product Disposal

- Any component that has a recycling bin label can be recycled.
- For more information on collecting, reusing and recycling, please contact the local or regional waste management unit.
- Please contact us directly for detailed environmental performance information.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1. Product Introduction

A27 Plus series products are high-definition fixed display screens specially designed for retail, enterprise, advertisement and other fields. The cabinet size is 610x343mm with a 27.5-inch 16:9 ratio design, which can perfectly replace the 55-inch LCD splicing wall with a 2x2 cabinets combination and realizes seamless splicing.

The product is primarily used at branded chain stores, shopping malls, hotel banquet hall, TV stations, banks, churches, theaters, corporate lobbies, high-end clubhouses, museums, transportation hubs, airports, railway stations, conference rooms as well as numerous other applications.



1.1 Product Main Features

- A27 Plus series products have two optional version: Standard Version and Smart Version. The smart version has a HDMI interface, and the video source can be directly input into the cabinet without sending card.
- A27 Plus series cabinet is formed integrally by die-casting. It is made of aluminum alloy and has the characteristics of high precision, good flatness, difficult deformation, good heat dissipation, etc.
- The cabinet is designed in 27.5 inches and a ratio of 16:9, which is convenient to splice the display sizes of 16:9. The point-to-point display FHD/4K ,FHD is 4x4(110 inches) cabinet arrangement when the A2712 Plus is arranged, 5x5(137.5 inches) cabinet arrangement when the A2715 Plus is arranged, 6x6(165 inches) cabinet arrangement

when the A2719 Plus is arranged, 8x8(220 inches) cabinet arrangement when the A2725 Plus is arranged, and 12x12(330 inches) cabinet arrangement when the A2738 Plus is arranged.

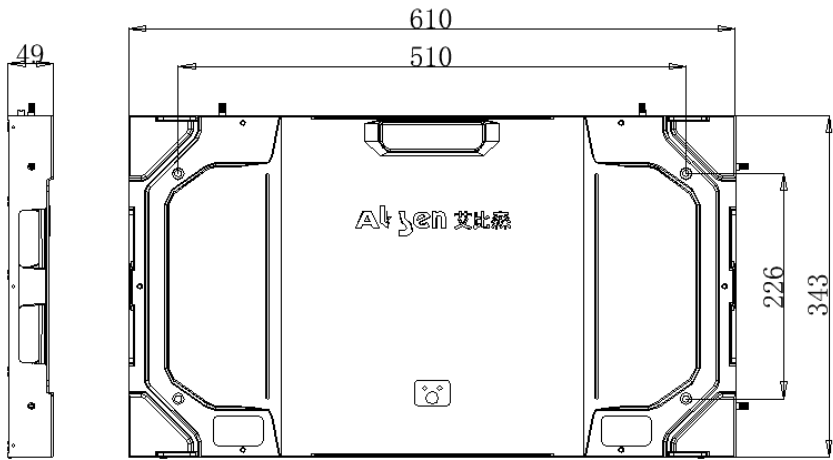
- Fully front installation and maintenance. power supply, receiving card, HUB, etc. can be maintained from the front, which is easy and fast without rear maintenance channel.
- Floating connectors are used between the module and the HUB board, which can realize fine adjustment of splicing gap after assembly to ensure no bright and dark lines.
- The wall mounting installation is easily realized by matching with a special installation mounting frame, and the depth of the whole screen after installation is only 9cm.
- The magnetic attraction module is wirelessly connected, and the module can be assembled and disassembled quickly without screwing or removing wires.
- The cabinet and power supply have a fanless design, eliminating noise, reducing power consumption and saving energy.
- Signals and power connections between the cabinets are connected quickly using crystal plugs and sockets, reliable power plugs and sockets.
- External test buttons and indicator lights are used to test cabinet and show running status at a glance.
- High gray scale, high refresh, high gray in low light, high contrast, large viewing angle, no ghosting and caterpillar phenomenon, showing excellent display effect.
- The cabinet can be customized to realize the installation of a 90-degree right-angle screen, and the right-angle splicing gap is only 4 mm.
- Support Absen's third generation point-by-point correction technology (upgrade version—A3C+), with more uniform and better picture. The module has its own correction data memory, which can import automatically correction data when replace module directly.
- Black screen automatic energy-saving technology: black screen and some black screen images automatically enter the energy-saving mode to save energy efficiently.
- Suitable for various installation methods: wall mounting, rigging, stacking, etc.

1.2 Product Specifications

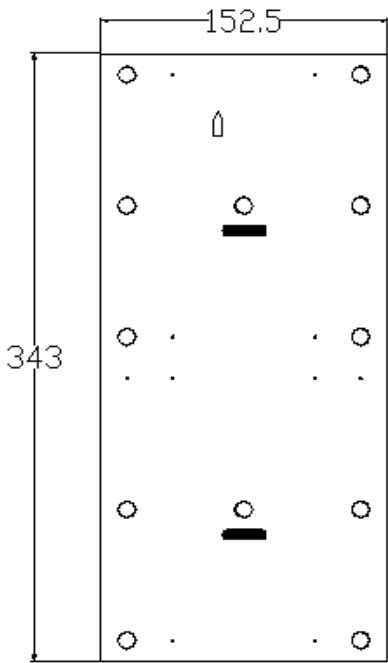
Parameter		A2738 Plus	A2725 Plus	A2719 Plus	A2715 Plus	A2712 Plus
Physical Parameter	Pixel Pitch (mm)	3.8	2.54	1.9	1.58	1.27
	LED Type	Black SMD 2121	Black SMD 2121	Black SMD 1515	Black SMD 1010	Black SMD 1010
	Panel Dimensions (WxHxD)/(mm)	610x343x49				
	Pixel Per Panel	160x90	240x135	320x180	384x216	480x270
	Panel Weight (kg)	6				
	Panel Material	Aluminum				
	Module Dimensions (WxH)/(mm)	152.5x343				
Optoelectronic Parameter	Brightness (nit)	1000	1000	800	600	600
	Gray scale (bit)	14				
	Refresh Rate (Hz)	1920~3840				
	Contrast Ratio	6000:1	4000: 1	4500: 1	4000: 1	3000: 1
	Color Temperature(K)	6500				
	Viewing Angle (H/V) (°)	160/140	160/140	140/120	160/140	160/140
	Driving Type	1/15	1/27	1/40	1/48	1/45
	AC Operating Voltage (V)	100~240				
	Power Consumption (Max./Avg.)(W/m ²)	570/190	610/203	540/180	610/203	630/210
Application Parameter	Storage Temperature (°C)		- 40~ + 60			
	Operating Temperature (°C)		- 10~ + 40			
	Storage Humidity (RH)		10 % ~85 %			
	Operating Humidity (RH)		10 % ~80 %			
	IP Rating (Front/Rear)		IP40/IP21			
	LED Lifetime (H)		100000			
	Module Maintenance		Front			
	PSU & Others Maintenance		Front			
	Panel Installation Type		Rigging/Stack/wall mounting, Front/Rear Installation			
	Certificate		TUV-CE+RoHS/ETL+FCC/CCC			

Remark: Power consumption tolerance: ±15%, according to the actual situation.

1.3 Cabinet dimension figure(mm)

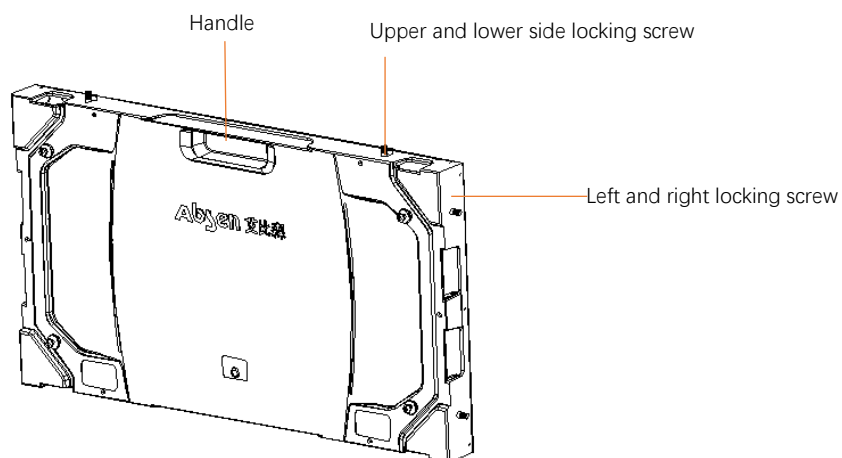


1.4 Module dimension figure(mm)



2. Product Components

2.1 Cabinet Introduction

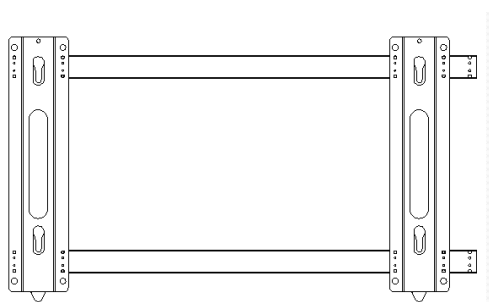


Note:

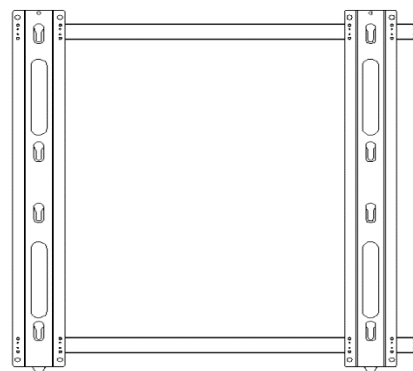
Side locking screws are used to connect the cabinets while adjusting the gaps between the cabinets to ensure the flatness.

2.2 Product Component Drawing

2.2.1 Mounting frame: used for wall mounting, including single and double frames.

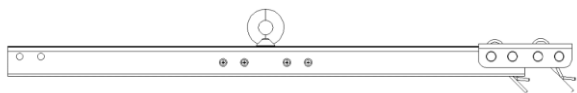


1X1 Single frame



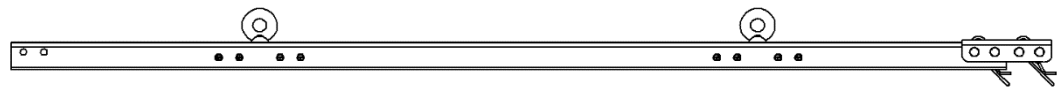
1X2 Double frame

2.2.2 Hanging bar: single and double hanging bars.



Single Hanging Bar

Single Hanging Bar



Double Hanging Bar

2.2.3 Data Jumper for vertical connections in between cabinets (Standard Version), 0.5m long.

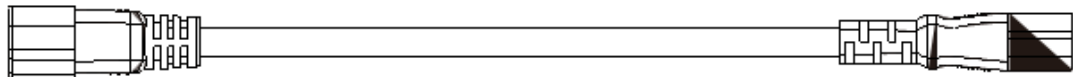


2.2.4 Data Jumper for horizontal connections in between cabinets (Standard Version), 0.8m long.

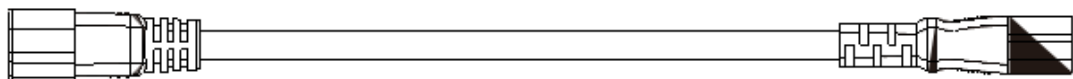


2.2.5 Power Jumper for vertical connections in between cabinets: 0.3m long (Type 1).

Power Jumper for vertical connections in between cabinets: 0.5m long (Type 2).



2.2.6 Power Jumper for horizontal connections in between cabinets: 0.9m long.



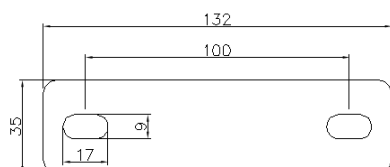
2.2.7 Power cable for video wall power in, 10m long.



2.2.8 Standard packaging: Carton packing, module and cabinet are packaged separately.
Package dimensions: 805×120×435 mm. Weight: 8 kg.



2.2.9 Connector plates and bolts are used for installations with steel structure.



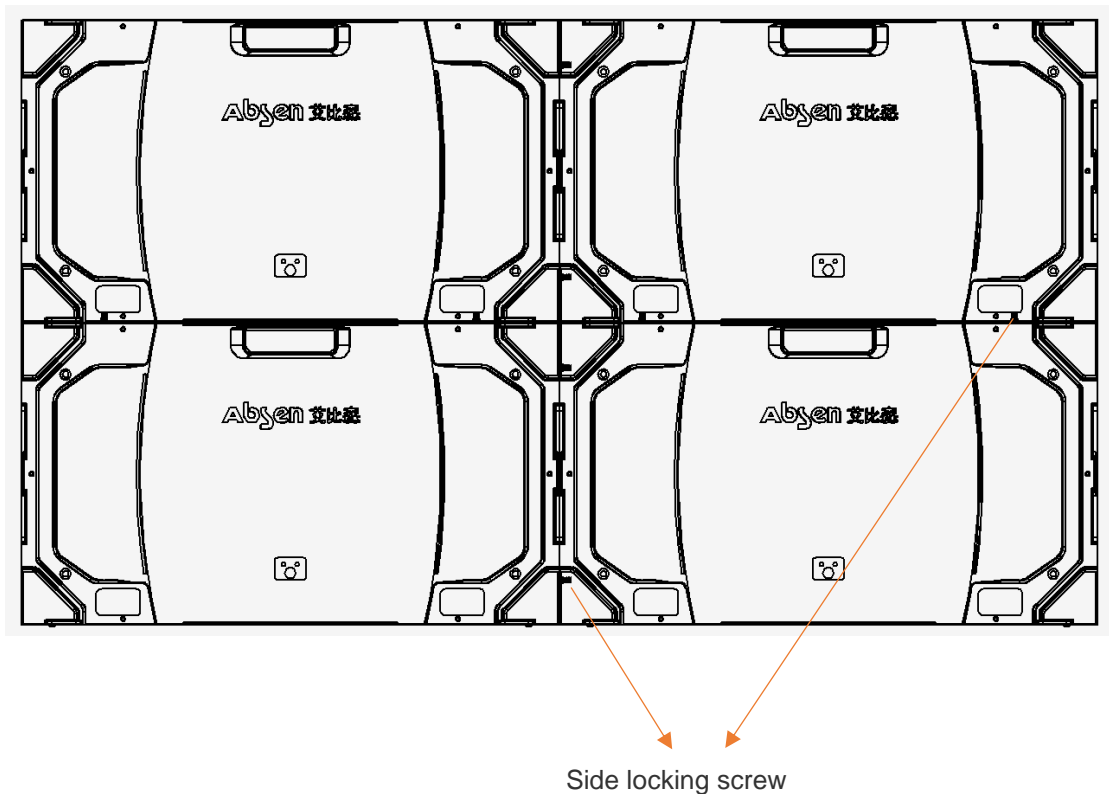
Connector Plates



M8×60 Screw Bolt

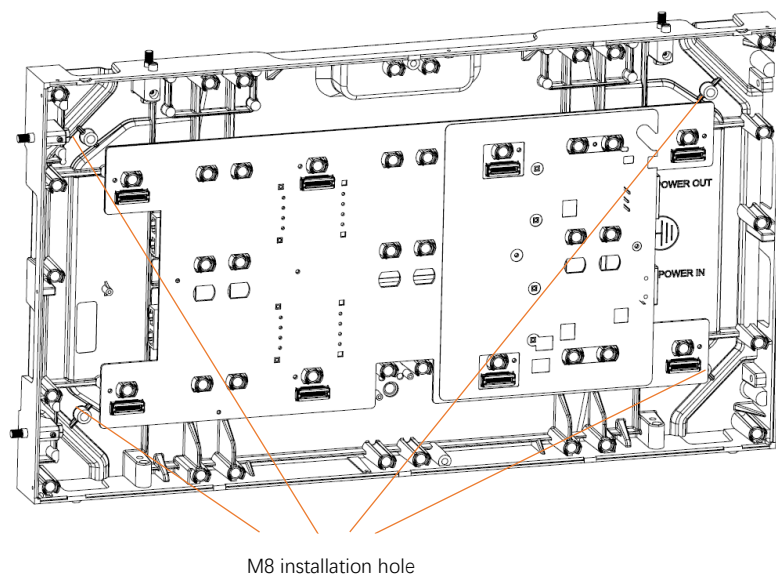
3、 Product Installation

The product is suitable for various forms of installation, including front installation, rear installation and rigging. Use the side locking screws to lock the cabinets during the installation.



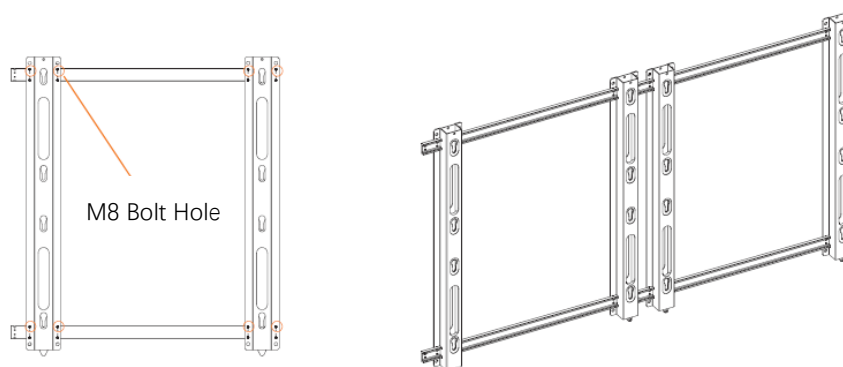
3.1 Front Installation

Cabinets can be mounted onto the wall with mounting frames or onto the steel structure via the front mounting screw hole of the cabinet.

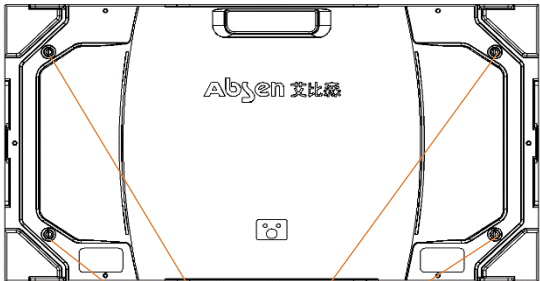


3.2 Installation of frame against wall

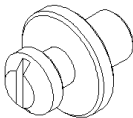
Step 1: Use M6 Tapping Screws or M6 Anchors to install the mounting frame onto a flat wall.



Step 2: Install the hanging pins onto the M8 holes of the cabinet, with 4 hanging pins per cabinet.

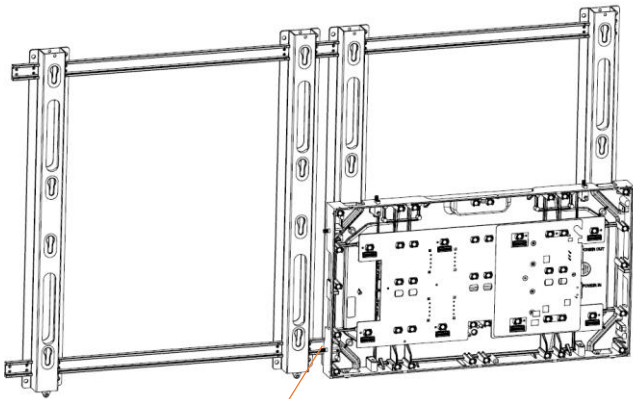


Hanging pin

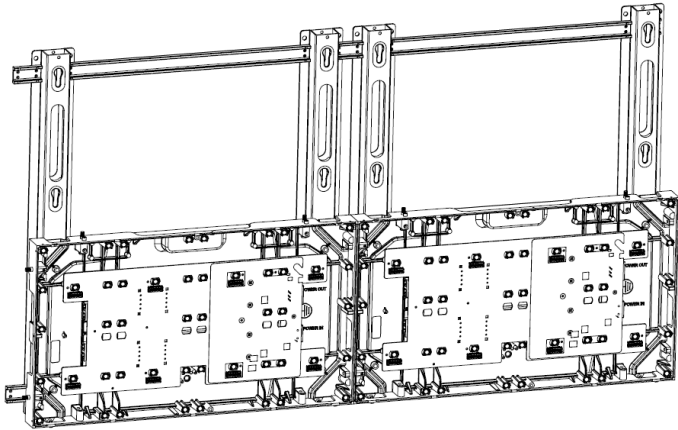


Hanging pin

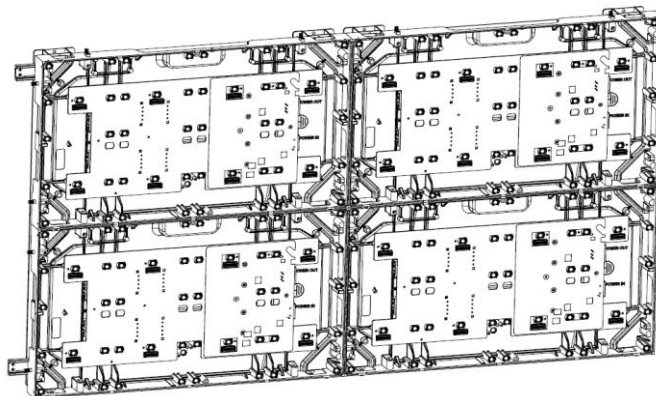
Step 3: Install the cabinet (without modules) onto the frame: install from bottom layer to top layer, and fasten the cabinets with locking screws.



Locking screw

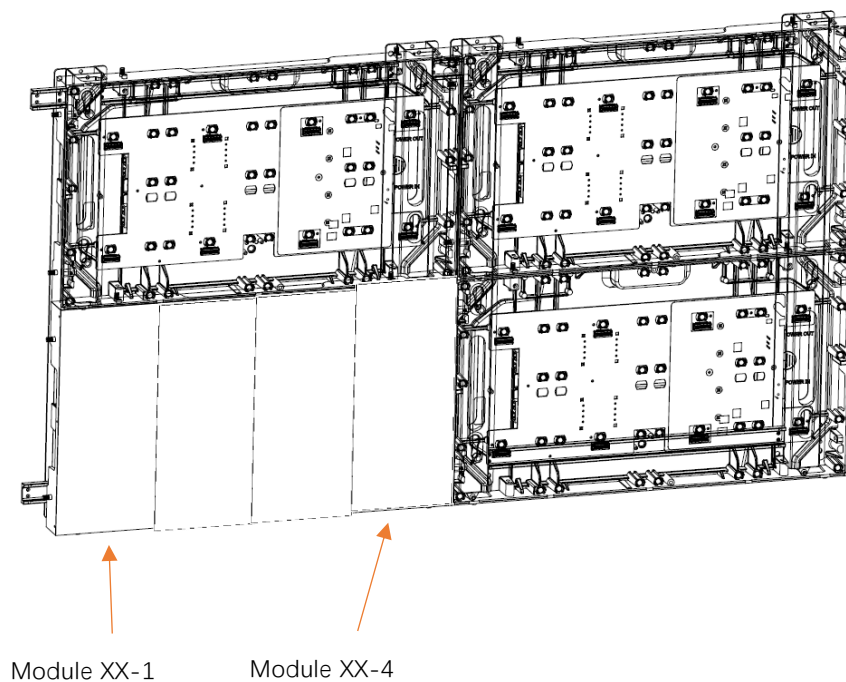


Step 4: After all the cabinets assembled, connect all the power and data cables.



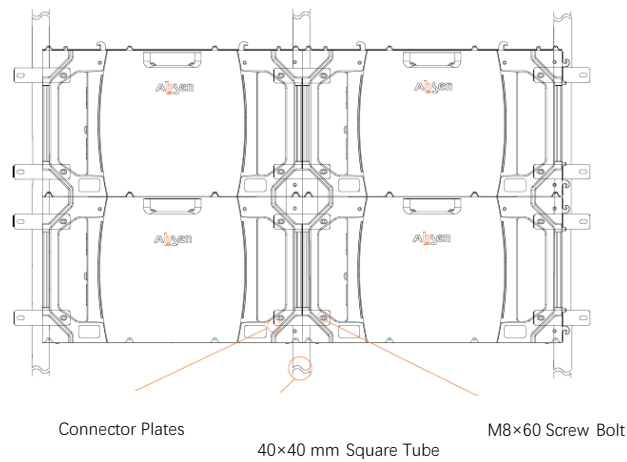
Step 5: Install the module. Please follow the instructions for this step as below:

From the front view, module XX-1 is installed on the leftmost side of the cabinet, and module XX-4 is installed on the rightmost side of the cabinet. (Note: "XX" represents for cabinet number, which should be exactly the same between cabinets and modules.)



3.3 Rear installation

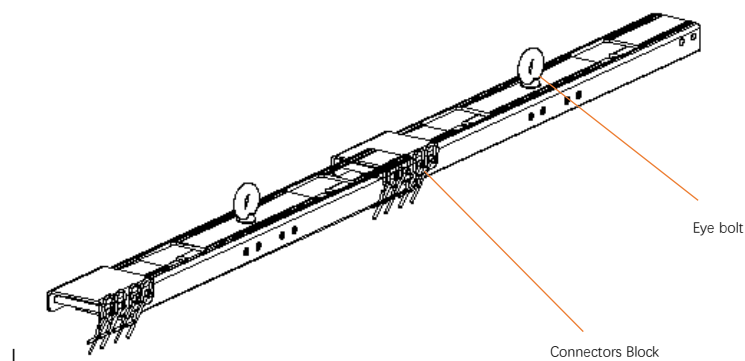
Install from bottom layer to top layer, first lock the connecting screws between the cabinets, then fix the connecting plates with M8x60mm screws onto the square tube.



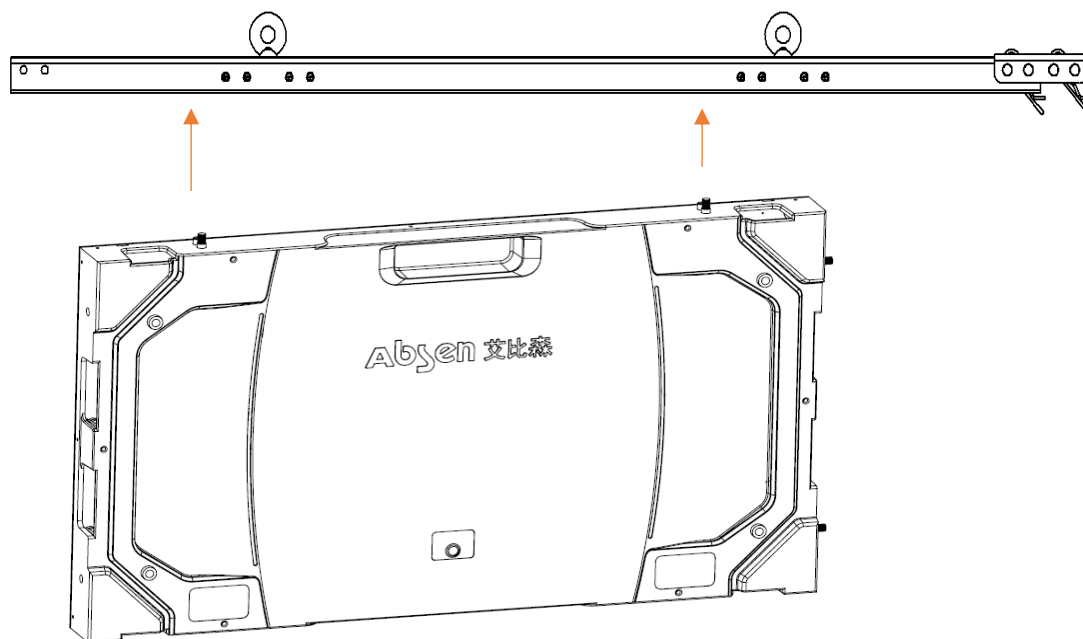
3.4 Rigging

The product also supports rigging installation, and the measured maximum load is 10 cabinets.

First, the hanging bar is fixed on the truss or steel structure by the airplane belt or steel wire rope through the eye bolt, and please make sure the adjacent hanging bars are connected by connecting blocks and kept on the same level.



Install from top layer to bottom layer, and the screw position of the cabinets is aligned with the hanging bar fixing hole.



Remark: during installation, make sure the side locking screws are well connected to ensure the flatness surrounding the cabinets.

4. Product Cabling

Preparation before cabling

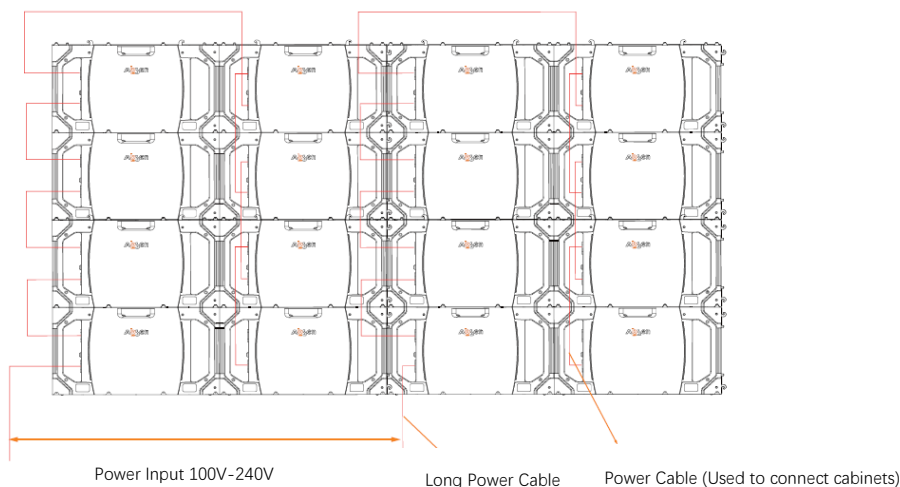
Before applying power and signal source to the screen, please check power and data cables connections carefully and make sure they are wired correctly. Use a multimeter to test the L, N and PE lines in AC power input port and make sure the three lines are not short-circuited.

Power cord connection instructions: Please calculate and select the appropriate model of distribution box or socket according to the maximum power consumption. Please consult your electrician or distribution cabinet manufacturer for specific selection scheme. The input voltage of the cabinet is 100-240V/AC. The 3X1.5mm²/16awg power cable is used from the distribution box to the cabinet. Please confirm the input voltage, The number of cabinets loaded on each power cable will be different upon different voltages and product models. (Please feel free to contact our after-sales service department if you cannot confirm).

Taking a [4x4] A2715 Plus screen for example, data and power wiring schematics are shown below:

4.1 Power Supply Wiring

When the input voltage is 220V, each power cable can carry up to 14 cabinets. When the input voltage is 110V, each power cable can carry up to 7 cabinets. The 16 cabinets of A2715 Plus are loaded with two main power cables, and each main power cable carries $2 \times 4 = 8$ cabinets. First, the cabinets are connected with power cables of connecting cabinets, and then connect the distribution box or socket to the bottom of cabinet with 3 x 1.5mm²/16awg power cables.

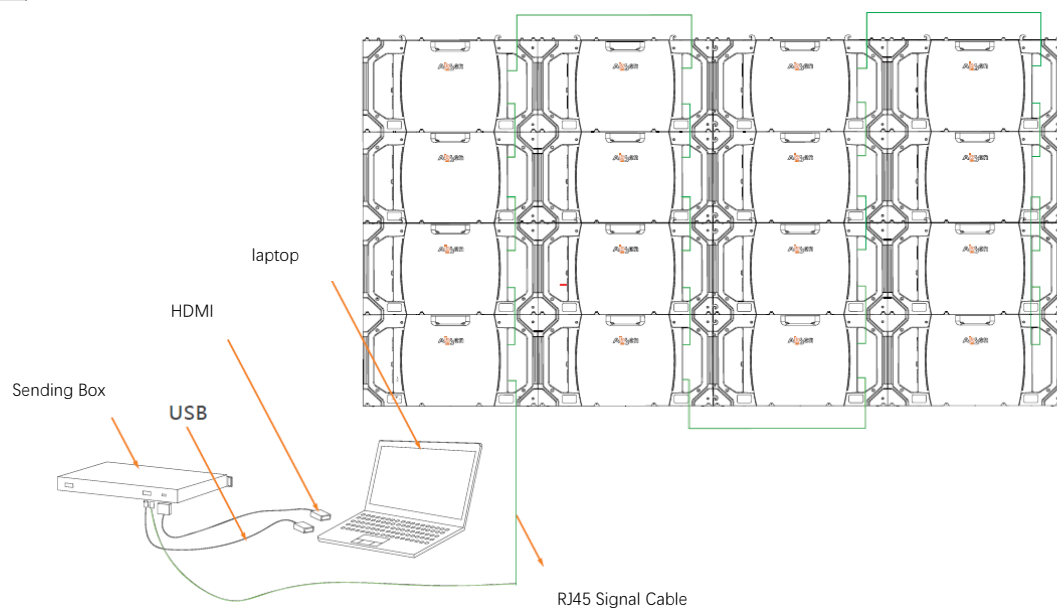


4.2 Signal Cable Wiring

4.2.1 Signal cable connection of standard product version

The signal cable of standard version uses RJ45 CAT5 network cable, and the network cable interface of the cabinet can be used for input and output. For the "S" type of up-down connection, please calculate the resolution according to the pixels of each cabinet and connect the signal cables according to the loading range of the sending card.

Note: The range of loaded pixels of each net port cannot exceed 655360 points (as shown in the following figure)

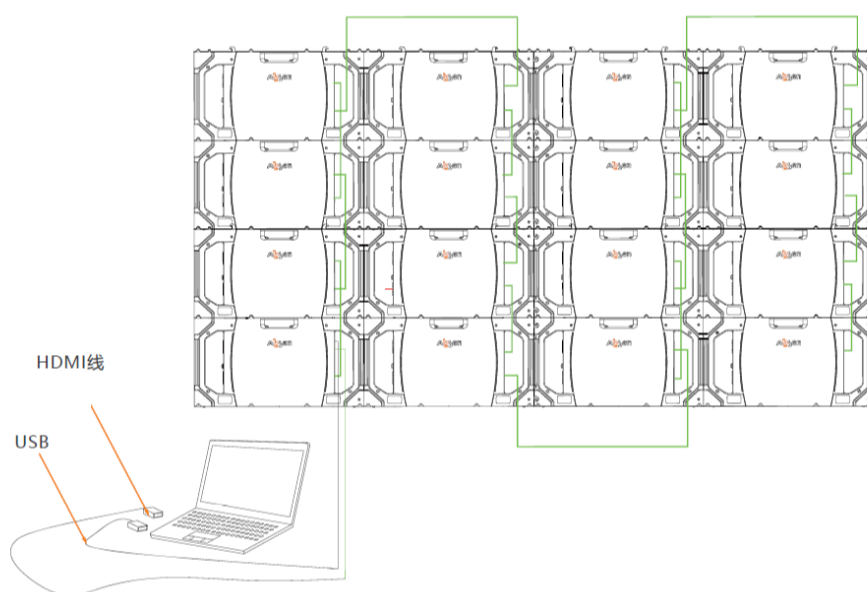


The picture is transmitted from the computer to the sending box via HDMI cable, and then from the sending box to the display screen via network cable.

4.2.2 Signal cable connection of smart version

Smart Version utilizes HDMI data interface with designated input and output ports. The cabinets are cascaded in the form of “S” using data jumper cables. Calculate total pixel load based on the resolution of the screen. Each HDMI cable can handle up to 1920x1080 pixels.

The signal cable of smart version adopts HDMI cable and the upper and lower connection style is S-shaped. Please calculate the resolution according to pixels of each cabinet. Each HDMI cable can control 1920*1080 pixels at most.



4.3 The test of setting up an electric circuit

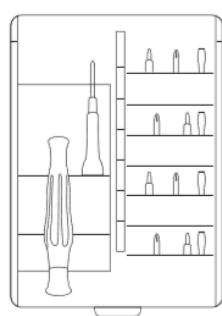
After the cabinet connection is completed, please use a multimeter to measure whether there is short circuit at the AC input (L/N/PE) and DC output (VCC/GND) of the power supply. If a short circuit is found, please check the circuit carefully. After ensuring the cable is normal, switch on the power to electrify the cabinets to work.

Note: Please refer to the software user manual for software operation.

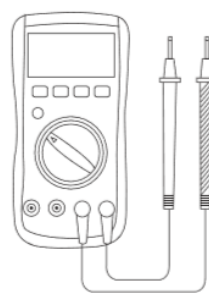
5. Maintenance

5.1 Preparation Tools

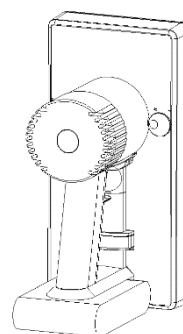
Preparation tools include: module front service tool, Phillips screwdriver, multimeter, etc.



Screwdriver



Multi-meter

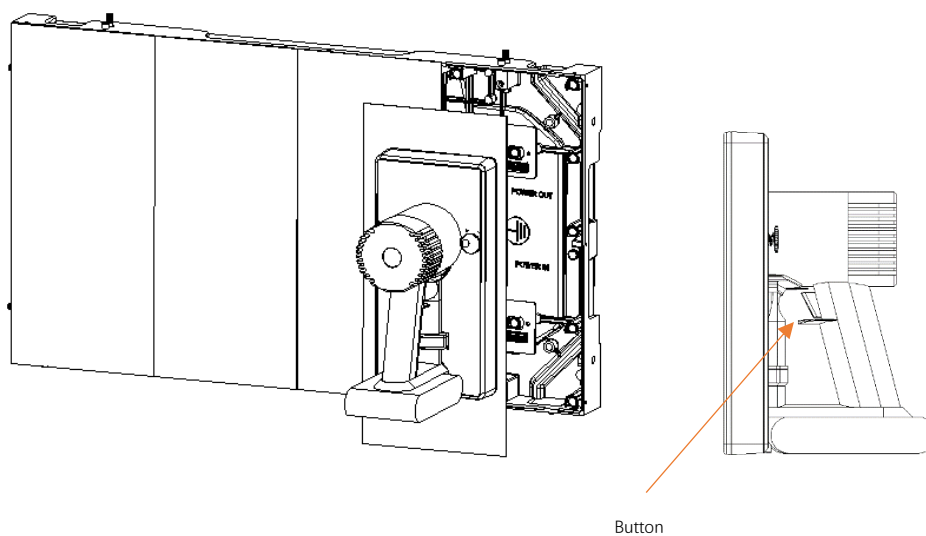


Module Front Service Tool

5.2 Maintenance Instructions

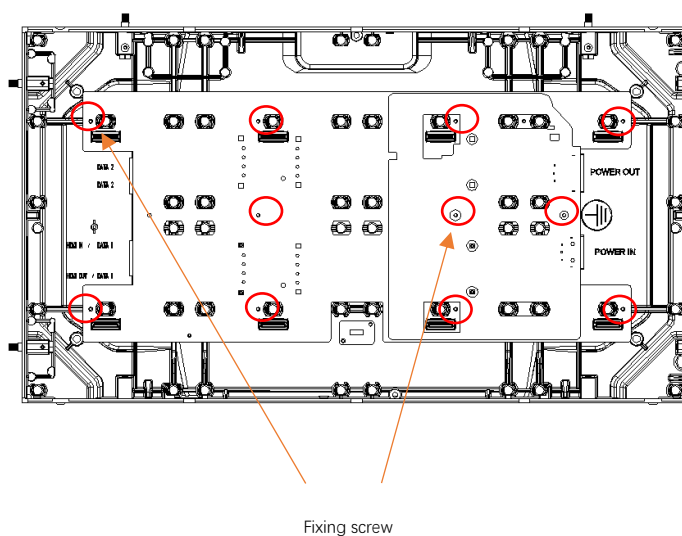
5.2.1 Module Maintenance

Put the front service tool onto the surface of the module, then press the button of the tool to suck out the module, hold the module by hand and release the button.



5.2.2 HUB board maintenance

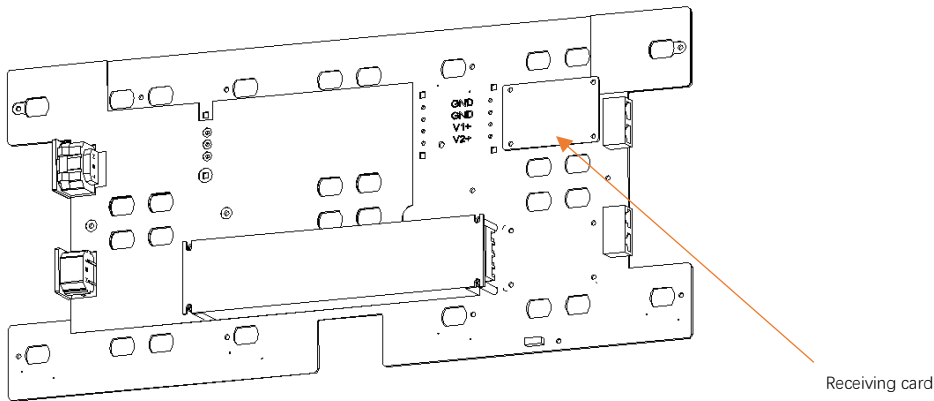
First, take down the 4 modules on the cabinet with the front service tool and put them in place. Then, use a Phillips screwdriver to remove the fixing screws of the HUB board. The HUB board can be removed from the cabinet



Note: The power supply behind the HUB board should be pasted with heat dissipation glue. When all screws are removed, the HUB board should be pulled out of the cabinet by hand.

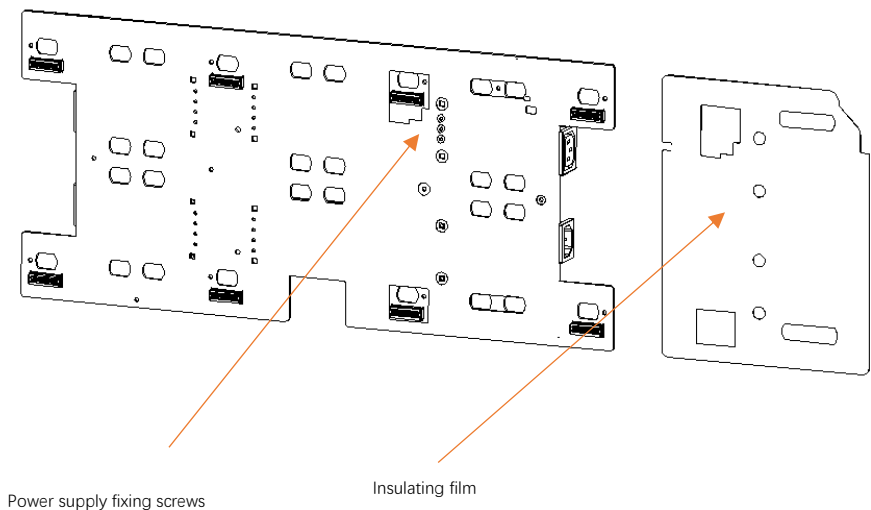
5.2.3 Receiving Card Maintenance

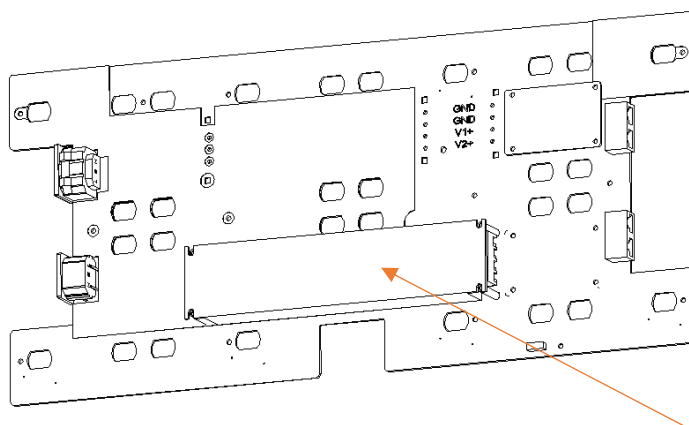
To replace the receiving card, the HUB board must be removed first. On the back of the HUB board, the fixing screw of receiving card must be removed, and the receiving card can be removed from the HUB board.



5.2.4 Maintenance in front of Power Supply

When maintaining the power supply, the HUB board must be removed, the black insulating film must be torn off, and then the power supply fixing screws must be removed with a Phillips screwdriver. The power supply can be removed from the back of the HUB board.





Power supply

Note: After the power supply is replaced, the front face of the HUB board needs to be subsidized with insulating plates.

Absen Your Inspiration. Our Innovation.

Absen Optoelectronic Co.,Ltd.

Address: 18-20F Building 3A, Cloud Park, Bantian Huawei Base,

Longgang District Shenzhen, 518129, P.R.China

TEL: +86-755-89747399 FAX: +86-755-89747599

E-mail: absen@absen.com Website: www.absen.com