Indoor Fixed LED Display Unit

Quick Start Guide

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Applicable Models

This guide is applicable to full-color LED display units.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Note	Provides additional information to emphasize or supplement important points of the main text.
Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

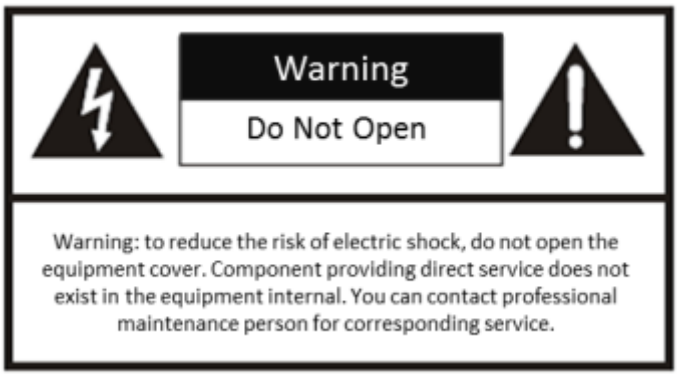
Safety Instructions

Caution

- The reduce the risk of fire or electric shock, please do not expose the device to rain or humid environment.
- The device may generate radio interference in indoor environment. Necessary precautions may be required.
- Electric discharge may last for a short period of time after the power is shut down. Please wait two minutes after the power is shut down before operating the device.
- To avoid the risk of electric shock, please do not operate when the power is on.
- Please do not plug and unplug the power cable when the power is on.
- Ensure correct voltage and wiring of the terminals for connection to mains supply.
- The device is only suitable for installation on the concrete or non-flammable surfaces, to prevent molten material from dripping to the bottom during fire caused by internal failure.
- Keep 90 degrees when moving and using the device.
- Do not place anything containing liquid on the device to avoid the risk of fire or electric shock caused by liquid-splashing.
- Install the device no more than 5 mm away from the wall or other metal racks in case of lamp board drop resulting in electric shock.
- After installation, there should be no openings around the LED module. The bottom bracket under the wire outlet position should completely cover the bottom hole only to let the wire out,

to prevent the molten material from dripping to the bottom during fire caused by internal failure.

- To ensure safety, the installation parts and the wall should support four times the weight of the device.



Warning

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- The device shall not be exposed to water dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the device.
- The protective grounding of the device should be reliably connected to the building protective grounding.
- Do not touch the bare components (such as the metal contacts of the inlets) and wait for at least 5 minutes, since electricity may still exist after the device is powered off.
- + identifies the positive terminals of the device which is used with, or generates direct current, and - identifies the negative terminal(s) of the device which is used with, or generates direct current.
- No naked flame sources, such as lighted candles, should be placed on the device.
- Install the device according to the instructions in Quick Start Guide.
- To prevent injury, this device must be securely attached to the installation surface in accordance with the installation instructions.
- Never place the device in an unstable location. The device may fall, causing serious personal injury or death.
- The additional force shall be equal to three times the weight of the device but not less than 50 N. The device and its associated mounting means shall remain secure during the installation. After the installation, the device, including any associated mounting plate, shall not be damaged.
- The interface varies with the models. Please refer to the product datasheet for details.
- If the device needs to be wired by yourself, select the corresponding wire to supply power according to the electric parameters labeled on the device. Strip off wire with a standard wire stripper at corresponding position. To avoid serious consequences, the length of stripped wire shall be appropriate, and conductors shall not be exposed.

- Make sure that the power has been disconnected before you wire, install, or disassemble the device.
- If smoke, odor, or noise arises from the power supply or device, immediately turn off the power, unplug the power cable, and contact the service center.
- The equipment has been designed, when required, modified for connection to an IT power distribution system.
- NEVER place items that might tempt children to climb, such as toys and remote controls, on the top of the equipment.
- CAUTION: This bracket is intended for use only with LED display unit. Use with other equipment may result in instability causing injury.
- This device is suitable for mounting on concrete or other non-combustible surface only to avoid fire hazard.
- The power supply or device must be connected to an earthed mains socket-outlet.
- High voltage for the power supply. Do not disassemble it.
- An all-pole mains switch shall be incorporated in the electrical installation of the building.
- A readily accessible disconnect device shall be incorporated external to the equipment, rated 220/230/240 VAC, 6 A for each device. A single device is recommended for AC 220 V/ 230 V/ 240 V, 6 A circuit breakers. When multiple devices are superimposed, a suitable circuit breaker should be selected according to the total rated current, but it must not exceed the building equipped circuit specifications.
- To reduce the risk of electric shock, install protective shield on the exposed connector after installing LED screen.
- The power supply or device must be connected to an earthed mains socket-outlet.
- High voltage for the power supply. Do not disassemble it.
- CAUTION: This device is for use only with LED bracket. Use with other (carts, stands, or carriers) may result in instability causing injury.
- The device external wiring connected to the hazardous live terminals requires installation by an instructed person.
- To reduce the risk of electric shock, install protective shield on the exposed connector after installing LED screen.
- Disconnect the power plug before installing the protective shield.
- Disconnect the power plug before maintenance.
- Make sure the power supply is well-grounded.
- The external wire connection between device and hazardous electronic terminals should be operated by professionals.
- Please strictly follow the installation method in this guide.
- To prevent injury, the device must be securely fixed to the ground, wall, ceiling, or steel frame. The all-in-one rack should be fixed to the ground with expansion screws.

- The supporting rack can only be used with the device. Using it with other devices may cause instability and injury.
- The device can only be used with the supporting rack. Using it with other equipment (such as a cart, shelf, or handling device) may cause instability and injury.
- This is a class A product and may cause radio interference in which case the user may be required to take adequate measures.

TABLE OF CONTENTS

Chapter 1 Introduction

1.1 Overview

Indoor fixed LED display unit (hereinafter referred to as the device, the product, or the LED) is a high-precision product delivering clear and vivid images. It is featured by wide color gamut, stable performance, long service life, strong environmental adaption, cost effective and little cost to use. The device is applicable to scenes, such as radio and television stations, meeting room display, video surveillance, information display, etc.

1.2 Product Components

An LED control system includes sending and receiving cards. The sending card packages images and sends them to the receiving card. The receiving card unpackages and processes the images, and then displays the images on the LED display unit.

The center distance between two pixels is called pixel pitch. The smaller pixel pitch results in higher pixel density per unit area, higher resolution and higher cost. For example, P1.2 indicates 1.2 mm pixel pitch.

Our products are rack-mount system, so the installation process mainly involves rack installation and cabinet installation. The following sections describe how to install the rack and cabinet in details.

Chapter 2 Rack Installation

2.1 About Rack

There are three types of racks for installing our full-color LED products: wall-mounted rack, ultrathin rack and all-in-one rack. The wall-mounted rack is used for installing front-maintenance cabinets only. The ultrathin rack and all-in-one rack can be used for installing front-maintenance cabinets and back-maintenance cabinets. The rack models vary depending on the project scale and installation environment, so the rack illustrations in this manual are for reference only.

2.2 Install the Rack

2.2.1 Precautions

- Installation personnel must wear protective gear.
- Take safety measures when working at heights.
- Make sure that the rack is mounted vertically to the flat ground without tilting or twisting.
- Check that all structural parts and fasteners are fully mounted without missing.
- After all the accessories are mounted, clean all the debris in the rack and avoid metal debris being remained.

2.2.2 Install the Wall-Mounted Rack

The wall-mounted rack is used for installing front-maintenance cabinets only.

Install the Base Frame

Step 1 Use header corners to connect aluminum extrusion rods from bottom to top.

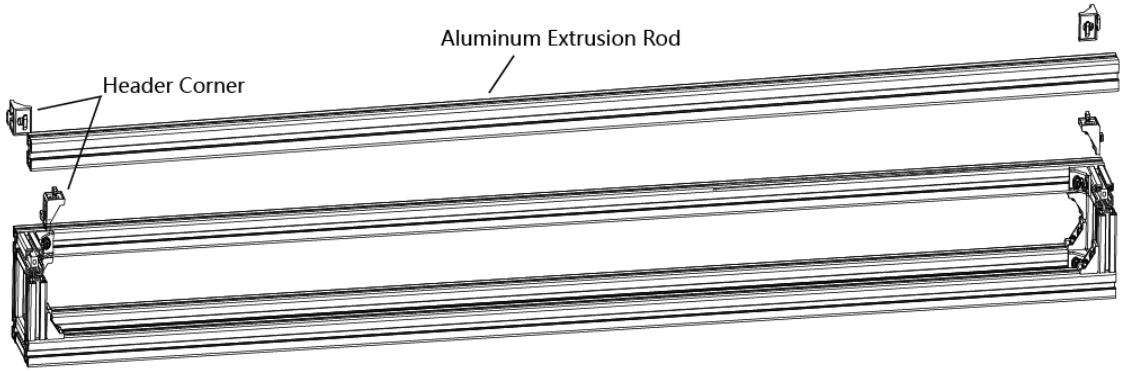


Figure 2-1 Assemble the Base Frame

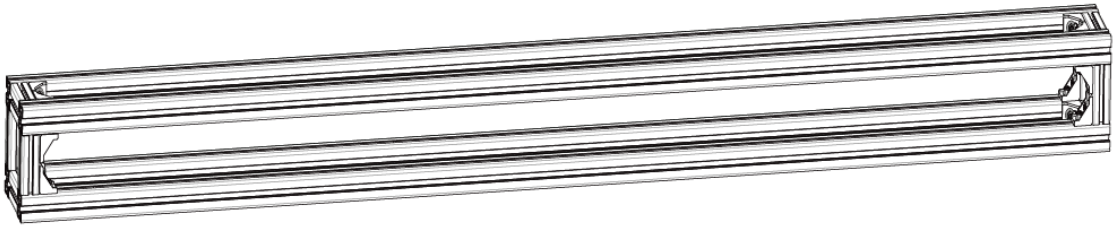


Figure 2-2 Base Frame Assembled

Step 2 Use expansion bolts, T-Shaped bolts and fixing plates to fix the base frame onto the wall.

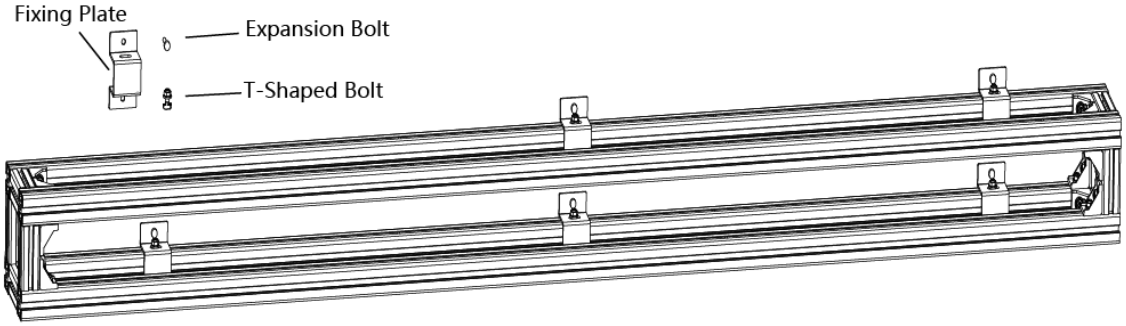


Figure 2-3 Fix the Base Frame onto the Wall

Install the Rack Frame

Step 1 Use the header corners to connect aluminum extrusion rods to the base frame from left to right.

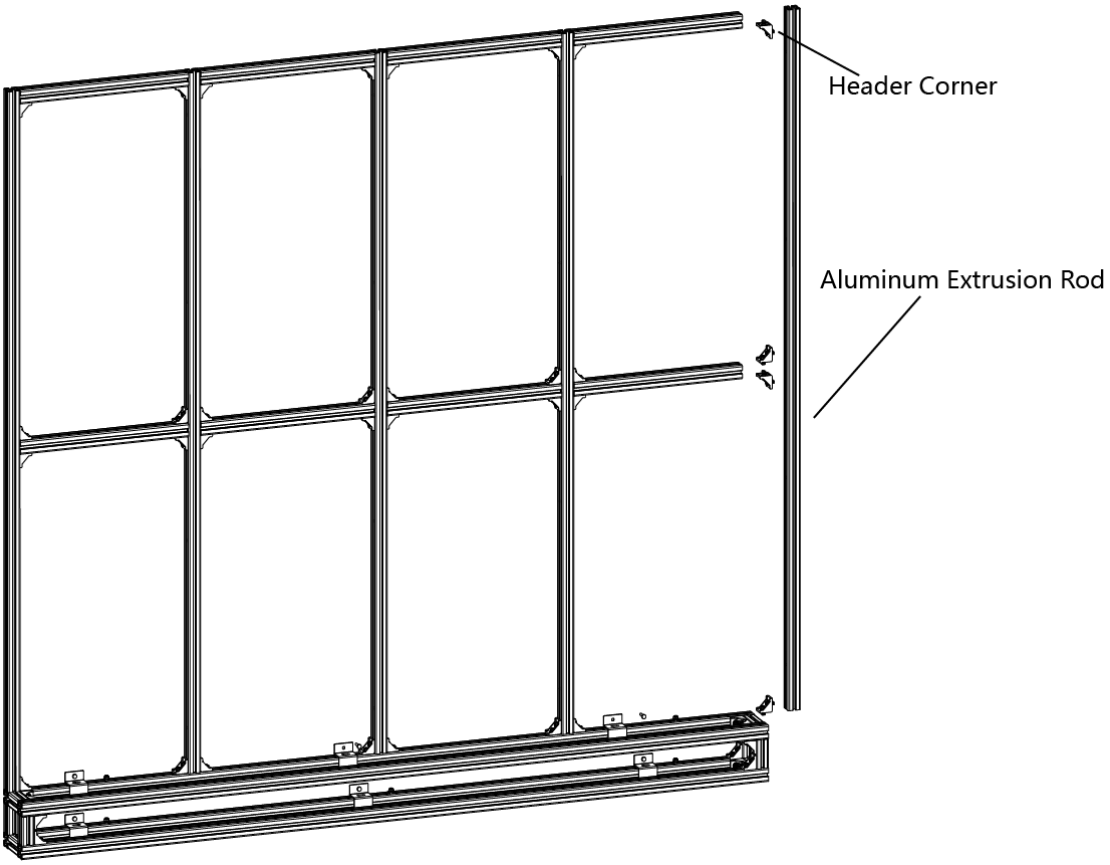


Figure 2-4 Assemble the Rack Frame

Step 2 Use expansion bolts, T-Shaped bolts and fixing plates to fix the rack frame onto the wall.

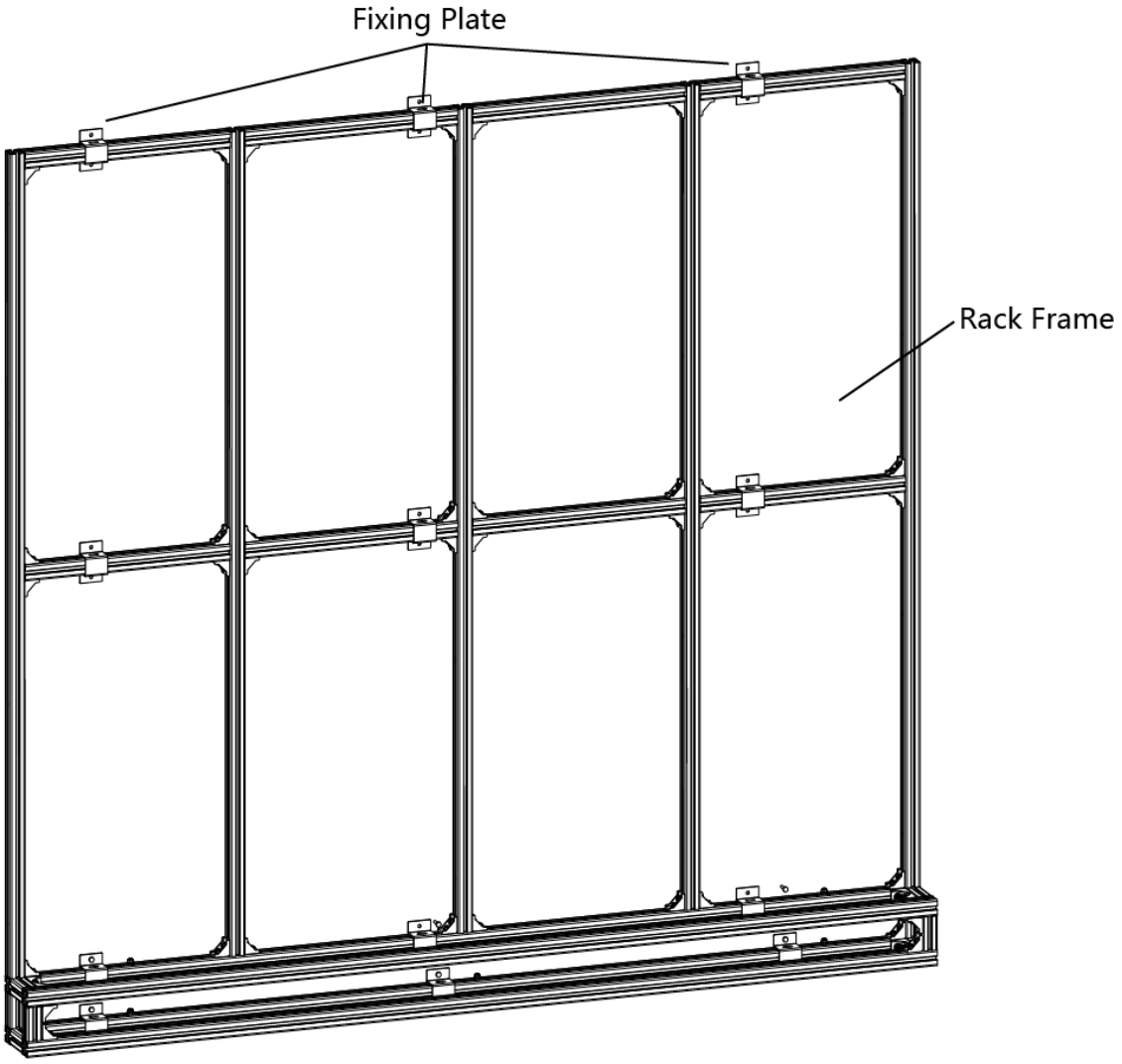


Figure 2-5 Fix the Rack Frame onto the Wall

Install Cabinets into the Rack Frame

After base frame and rack frame are well installed, perform the following steps to install the cabinets into the rack frame:

Step 1 Install the mounting screws through the holes on the front of the cabinet and lock with the floating nuts on the bracket frame.

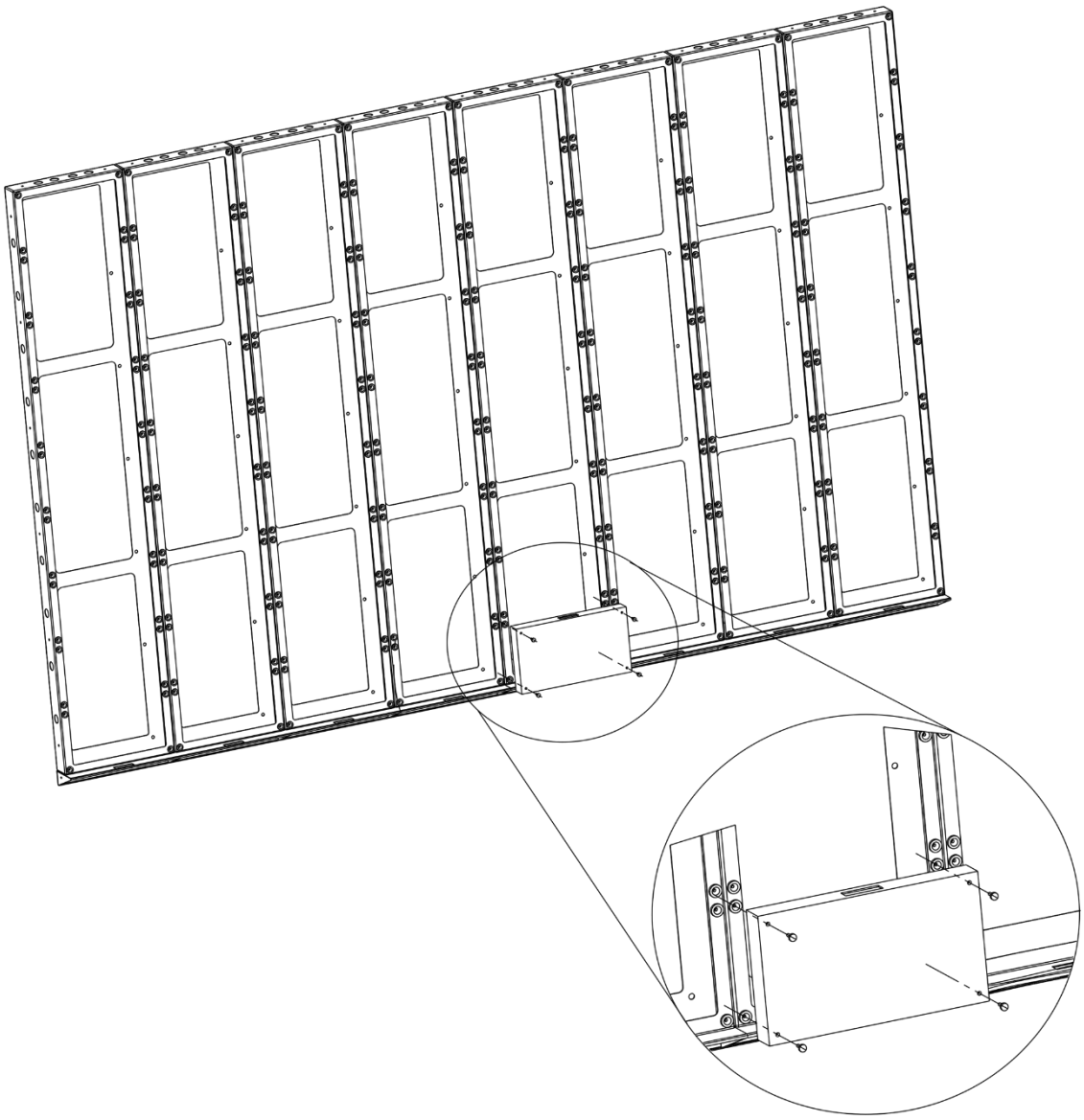


Figure 2-6 Fix the Screen

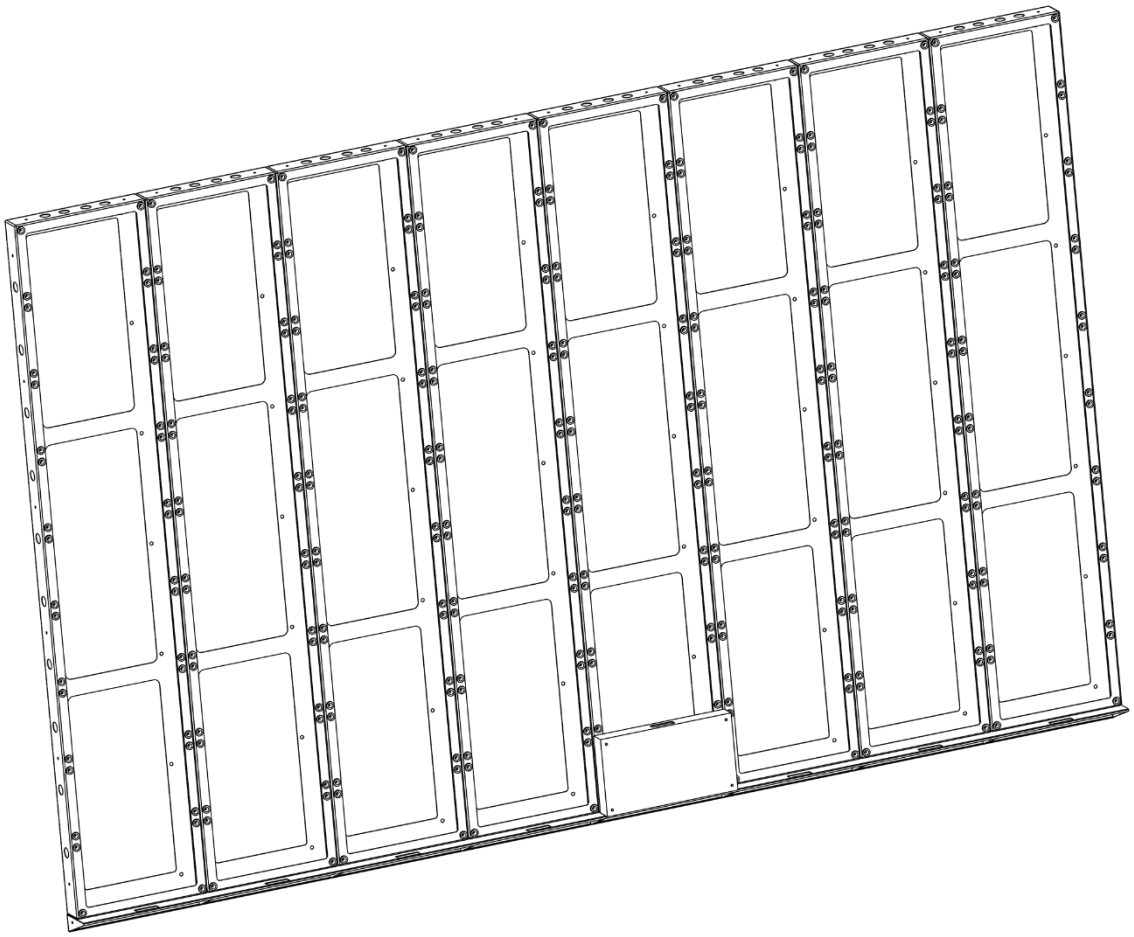


Figure 2-7 Screen Fixed

Step 2 Install the cabinets from the center to both sides until cabinets of the first row installed.

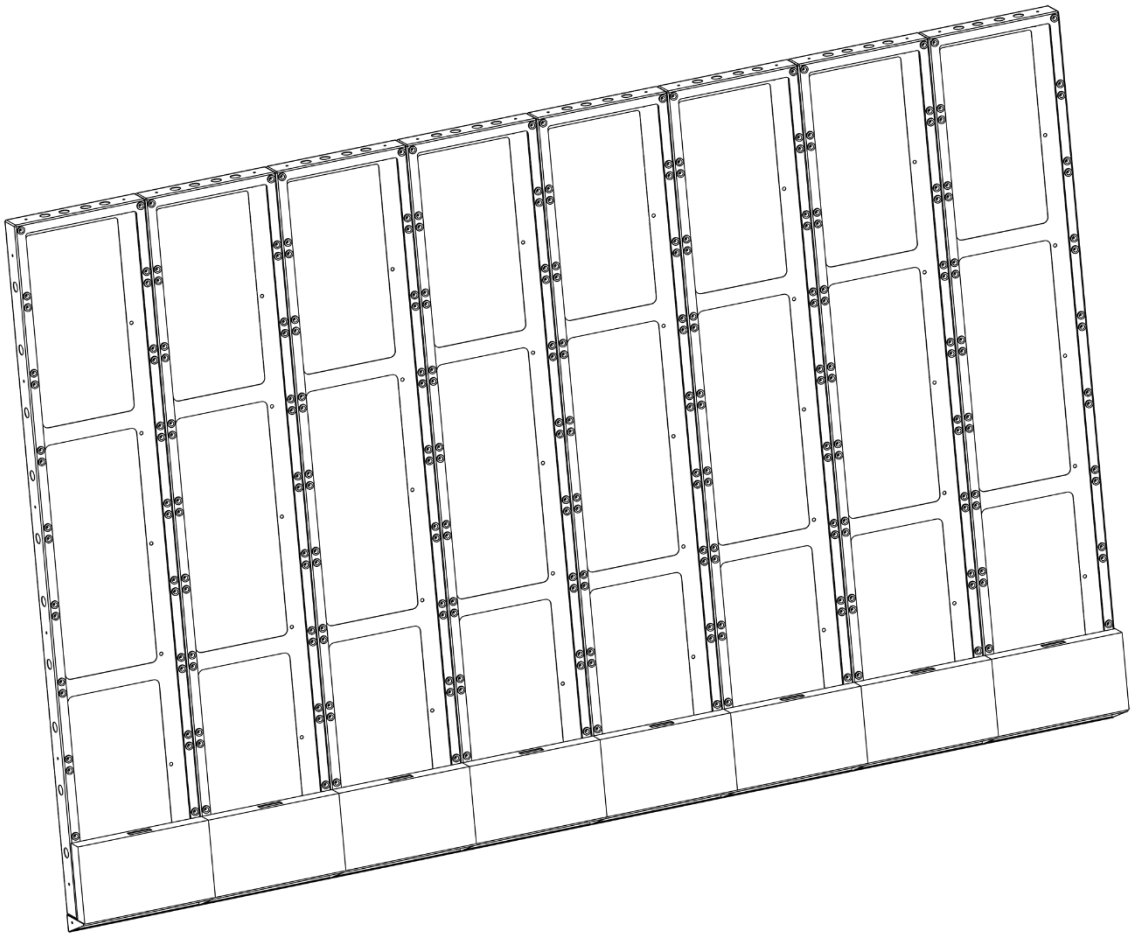


Figure 2-8 Screen Fixed

Step 3 Repeat the above steps to install the other cabinets in the above rows.

Step 4 Use a level to measure and ensure that the cabinets are flat and vertical.

Note

- Do not fix the screws between the connectors and cabinets too tight for future adjustment.
- In normal cases, lock out LED lamp boards after they are adjusted horizontally and vertically because the boards will probably be moved during the installation of other lamp boards.
- Ensure that the screen is flat and without evident gap. Otherwise, make some adjustments.

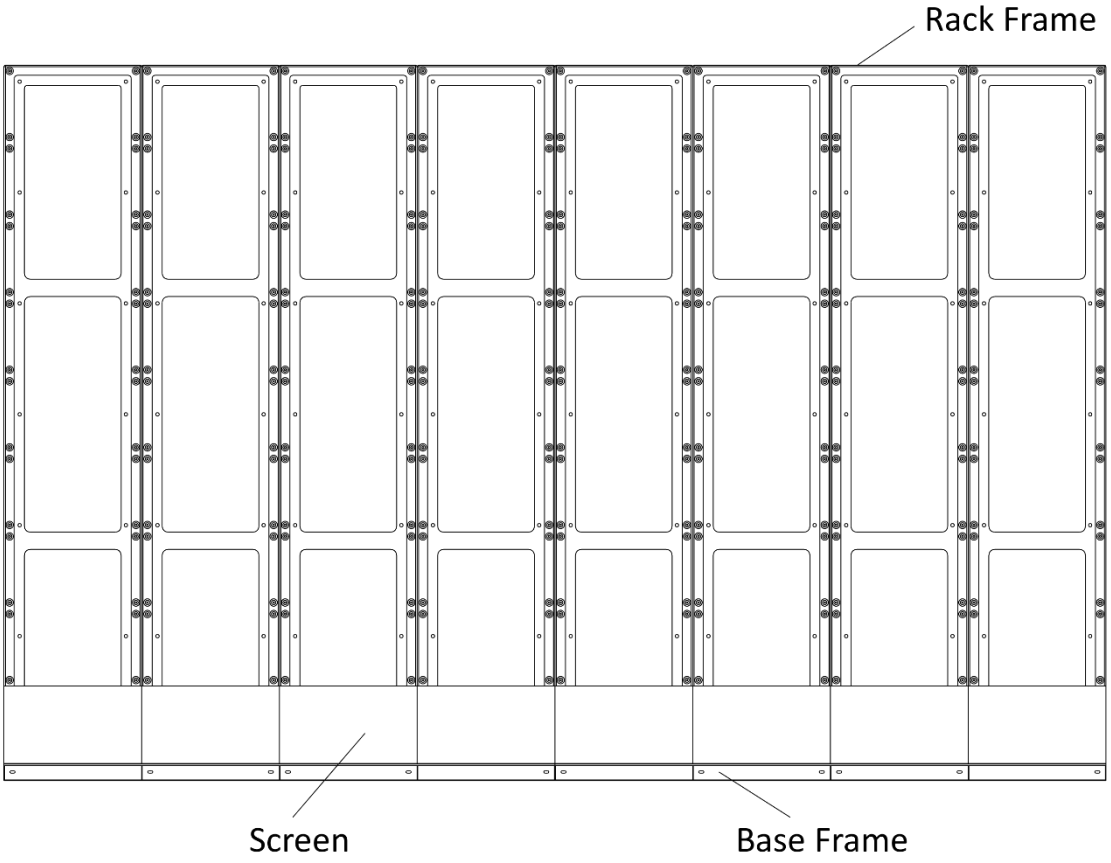


Figure 2-9 Screens of the First Row Fixed

Note

- For details about cabinet stitching, see 3.2.2 Stitch Cabinet Frames.
- For details about lamp boards maintenance, see 3.5.1 Maintain the Lamp Board.

Step 5 Repeat the above steps to install the other cabinets.

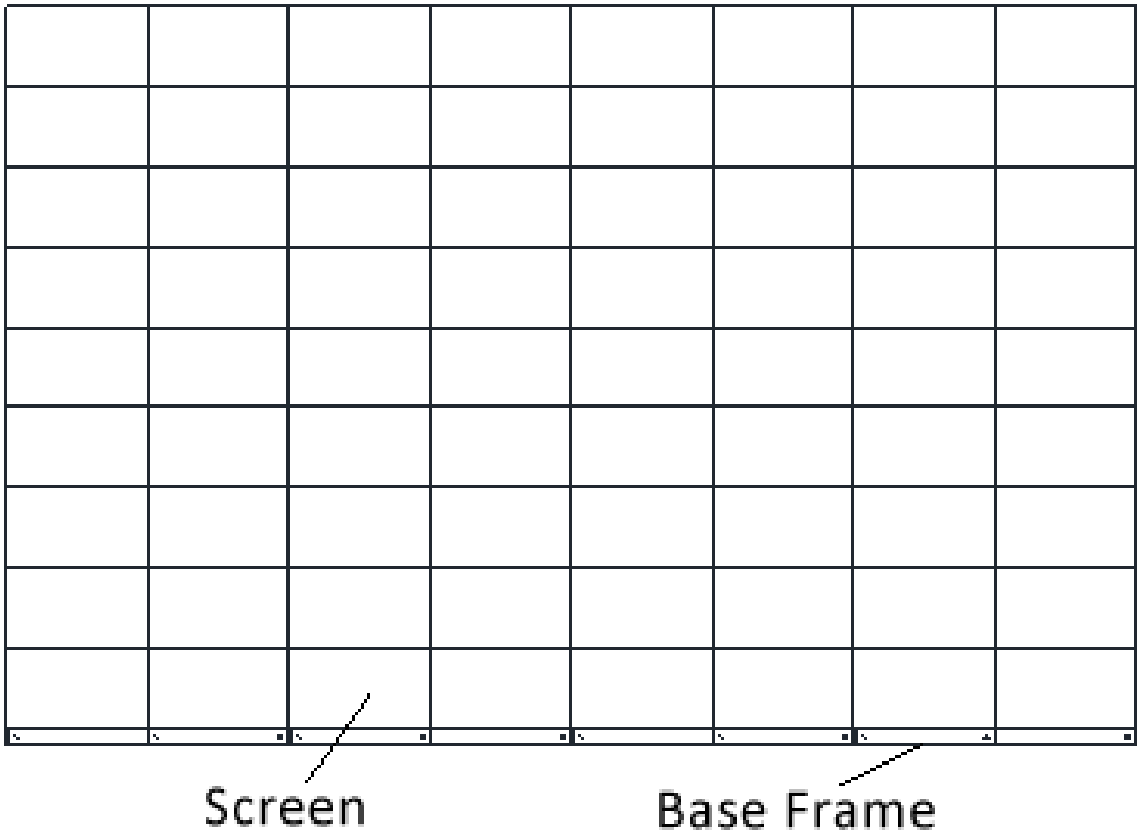


Figure 2-10 Screen Installation Finished

Note

- Install the device no more than 5 mm away from the wall or other metal racks in case of lamp board drop resulting in electric shock.
- After installation, there should be no openings around the LED module. The bottom bracket under the wire outlet position should completely cover the bottom hole only to let the wire out, to prevent the molten material from dripping to the bottom during fire caused by internal failure.
- To ensure safety, the installation parts and the wall should support four times the weight of the device.

2.2.3 Install the Ultrathin Rack

The ultrathin racks are used for mounting front-maintenance products and rear-maintenance products.

Install the Bottom Chassis

Step 1 Use header corners to connect aluminum extrusion rods from bottom to top.

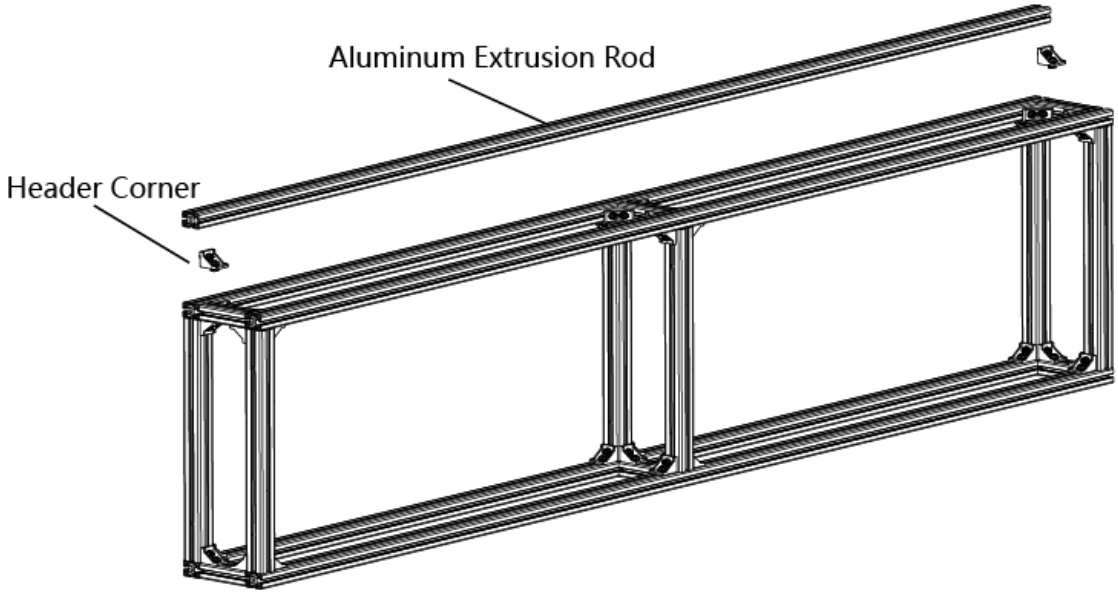


Figure 2-11 Assemble the Base Frame Unit

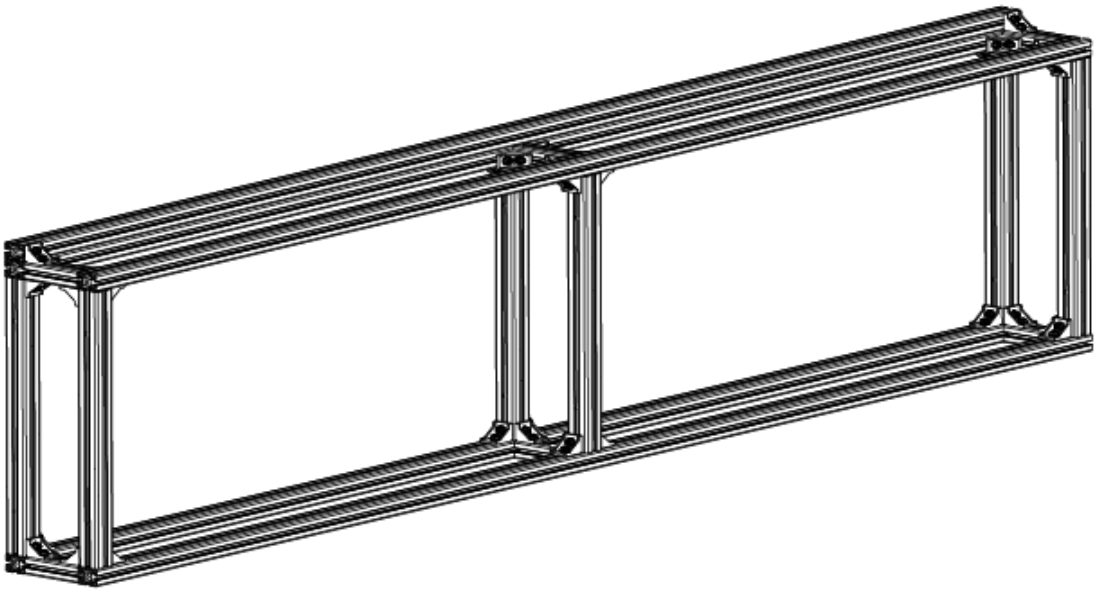


Figure 2-12 Base Frame Unit Assembled

Step 2 Use wedge-locking collector bolts to connect the base frame units.

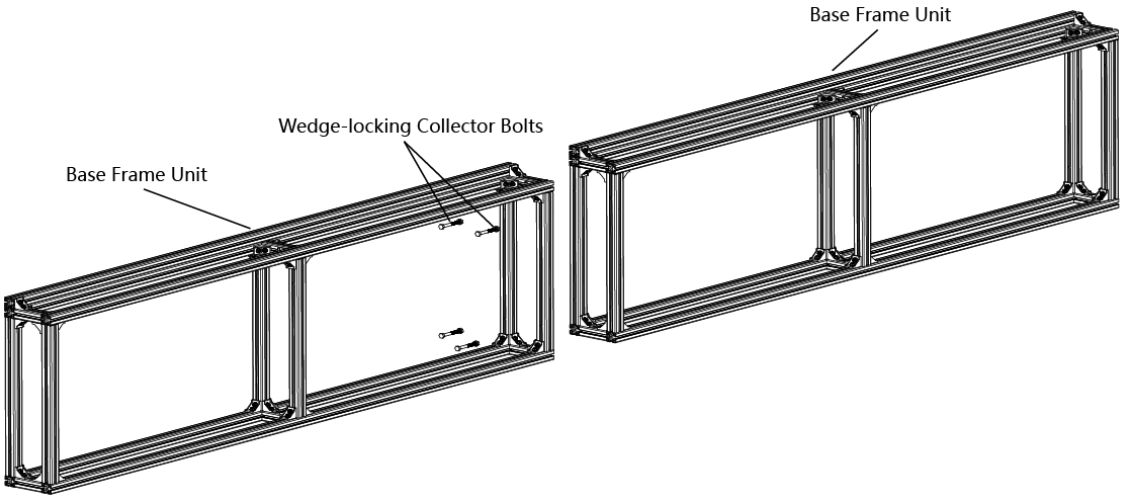


Figure 2-13 Connect the Base Frame Units

Step 3 Position the anchor bolts into the base frame and tighten the bolts.

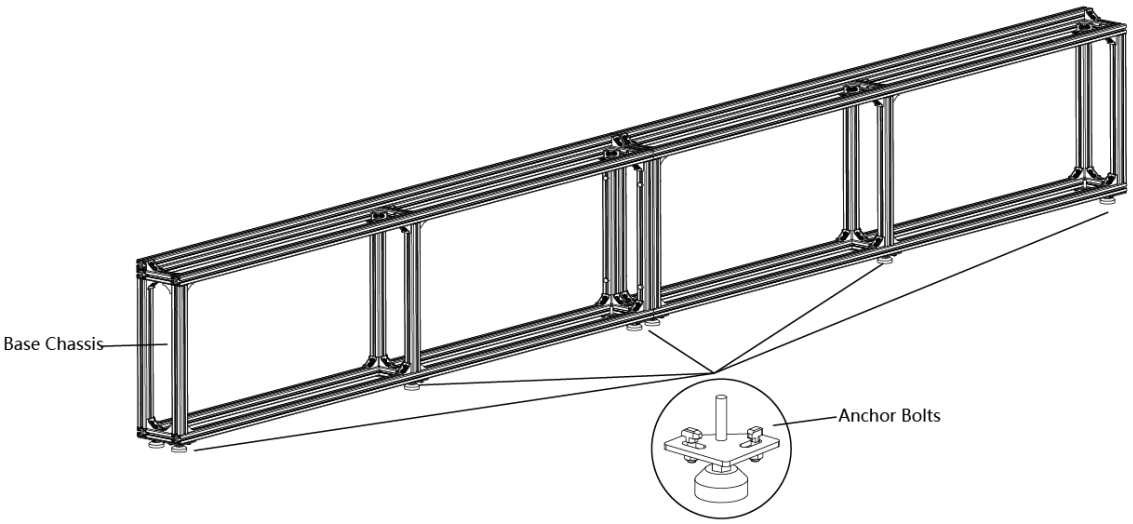


Figure 2-14 Assemble the Base Frame

Step 4 Level the bottom chassis and then tighten the bolts.

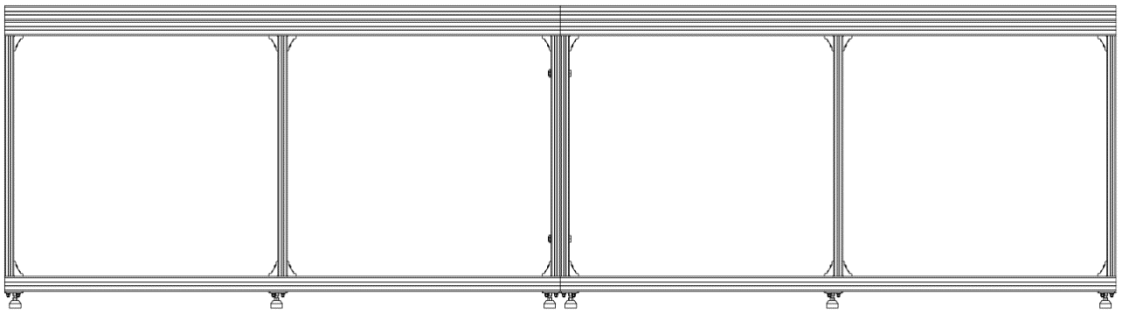


Figure 2-15 Leveled Bottom Chassis

Install the Rack Frame

Step 1 Use header corners to connect aluminum extrusion rods from bottom to top.

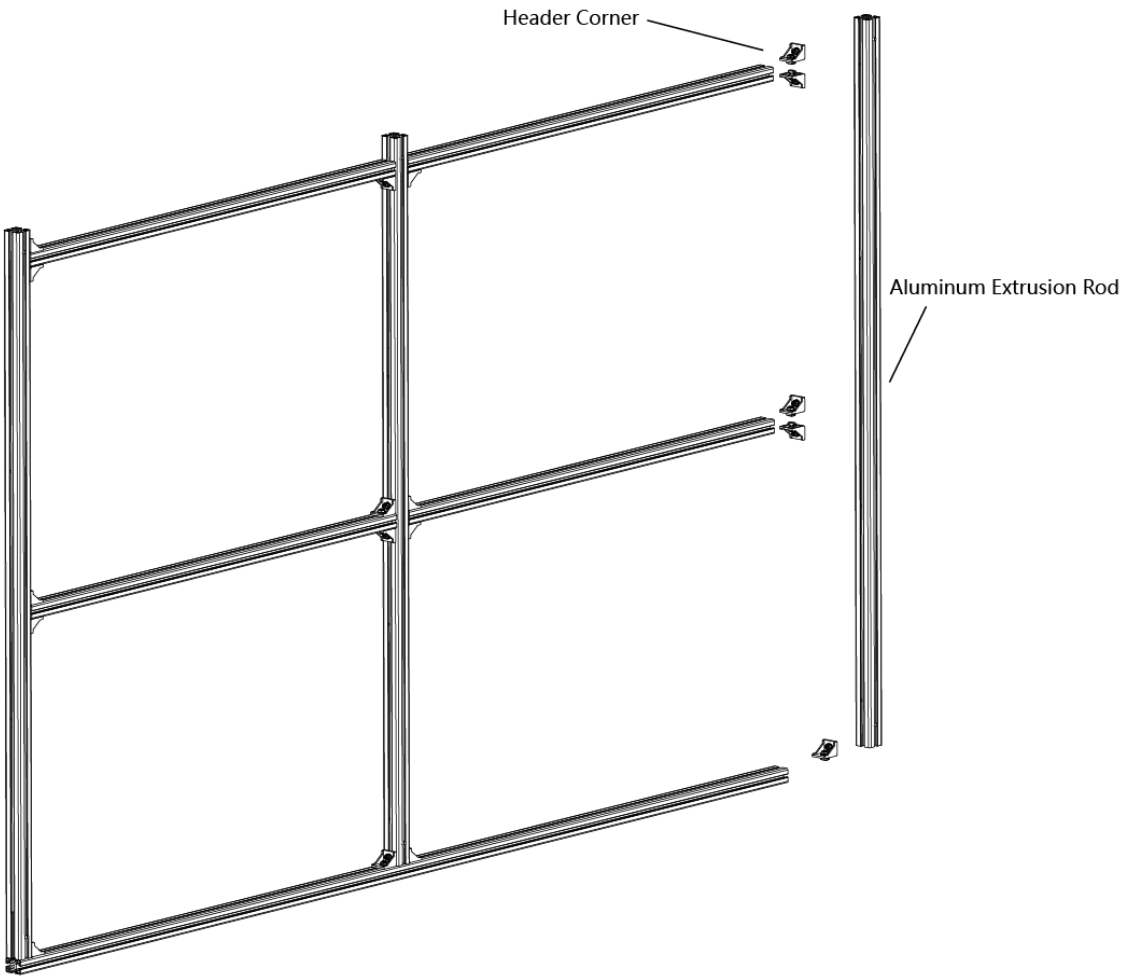


Figure 2-16 Assemble the Rack Frame Unit

Step 2 Use wedge-locking collector bolts to connect the rack frame units.

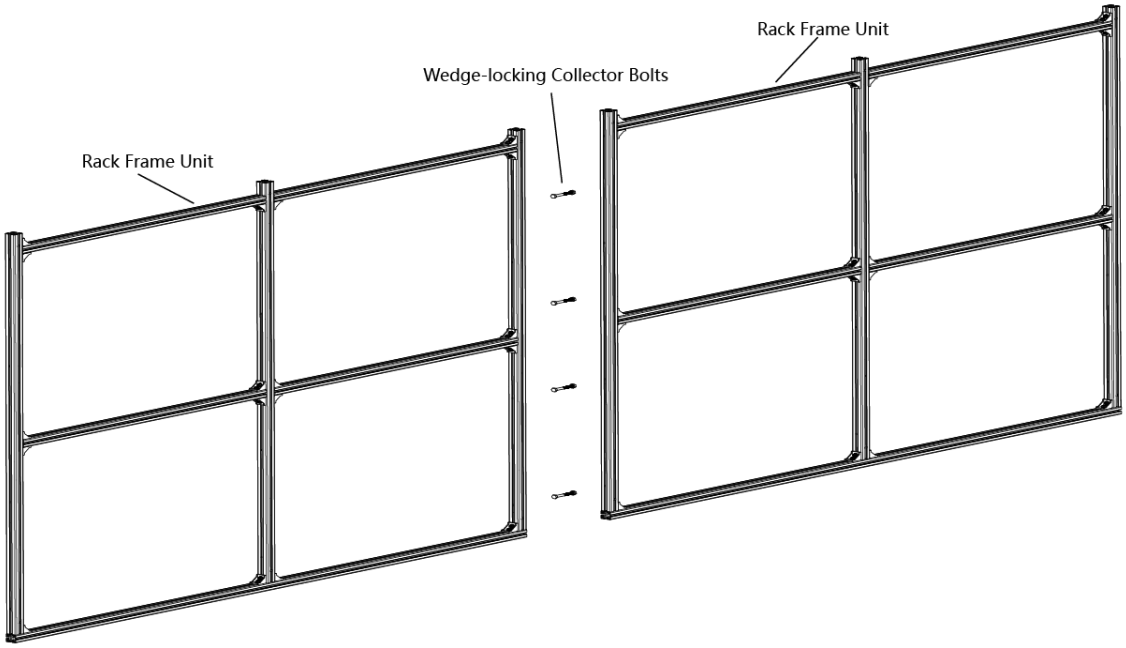


Figure 2-17 Connect the Rack Frame Units

Step 3 Align the rack frame to the base chassis and use wedge-locking collector bolts to fix the frames.

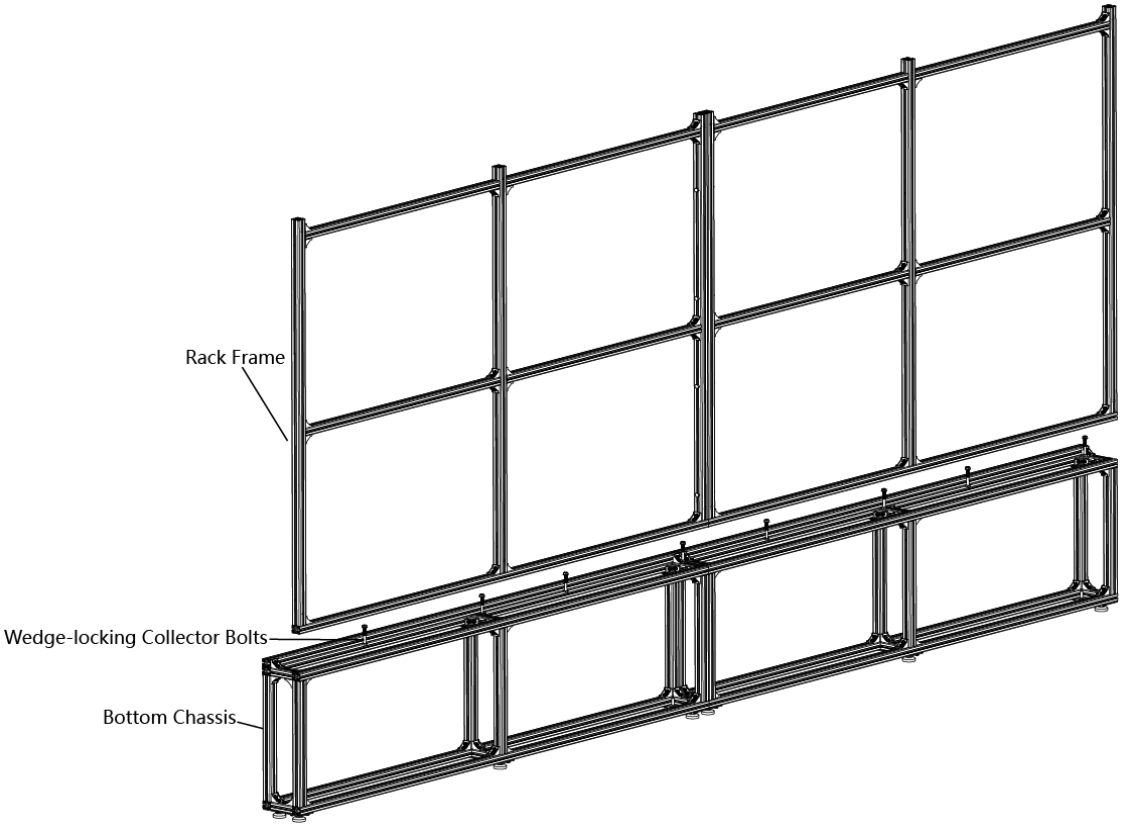


Figure 2-18 Align the Rack Frame to the Base Chassis

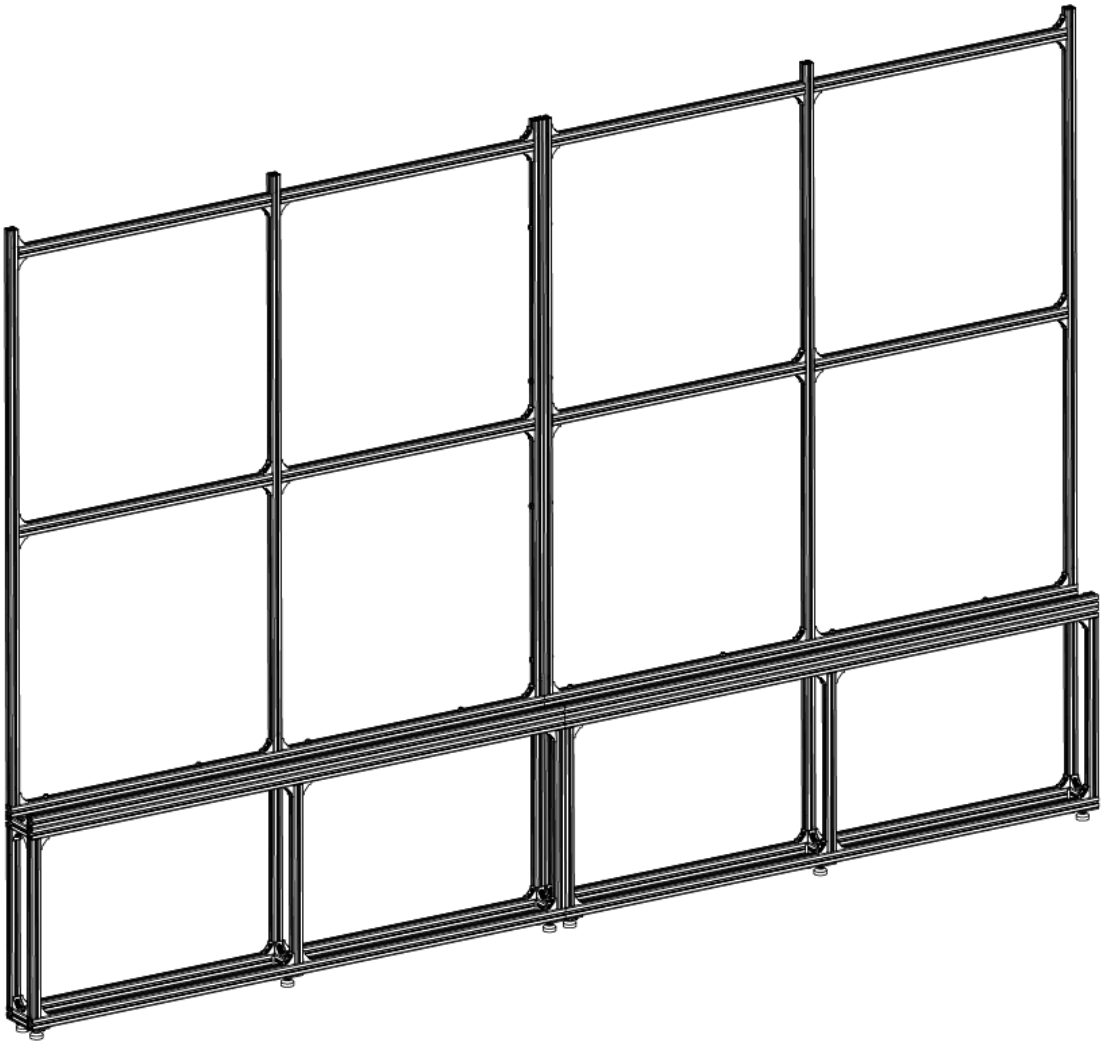


Figure 2-19 Frames Aligned

Install the Rear Pulling Rods (for Large-scale Project)

Step 1 Use the wedge-locking collector bolts to fix the rear pulling rods into the rack frame.

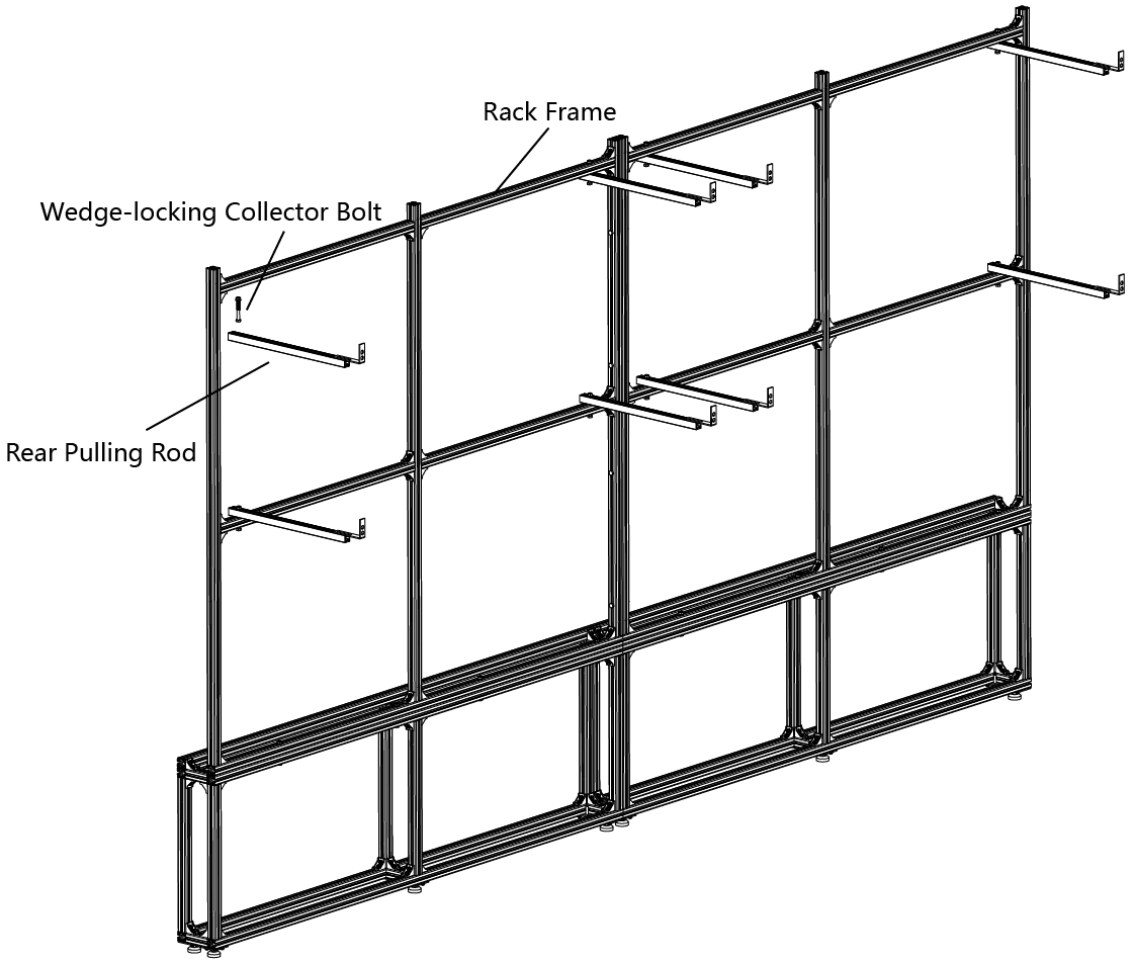


Figure 2-20 Fix the Rear Pulling Rods into the Rack Frame

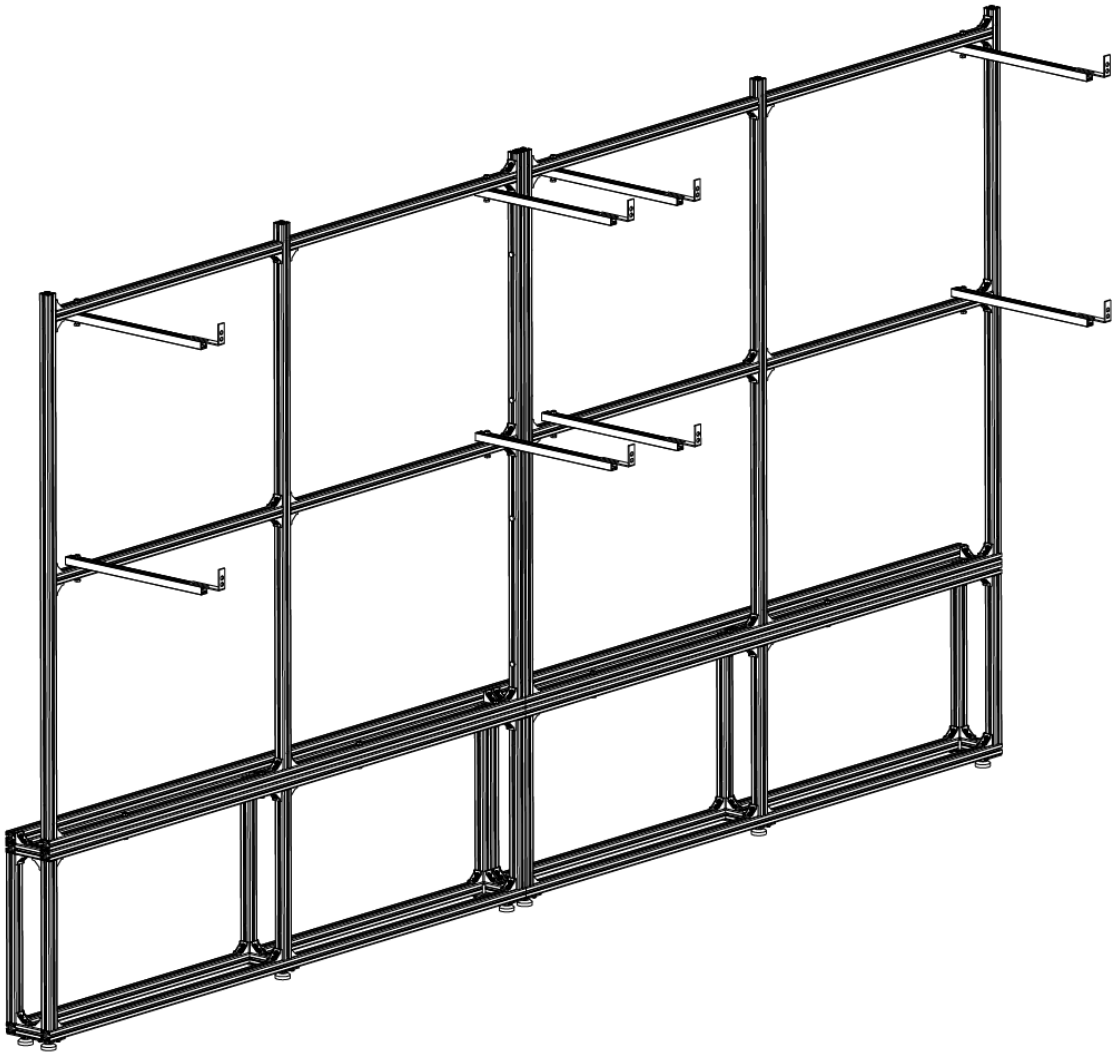


Figure 2-21 Rear Pulling Rods Fixed

Step 2 Use the expansion bolts to fix the rear pulling rods onto the bearing wall.

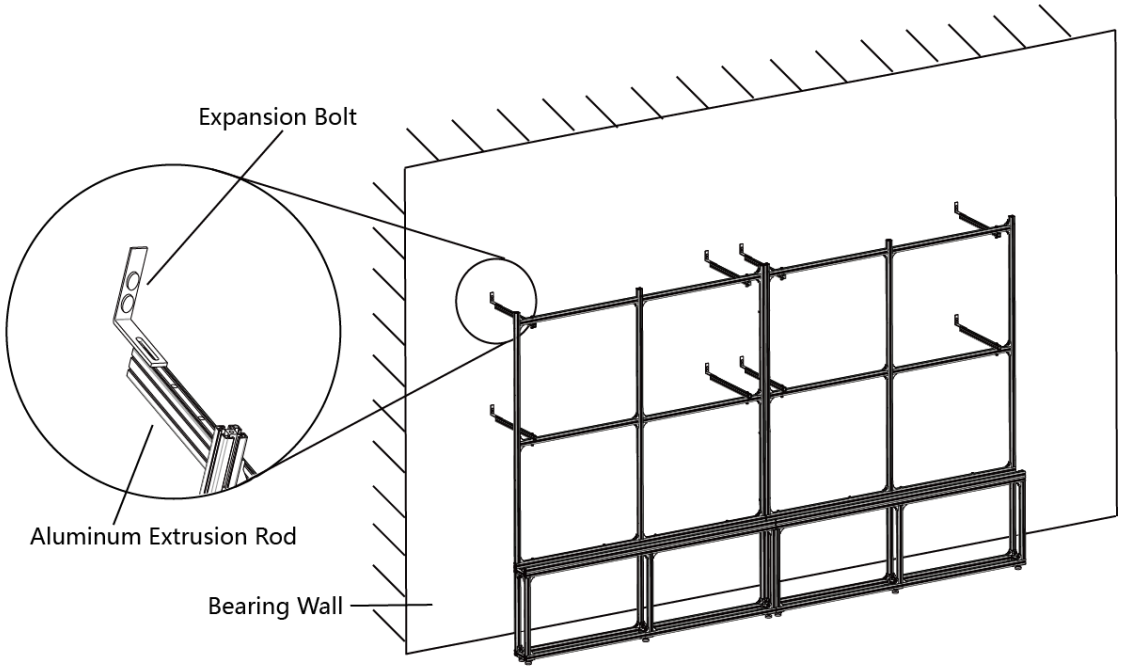


Figure 2-22 Fix the Rear Pulling Rods onto the Bearing Wall

Install the Connectors

The connectors are divided into two parts: customized front joint piece which is used to connect the screens, and back connecting component which is used to connect the rack frame. The following figures list three types of connectors and the positions where the connectors used respectively.

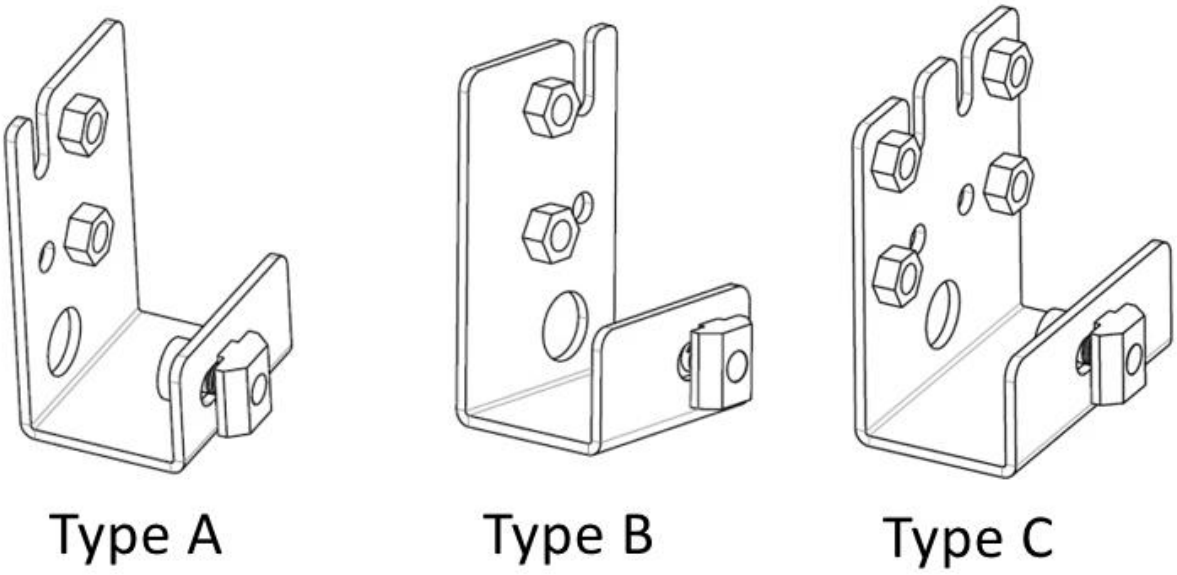


Figure 2-23 Connectors

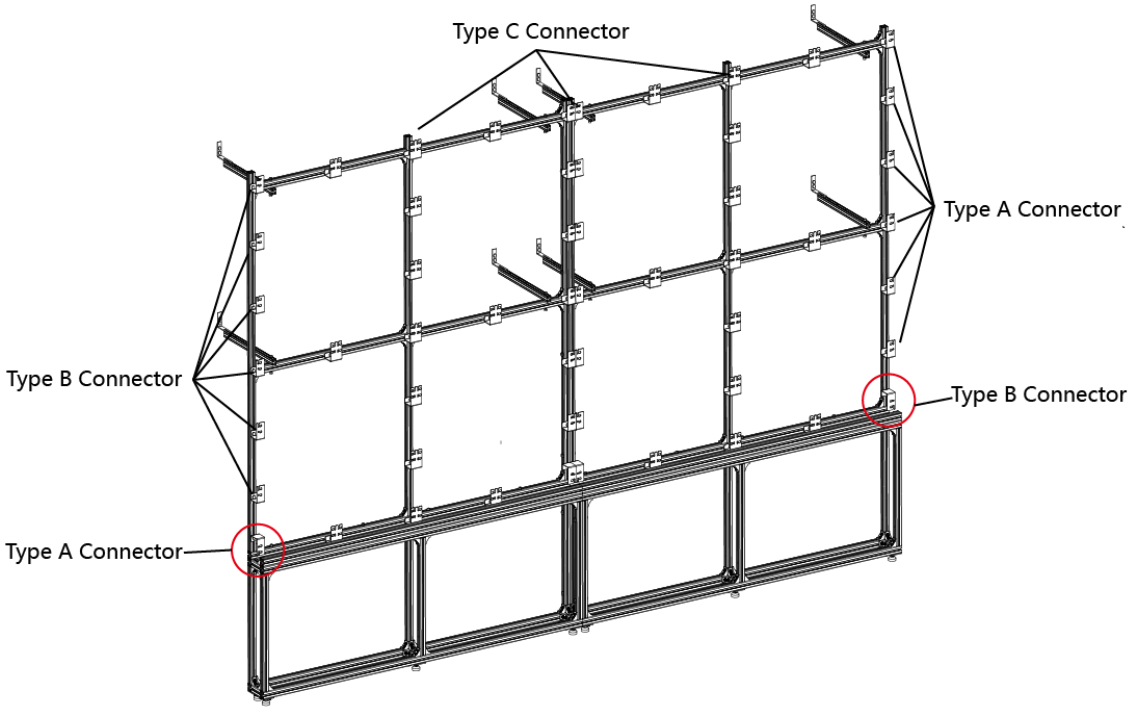


Figure 2-24 Connectors Installed

Note

Please pay attention to the types of outermost connectors between rack frame and bottom chassis.

Step 1 Twist the hexagonal screws into the T-Shaped nuts.

Step 2 Insert the T-Shaped nuts into the slots of aluminum extrusion rods, and move the connectors to the suitable place.

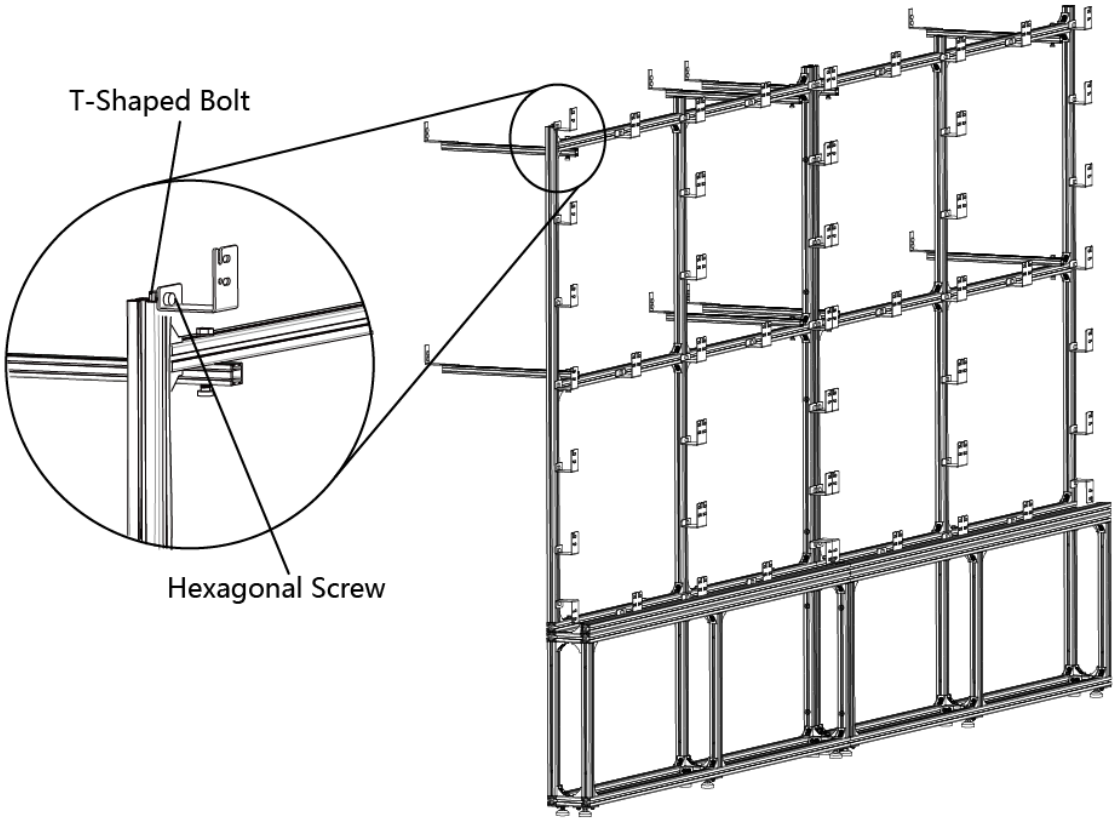


Figure 2-25 Install the Connectors

Step 3 Secure the connectors to the rack frame with screws.

Install Cabinets into the Rack Frame

After the bottom chassis, rack frame and connectors are well installed, perform the following steps to install the cabinets into the rack frame:

Step 1 Install the first cabinet from the lower middle part. Level and secure the cabinet to the connectors on the rack frame. For screens do not have connectors near the rear, use joint pieces to fix the screen.

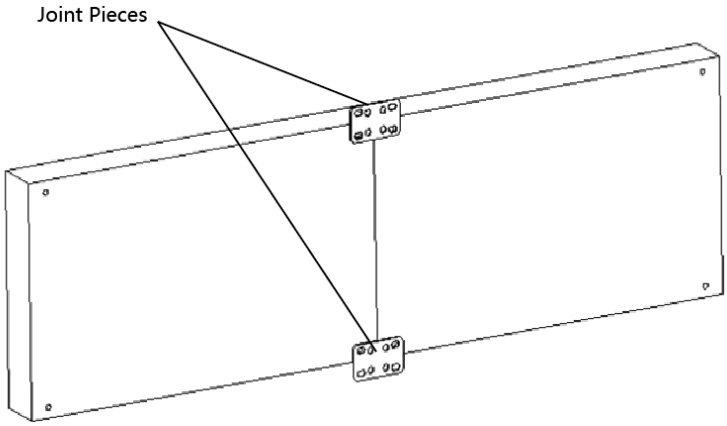


Figure 2-26 Fix the Screen with Joint Pieces

Note

- Install the cabinets from bottom to top, from middle to both sides.
- Do not fix the screws between the connectors and cabinets too tight for future adjustment.
- In normal cases, lock out LED lamp boards after they are adjusted horizontally and vertically because the boards will probably be moved during the installation of other lamp boards.
- Ensure that the screen is flat and without evident gap. Otherwise, make some adjustments.

Step 2 Repeat the above steps to install the other cabinets in the lowest row.

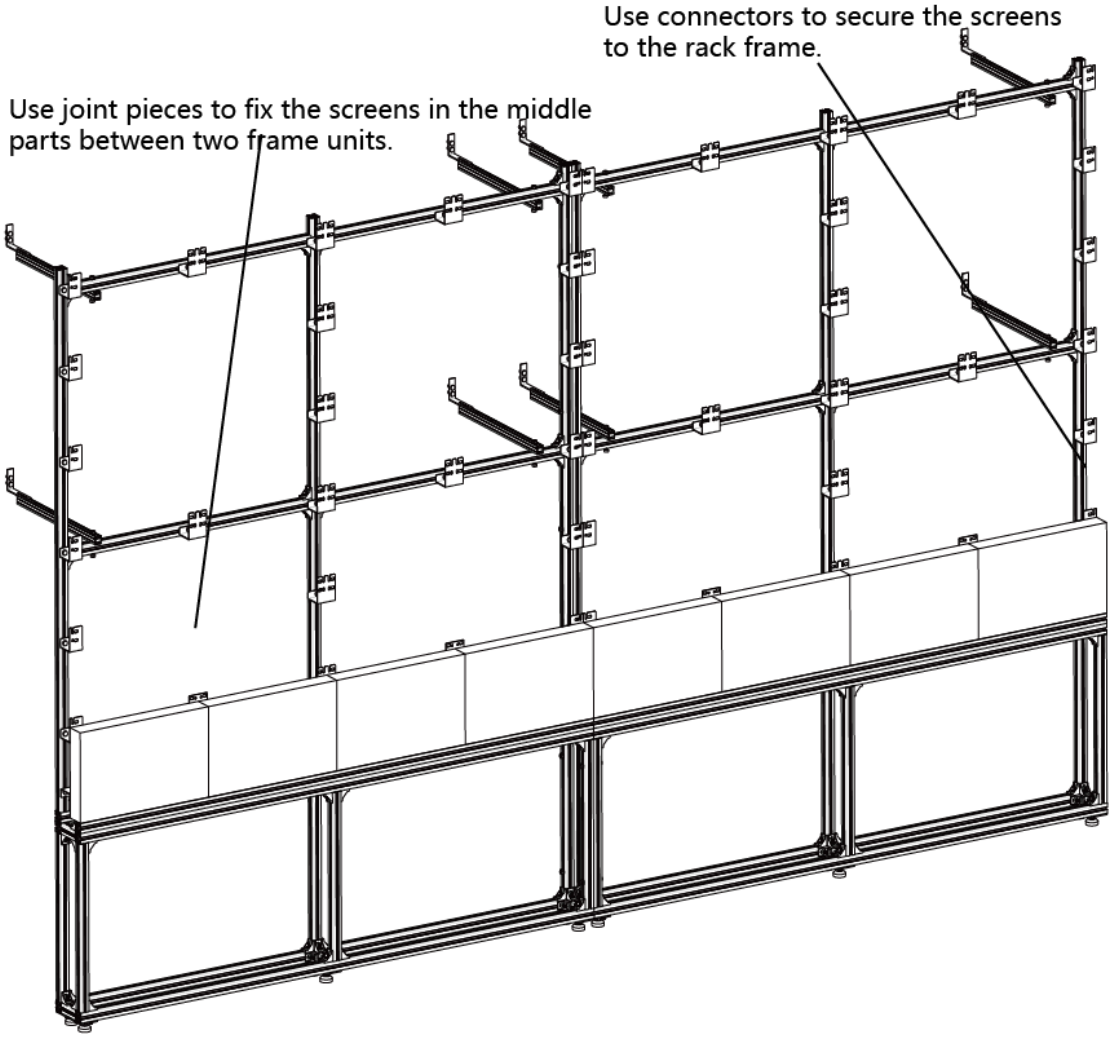


Figure 2-27 Fix the Screens

Step 3 Use a level to measure and ensure that the cabinets are flat and vertical.

Note

When there is a deviation in height, simply place a thin iron sheet under the bottom. Do not try to resolve the deviation by hitting the cabinets on the top because it will result in larger deviation later.

Step 4 Repeat the above steps to complete the installation of other cabinets.

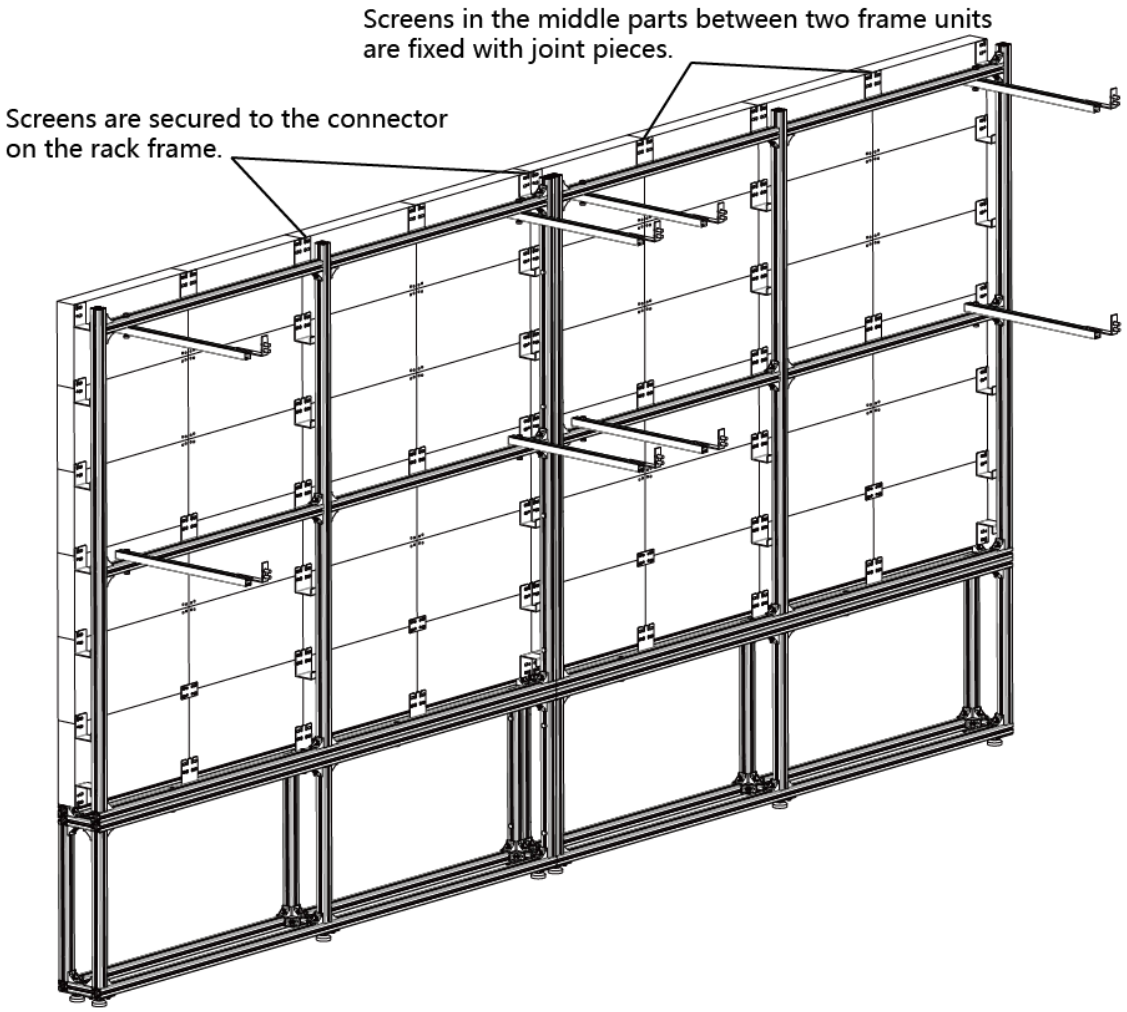


Figure 2-28 Screen Fixed

Step 5 Ensure that all the cabinets are flat and vertical and the seams between the cabinets are even. Then tighten the screws to complete the installation.

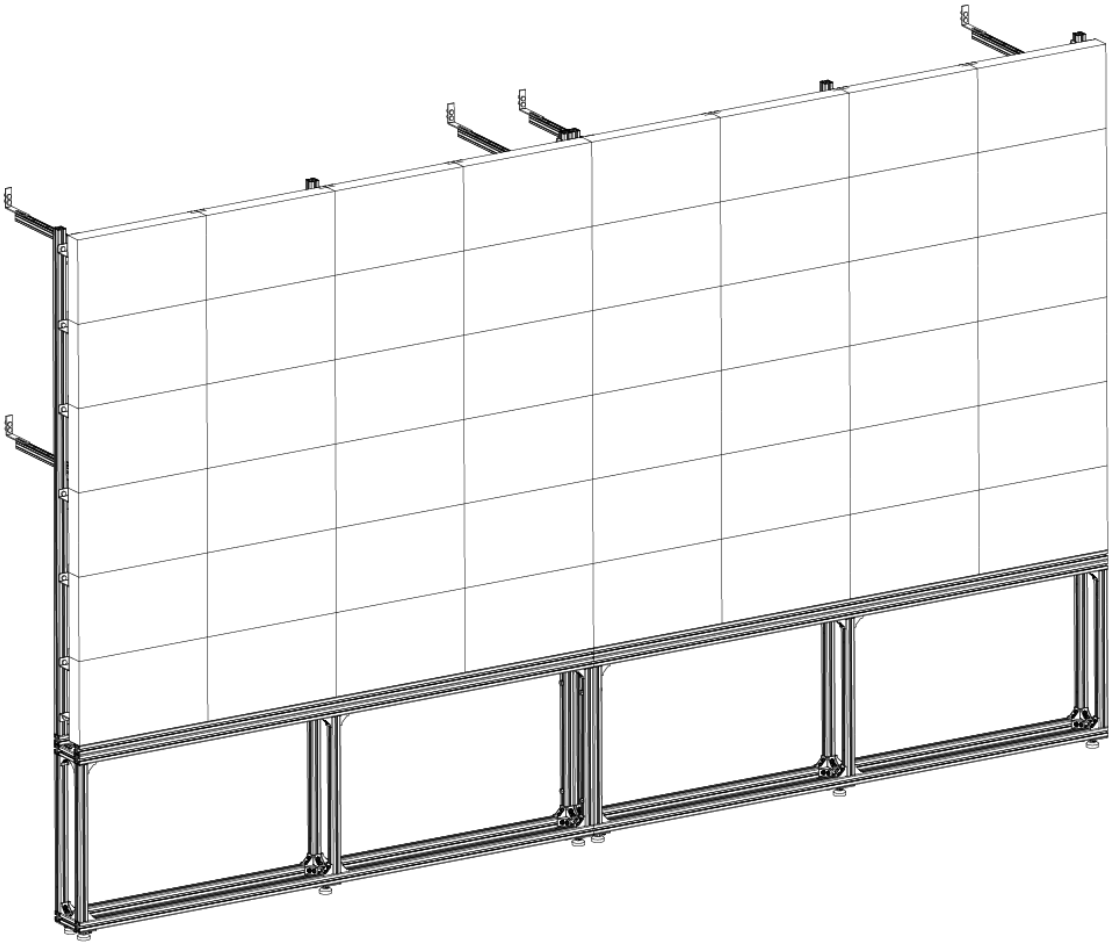


Figure 2-29 Screen Installation Finished

Note

- For details about cabinet stitching, see 3.2.2 Stitch Cabinet Frames.
- For details about lamp board maintenance, see 3.5.1 Maintain the Lamp Board.

2.2.4 Install the All-in-One Rack

The all-in-one racks are used for mounting front-maintenance products and rear-maintenance products.

Install the Bottom Chassis

Step 1 Use header corners to connect aluminum extrusion rods.

Note

It is recommended to assemble the base frame units from bottom to top.

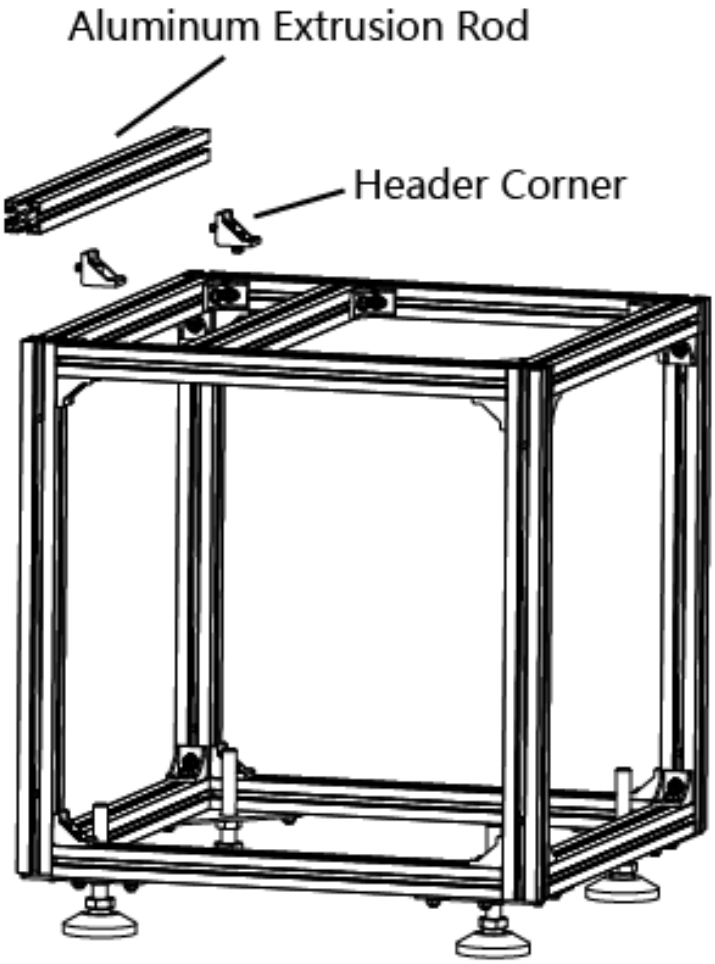


Figure 2-30 Assemble the Base Frame Unit

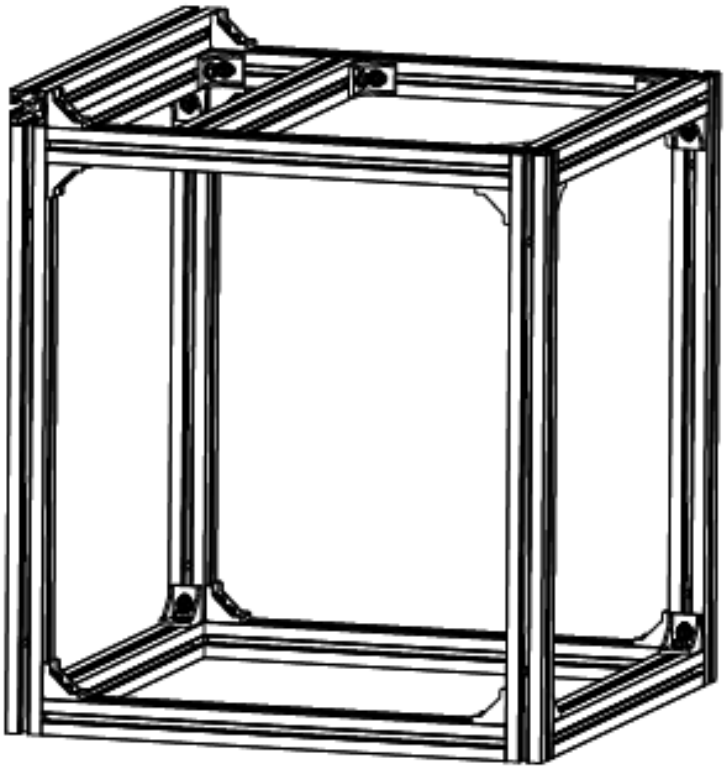


Figure 2-31 Base Frame Unit Assembled

Step 2 Use wedge-locking collector bolts to connect the base frame units.

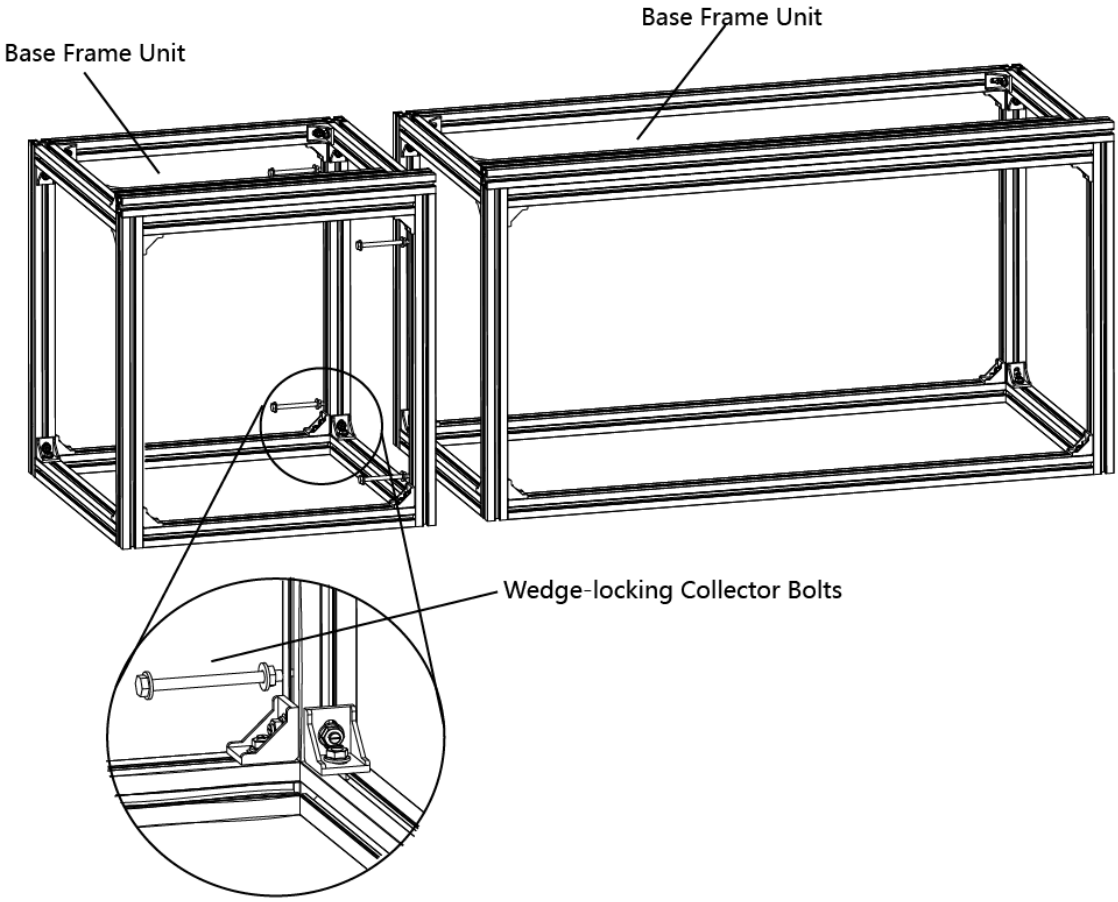


Figure 2-32 Connect the Base Frame Units

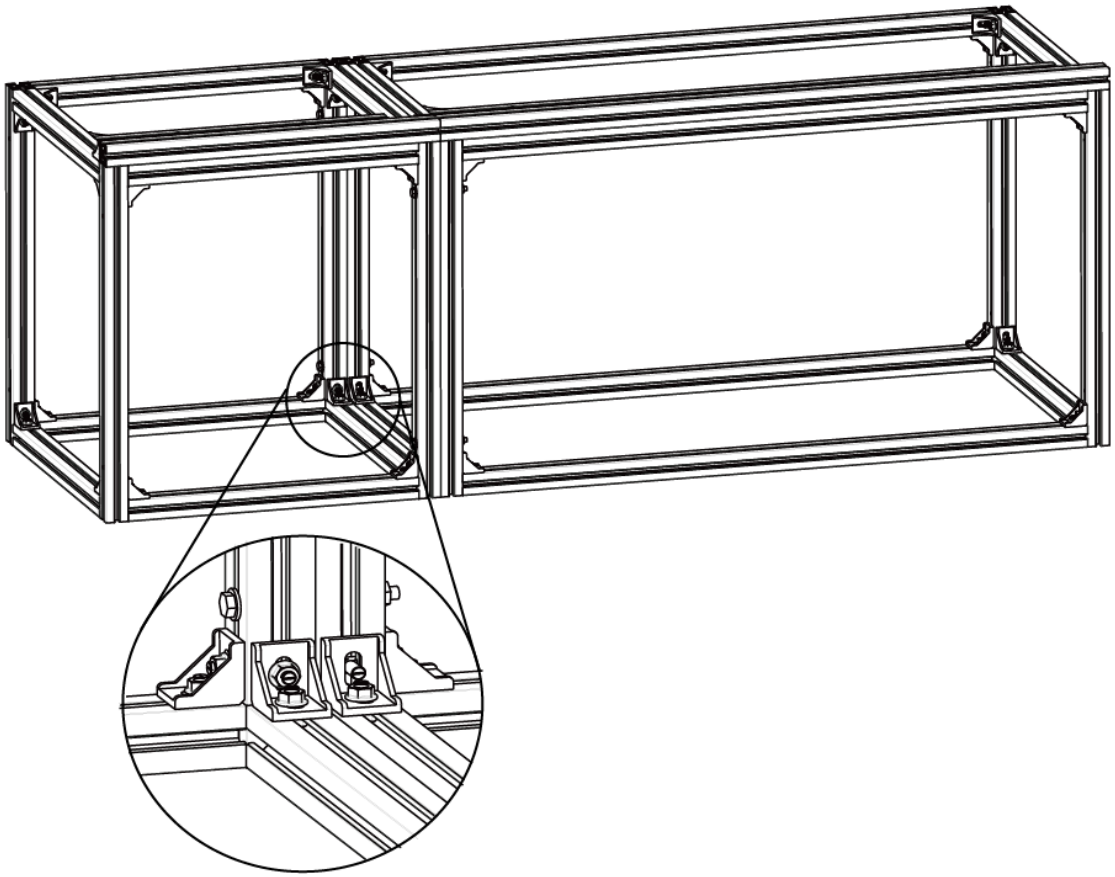


Figure 2-33 Base Frame Units Connected

Step 3 Repeat the above steps to connect the other base frame units.

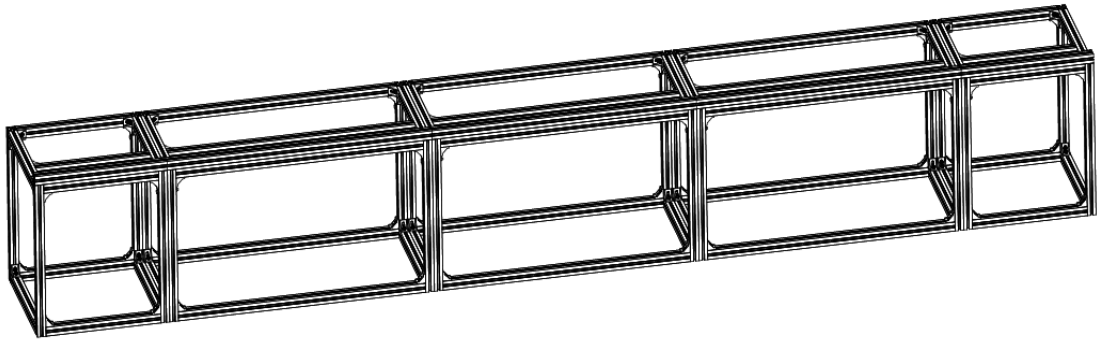


Figure 2-34 Base Frame

Step 4 Position the anchor bolts into the base frame and tighten the bolts.

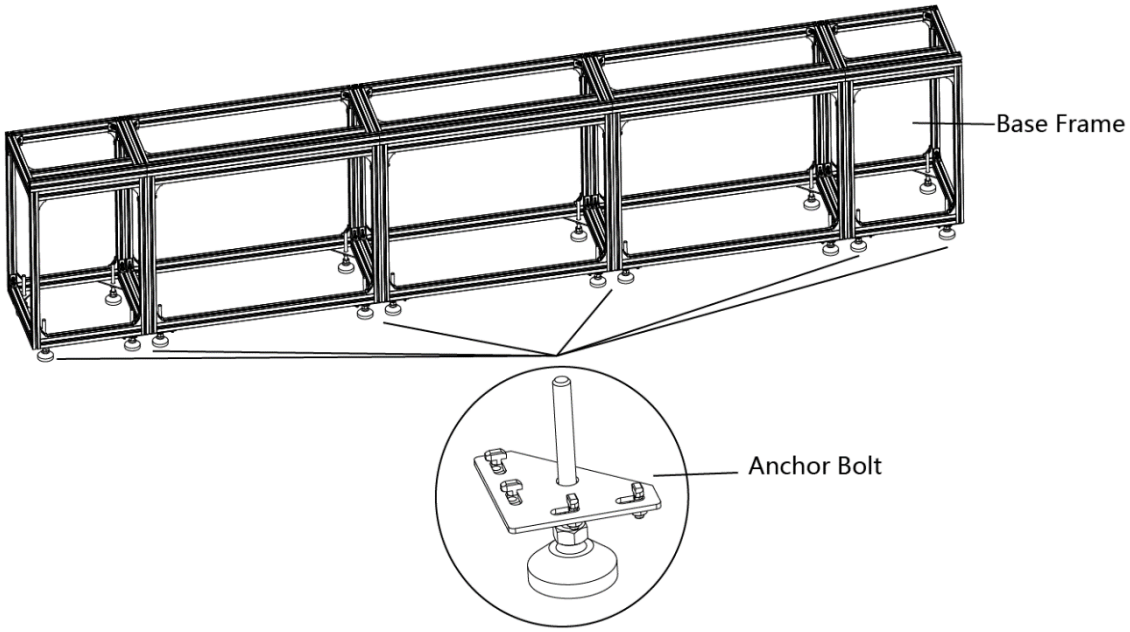


Figure 2-35 Assemble the Base Frame

Step 5 Level the bottom chassis and then tighten the bolts.

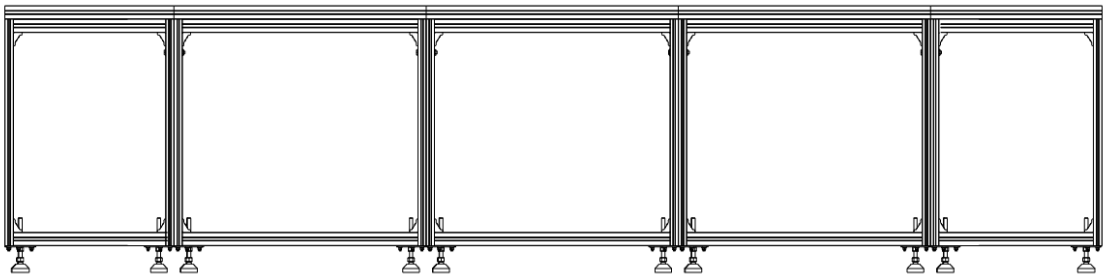


Figure 2-36 Leveled Bottom Chassis

Install the Rack Frame

Step 1 Use header corners to connect aluminum extrusion rods.

Note

It is recommended to assemble the rack frame units from bottom to top.

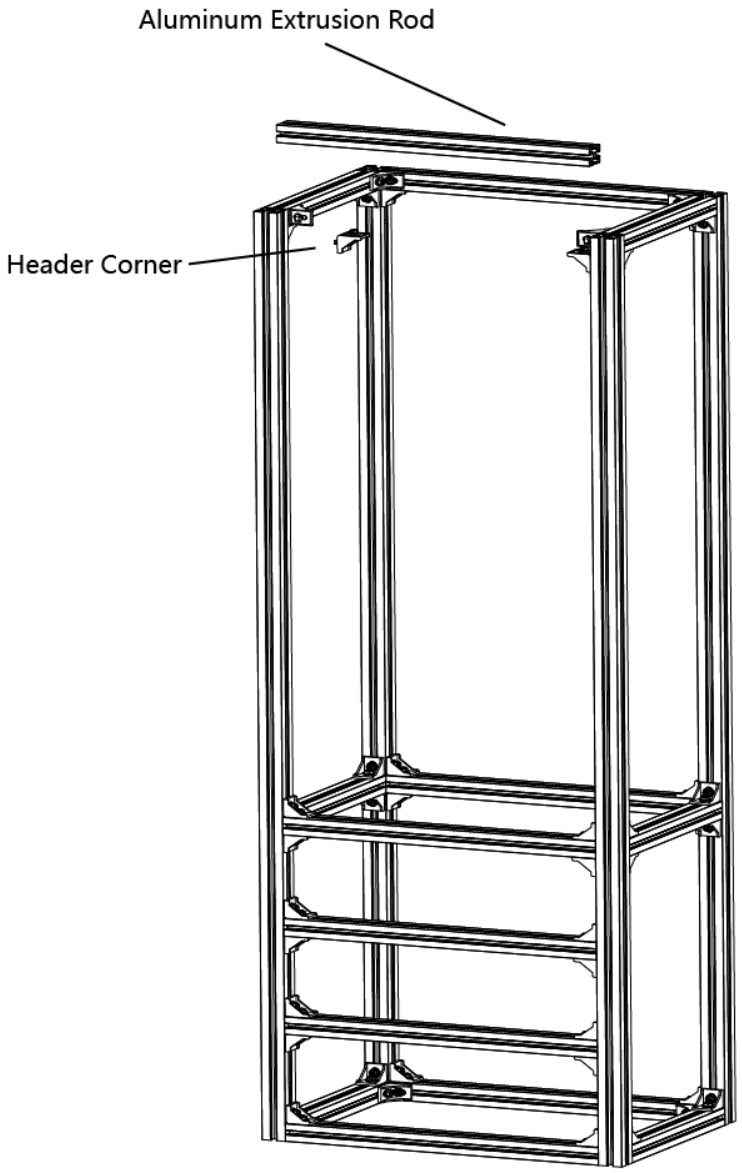


Figure 2-37 Assemble the Rack Frame Unit

Step 2 Use wedge-locking collector bolts to connect the rack frame units.

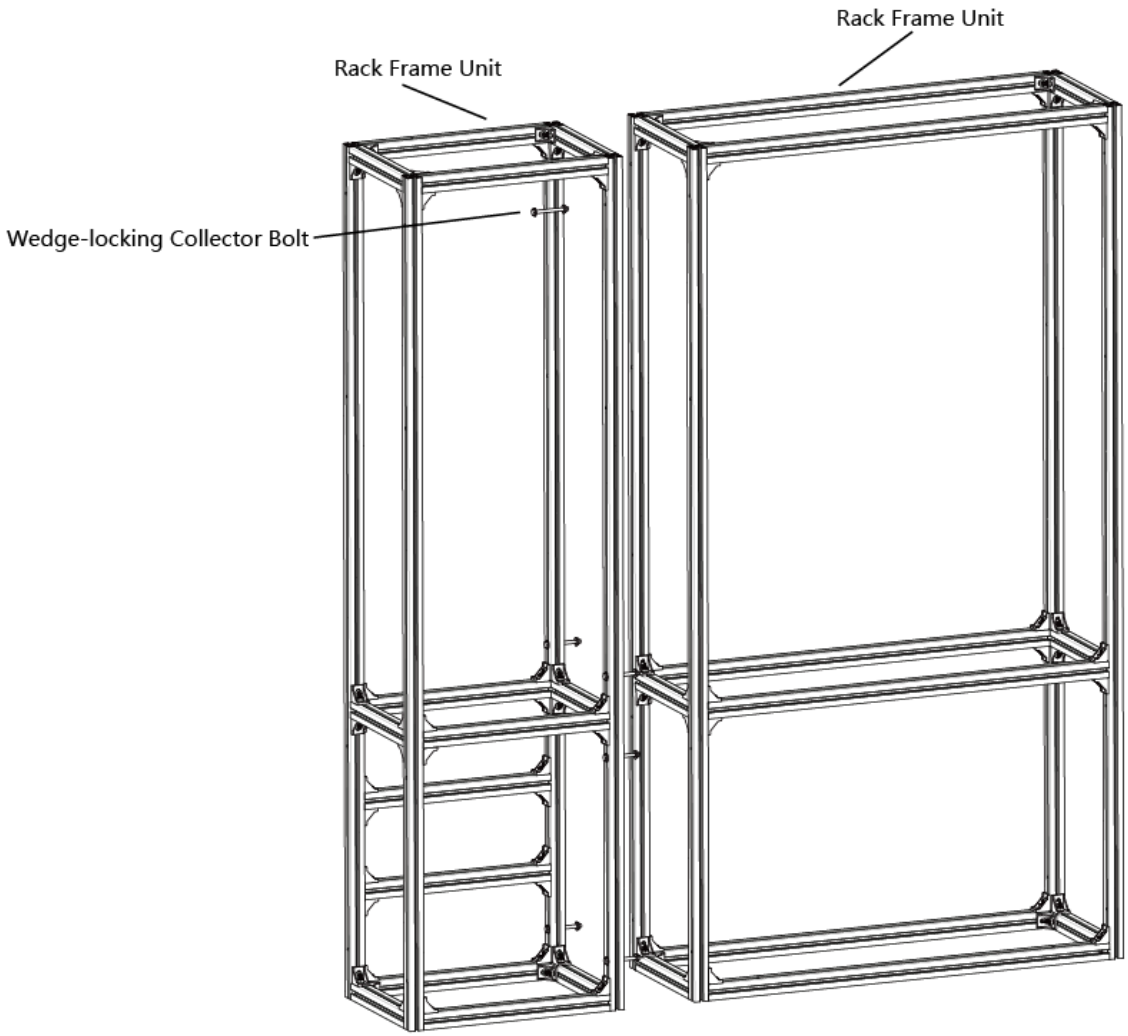


Figure 2-38 Connect the Rack Frame Units

Step 3 Repeat the above steps to connect the other rack frame units.

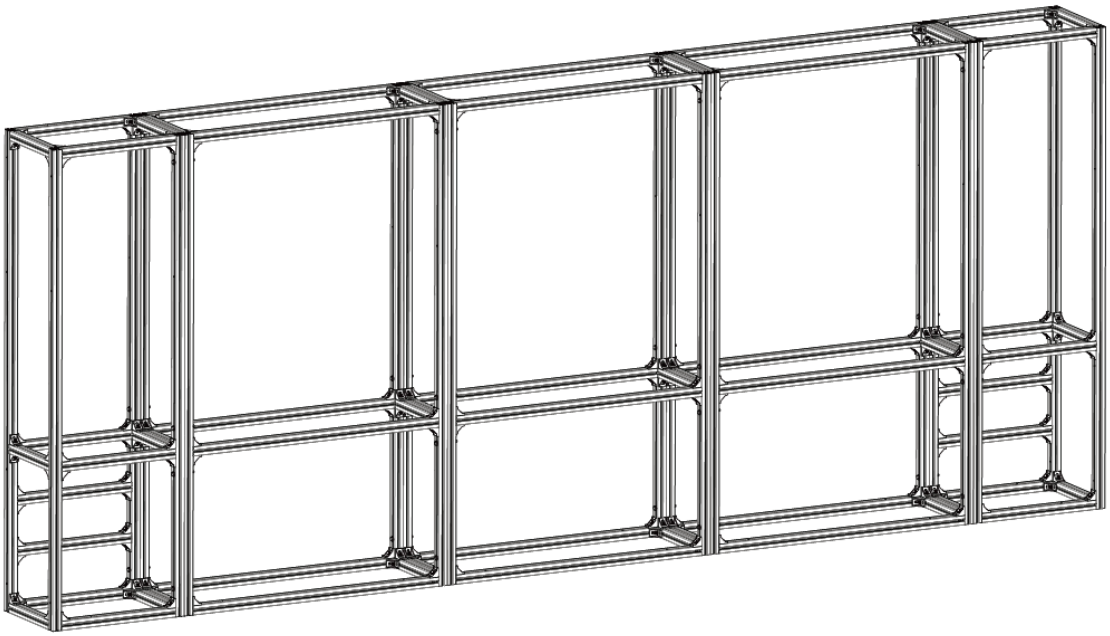


Figure 2-39 Rack Frame

Step 4 Align the rack frame to the base chassis and use wedge-locking collector bolts to fix the frames.

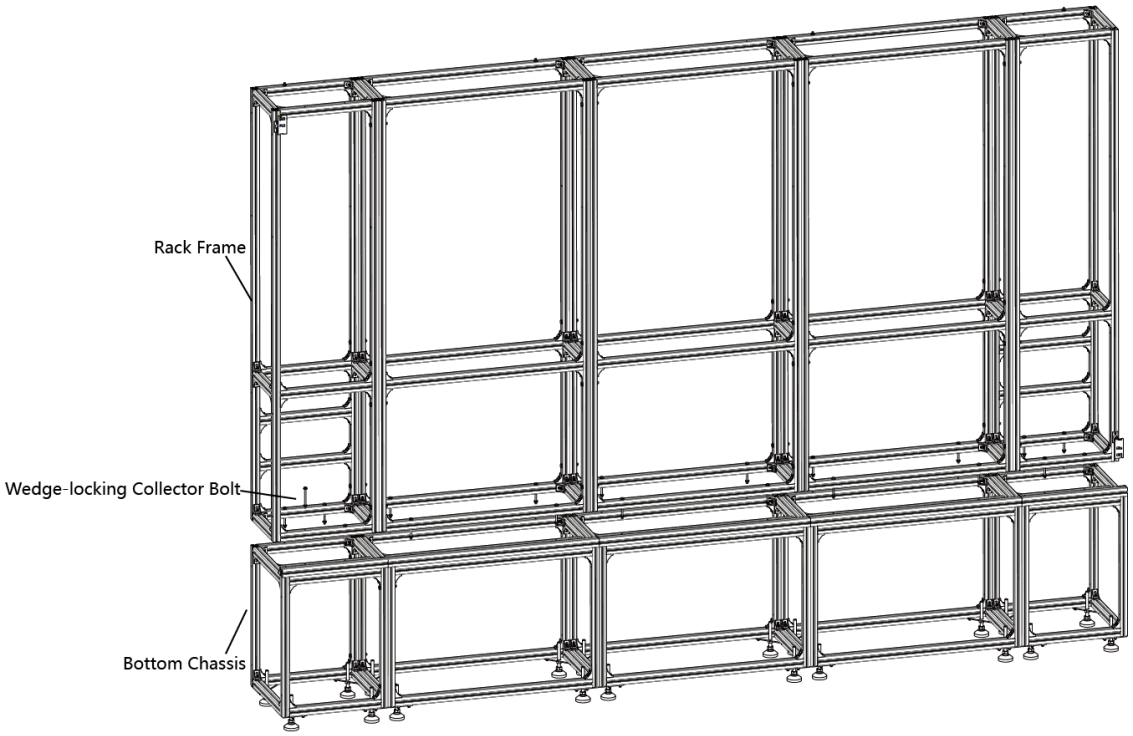


Figure 2-40 Align the Rack Frame to the Base Chassis

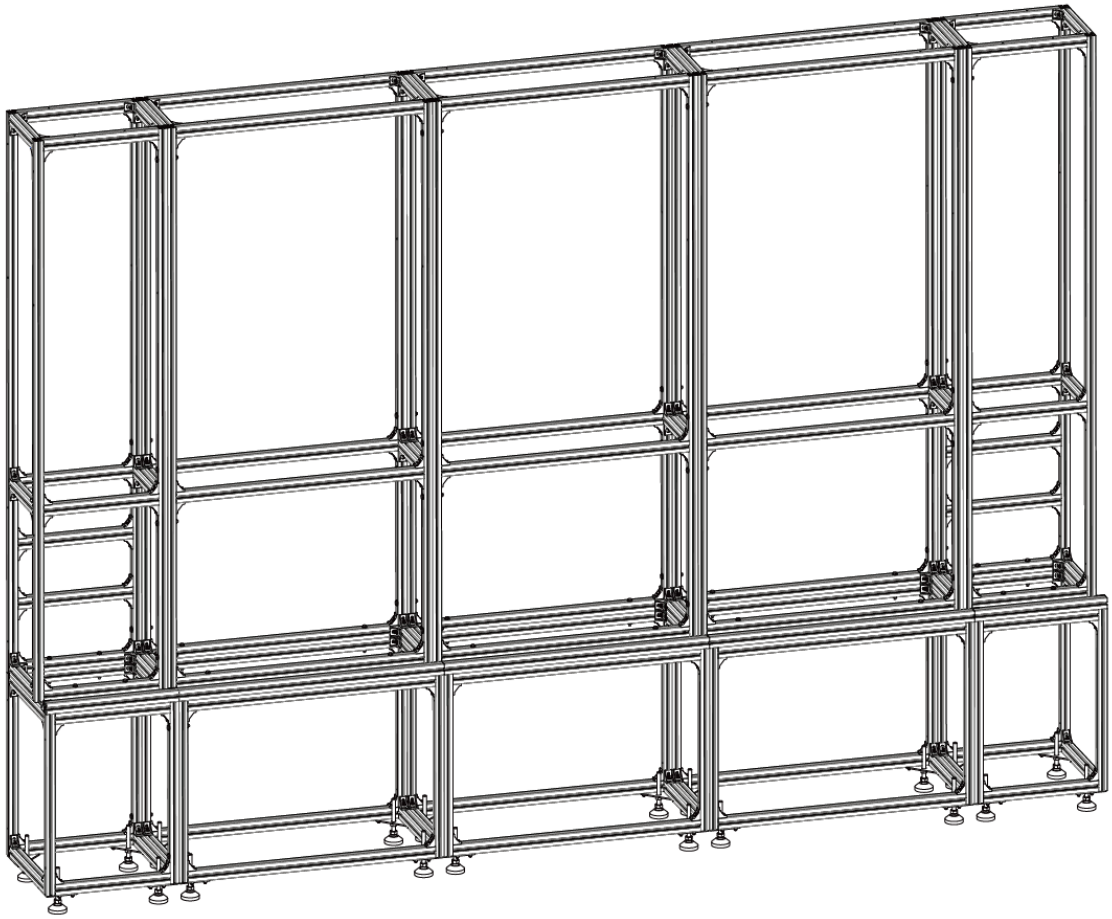


Figure 2-41 Frames Aligned

Install the Rear Pulling Rods (for Large-scale Project)

Step 1 Use the wedge-locking collector bolts to fix the rear pulling rods into the rack frame.

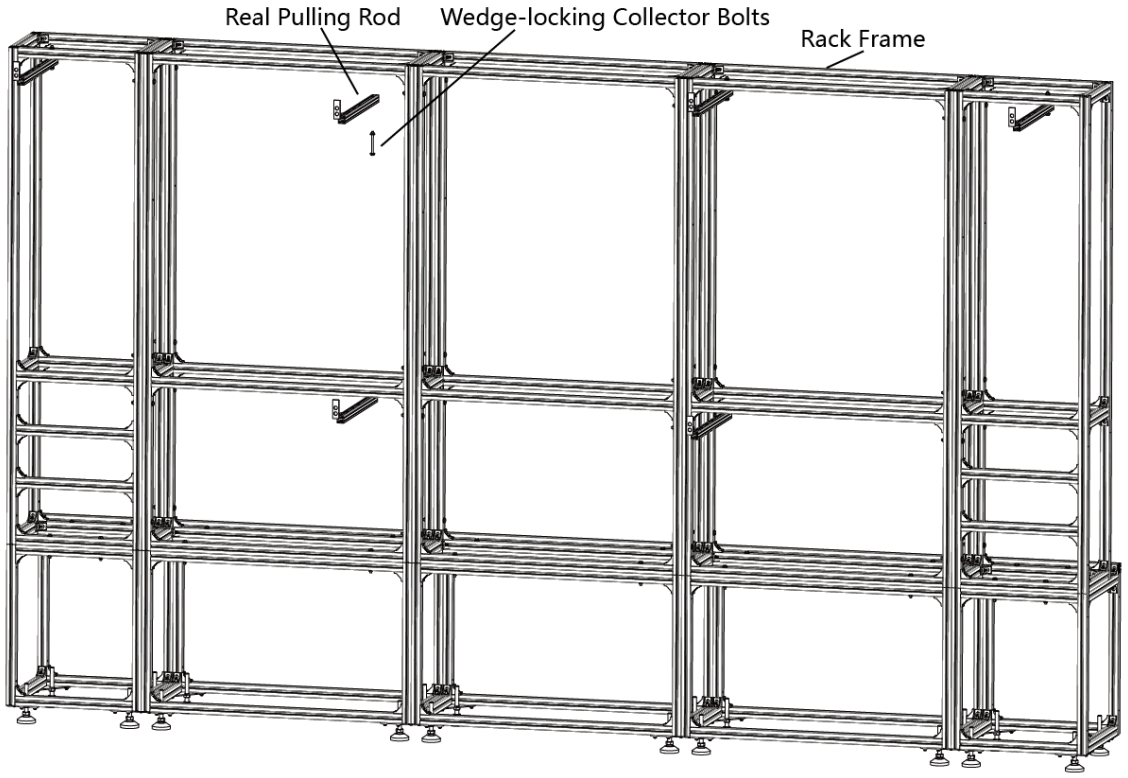


Figure 2-42 Fix the Rear Pulling Rods into the Rack Frame

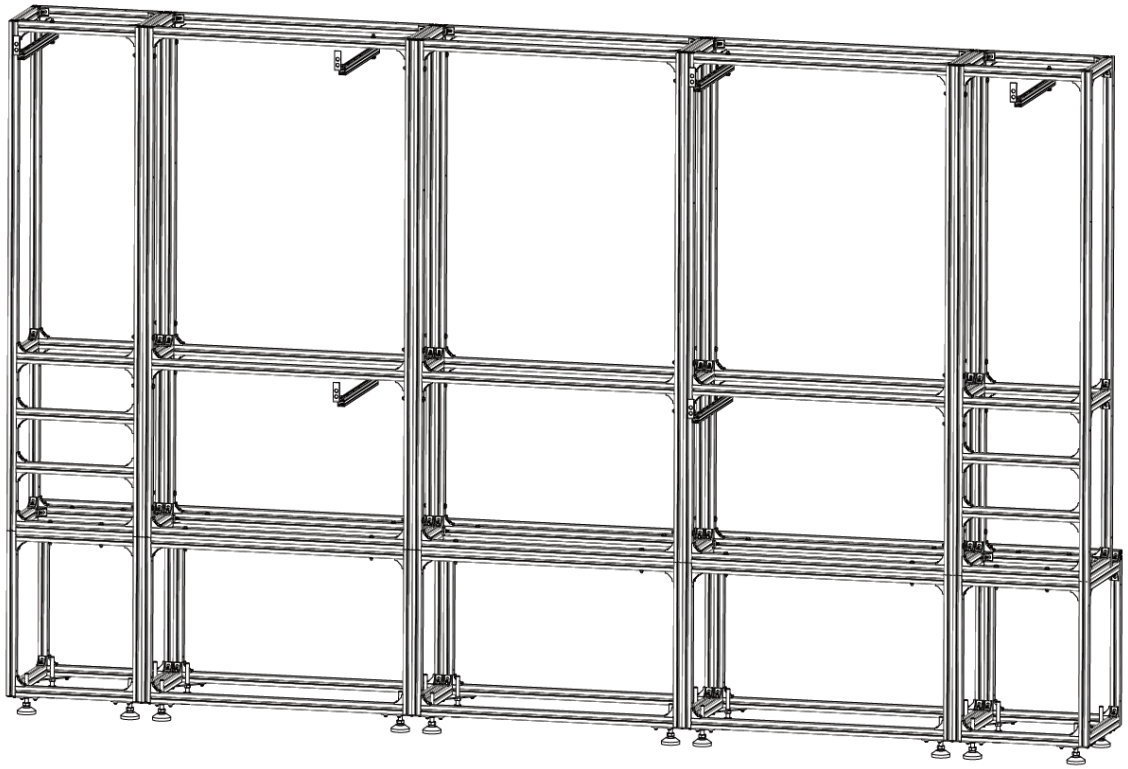


Figure 2-43 Rear Pulling Rods Fixed

Step 2 Use the expansion bolts to fix the rear pulling rods onto the bearing wall.

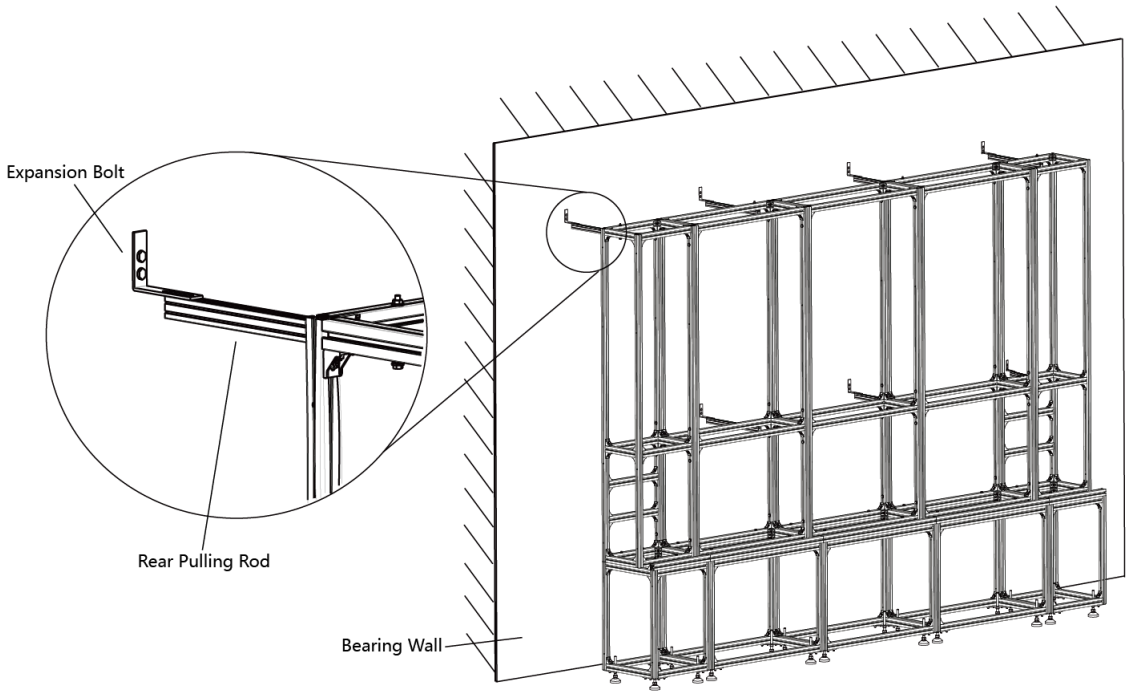


Figure 2-44 Fix the Rear Pulling Rods onto the Bearing Wall

Install the Connectors

The connectors are divided into two parts: customized front joint piece which is used to connect the screens, and back connecting component which is used to connect the rack frame. The following figures list three types of connectors and the positions where the connectors used respectively.

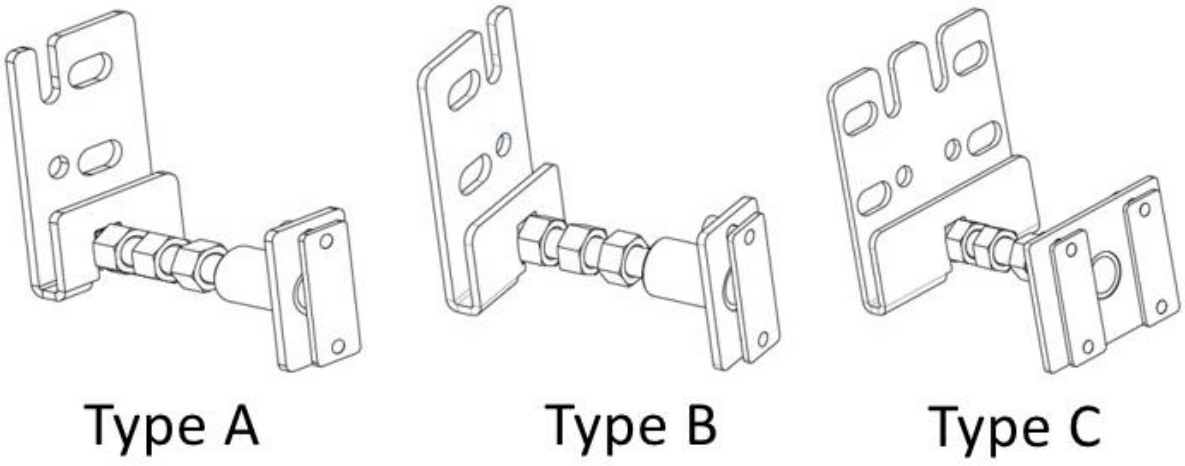


Figure 2-45 Connectors

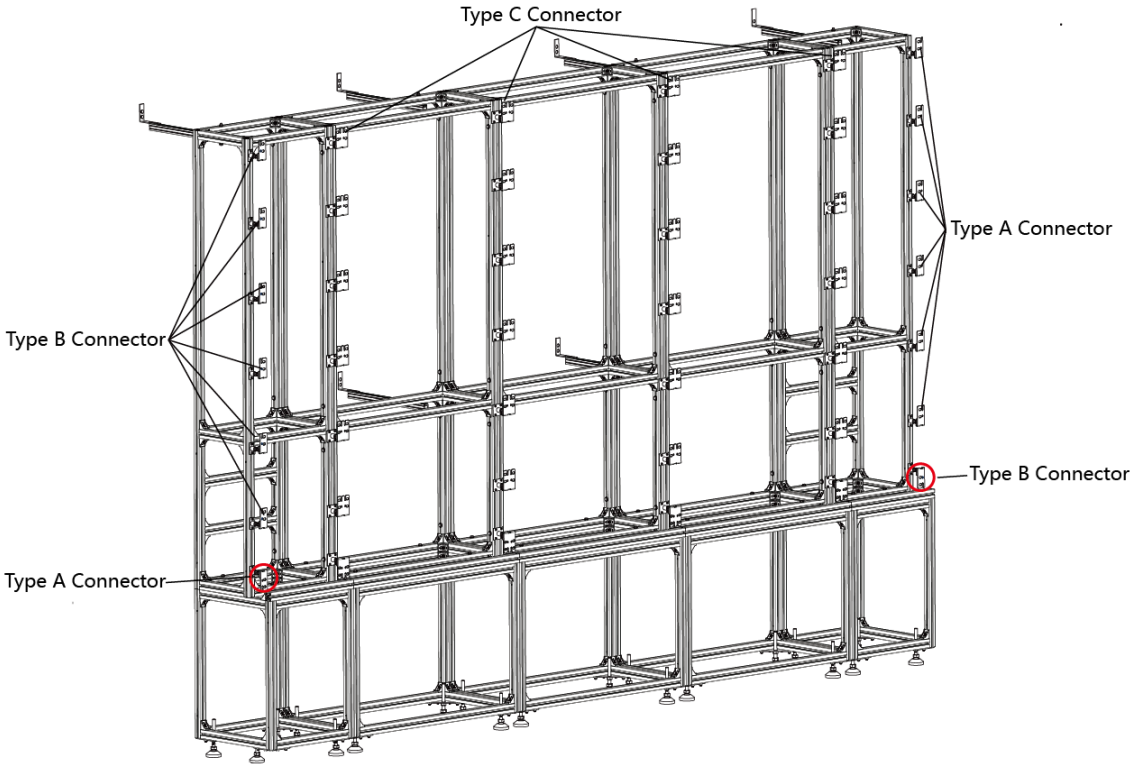


Figure 2-46 Connectors Installed

Note

Please pay attention to the types of outermost connectors between rack frame and bottom chassis.

Step 1 Twist the hexagonal screws into the screw thread plates.

Step 2 Insert the screw thread plates into the slots of aluminum extrusion rods, and move the connectors to the suitable place.

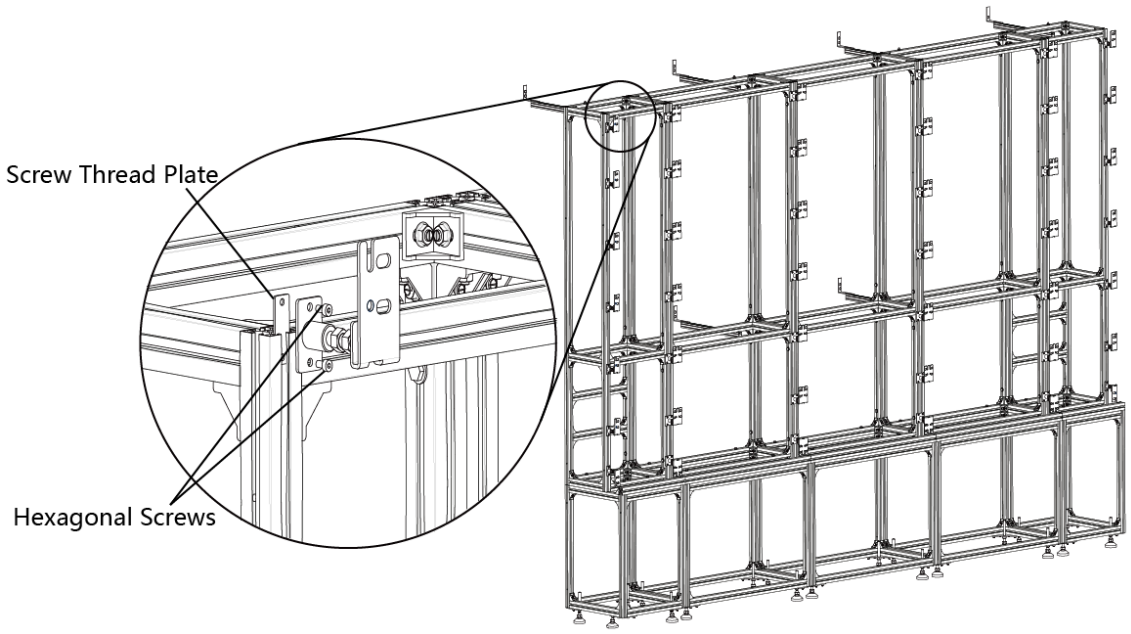


Figure 2-47 Install the Connectors

Step 3 Secure the connectors to the rack frame with screws.

Install Cabinets into the Rack Frame

After the bottom chassis, rack frame and connectors are well installed, perform the following steps to install the cabinets into the rack frame:

Step 1 Install the first cabinet from the lower middle part. Level and secure the cabinet to the connectors on the rack frame. For the screens do not have connectors near the rear, use joint pieces to fix the screen.

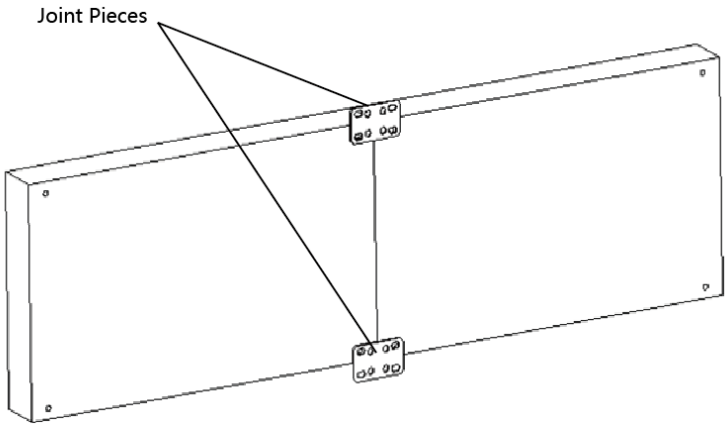


Figure 2-48 Fix the Screen with Joint Pieces

Note

- Install the cabinets from the bottom to the top, from the middle to the sides.
- Do not fix the screws between the connectors and cabinets too tight for future adjustment.
- In normal cases, lock out LED lamp boards after they are adjusted horizontally and vertically because the boards will probably be moved during the installation of other lamp boards.
- Ensure that the screen is flat and without evident gap. Otherwise, make some adjustments.

Step 2 Repeat the above steps to install the other cabinets in the lowest row.

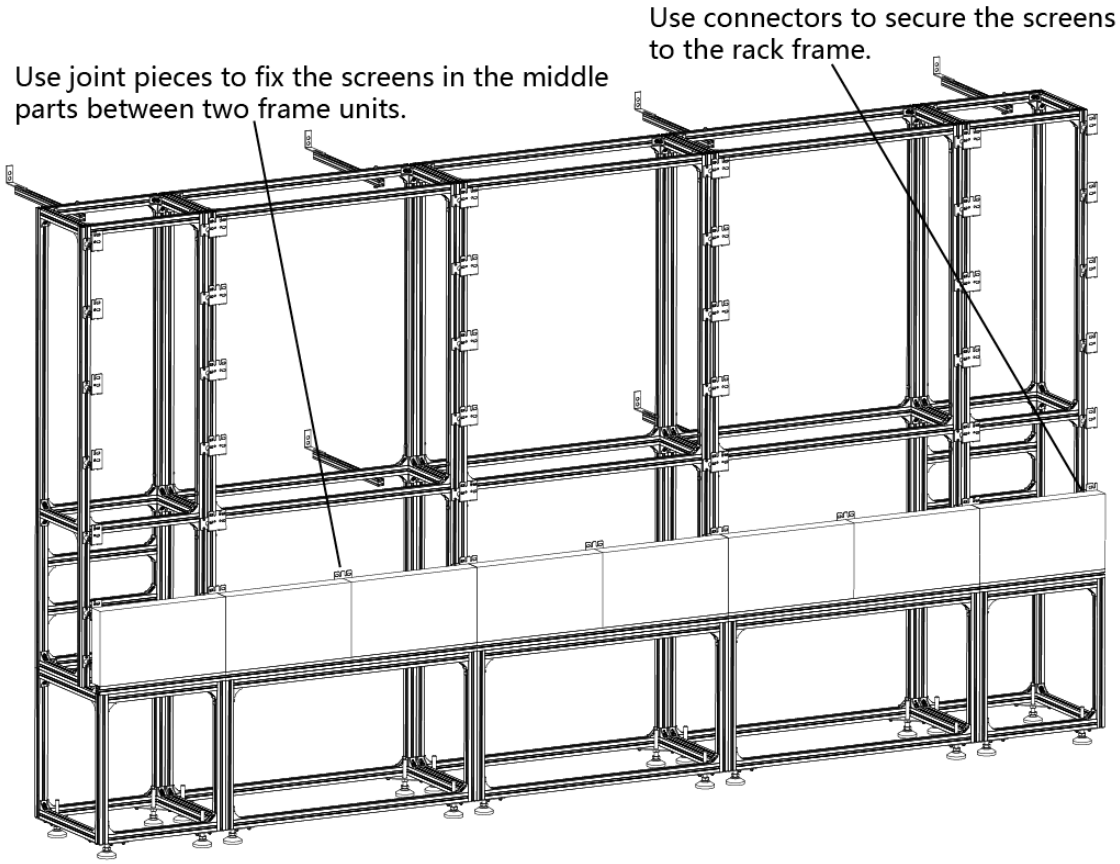


Figure 2-49 Fix the Screens

Step 3 Use a level to measure and ensure that the cabinets are flat and vertical.

Note

When there is a deviation in height, simply place a thin iron sheet under the bottom. Do not try to resolve the deviation by hitting the cabinets on the top because it will result in larger deviation later.

Step 4 Repeat the above steps to complete the installation of other cabinets.

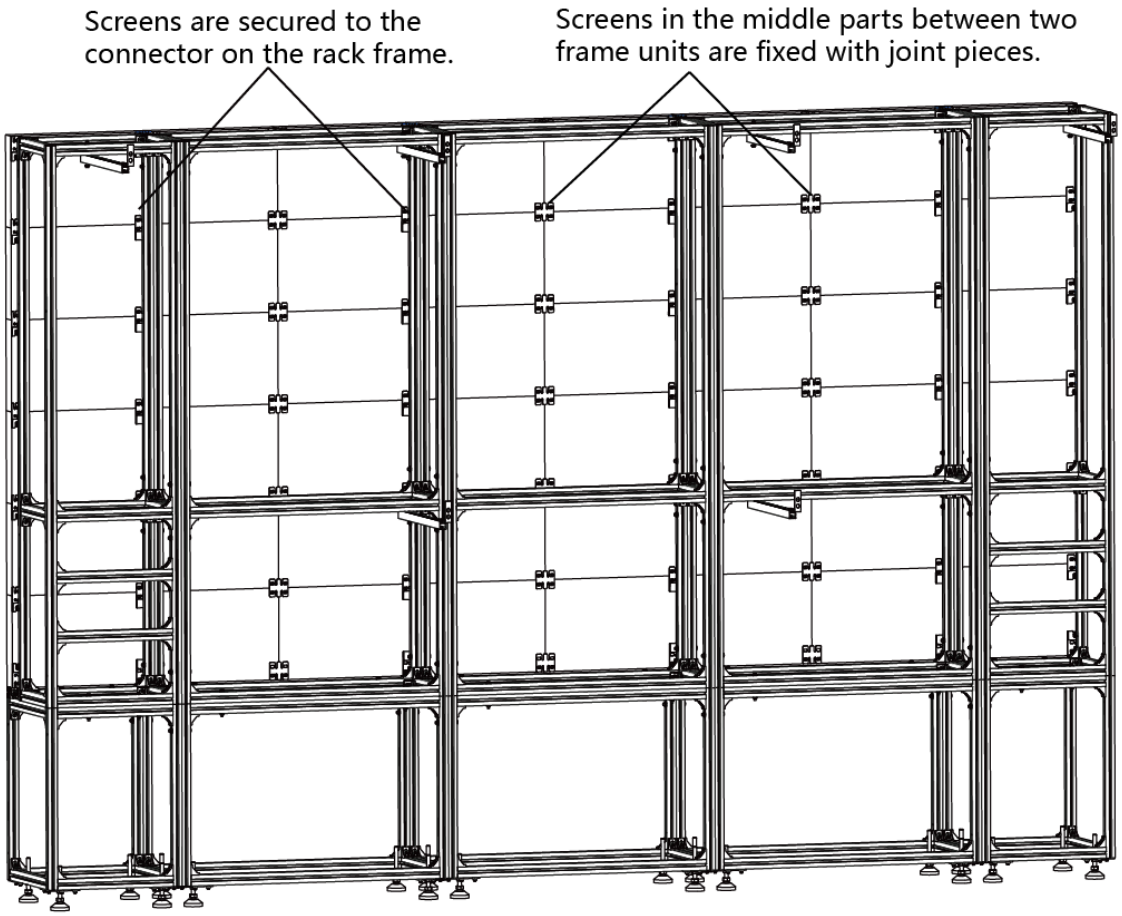


Figure 2-50 Screens Fixed

Step 5 Ensure that all the cabinets are flat and vertical and the seams between the cabinets are even. Then tighten the anchor bolts to complete the installation.

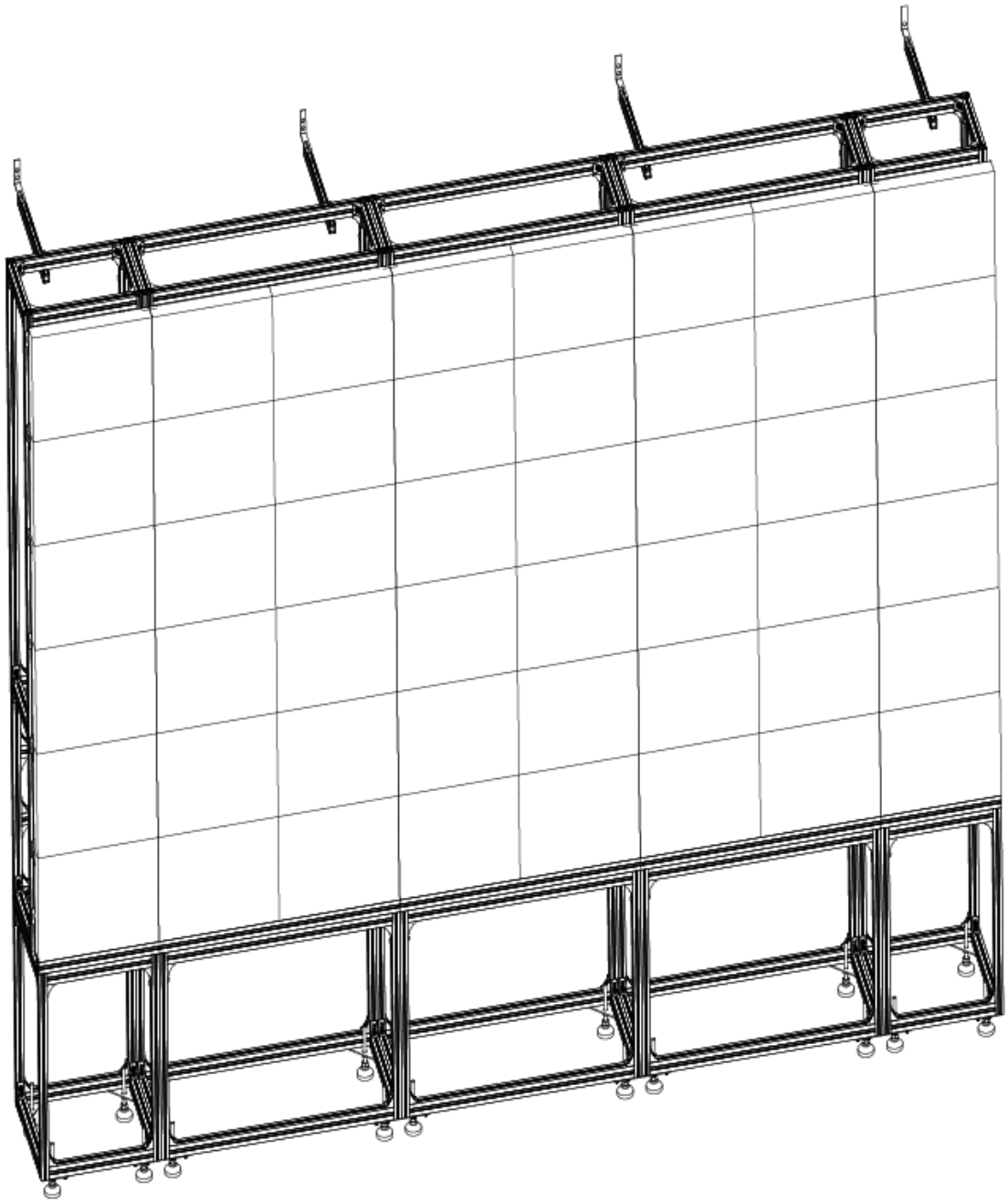


Figure 2-51 Screen Installation Finished

Note

- For details about cabinet stitching, see 3.2.2 Stitch Cabinet Frames.
- For details about lamp boards maintenance, see3.5.1 Maintain the Lamp Board.

Install the Cover Plates and Door Plates for Bottom Chassis

Step 1 Use T-Shaped bolts to install the front cover plates and lateral cover plates for bottom chassis respectively.

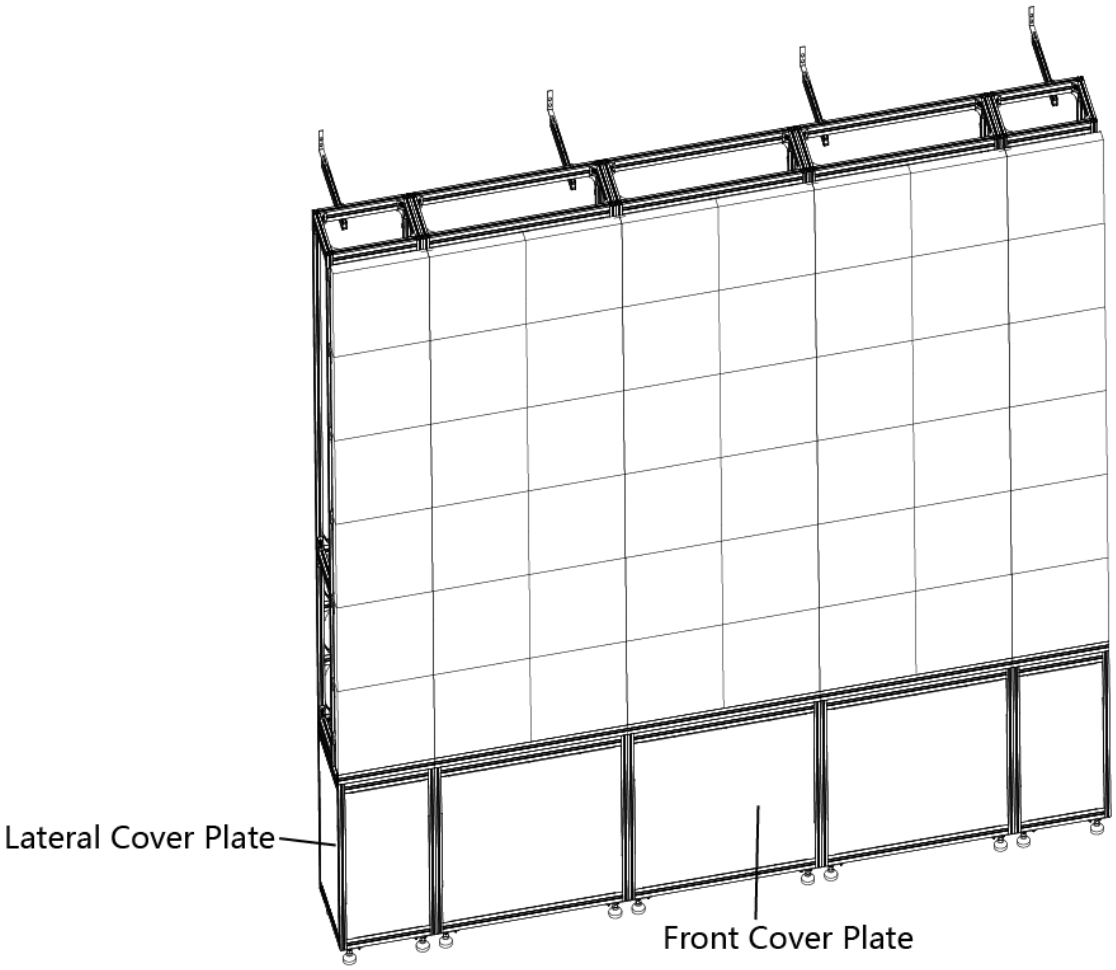


Figure 2-52 Install the Cover Plates

Step 2 Use T-shaped bolts or door hinge to install the door plates including upper fixing plates, lower fixing plates, left door plates and right door plates.

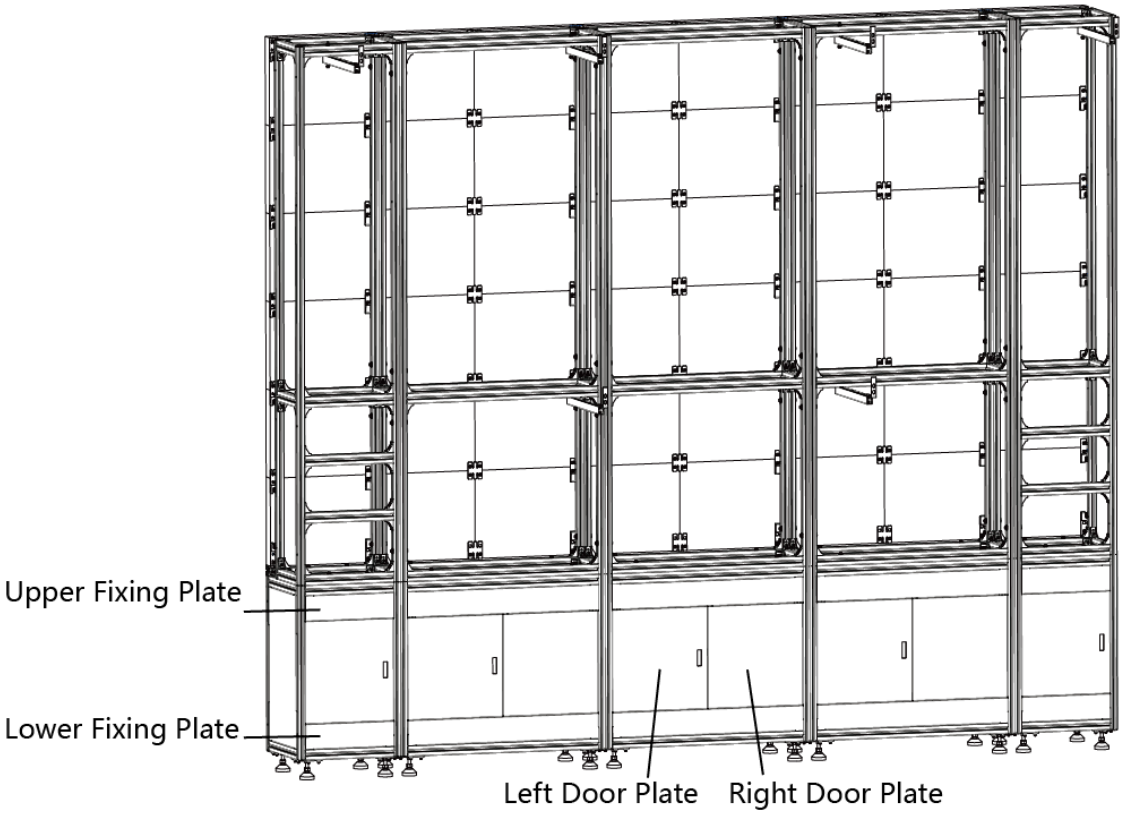


Figure 2-53 Install the Door Plates

Chapter 3 Cabinet Installation

3.1 Introduction

3.1.1 About the Cabinet

A cabinet is a basic unit for LED engineer installation in which LED modules are neatly mounted on a metal sheet (cast aluminum) box, with a built-in independent receiving card and switching power supply, an engineering installation structure, and independent display.

3.1.2 Load Capability of the Cabinet

Load Capability of Network Interfaces

The load capability of a single network interface of the sending card is limited. You can calculate the max load of a single network interface by the following formula.

Max Load of a Network Interface = Pixel Capacity of a Network Interface/Cabinet Resolution

Example

If equipped with a sending card of 650,000 pixels, the max load of a single network interface for a P1.2 cabinet of 480 × 270 resolution is 5 cabinets.

Note

You can choose sending cards of different pixels and cabinets of different resolution, and calculate the load capability by the formula.

Load Capability of Power Cords

The load capability of a single power cord is limited. You can calculate the max load of a single power cord by the following formula.

Max Load of a Single Power cord = Power of the Cord/Power of the Cabinet

Note

You can choose power cords and cabinets of different specifications, and calculate the load capability by the formula.

3.1.3 Cabinet Overview

There are four types of cabinets in total.

Table 3-1 Cabinet Specification

Type	Cabinet Dimensions (W × H × D)	Lamp Boards Amount	Pixel Pitch	Cabinet Resolution
1	1000 mm × 250 mm × 50 mm	4	P1.5	640 × 160
			P1.9	512 × 128
			P2.6	384 × 96
			P2.9	336 × 84
			P3.9	256 × 64
2	750 mm × 250 mm × 50 mm	3	P1.5	480 × 160
			P1.9	384 × 128
			P2.6	288 × 96
			P2.9	252 × 84
			P3.9	192 × 64
3	1000 mm × 500 mm × 50 mm	8	P1.5	640 × 320
			P1.9	512 × 256
			P2.6	384 × 192
			P2.9	336 × 168
			P3.9	256 × 128
4	500 mm × 500 mm × 50 mm	4	P1.5	320 × 320
			P1.9	256 × 256
			P2.6	192 × 192
			P2.9	168 × 168
			P3.9	128 × 128

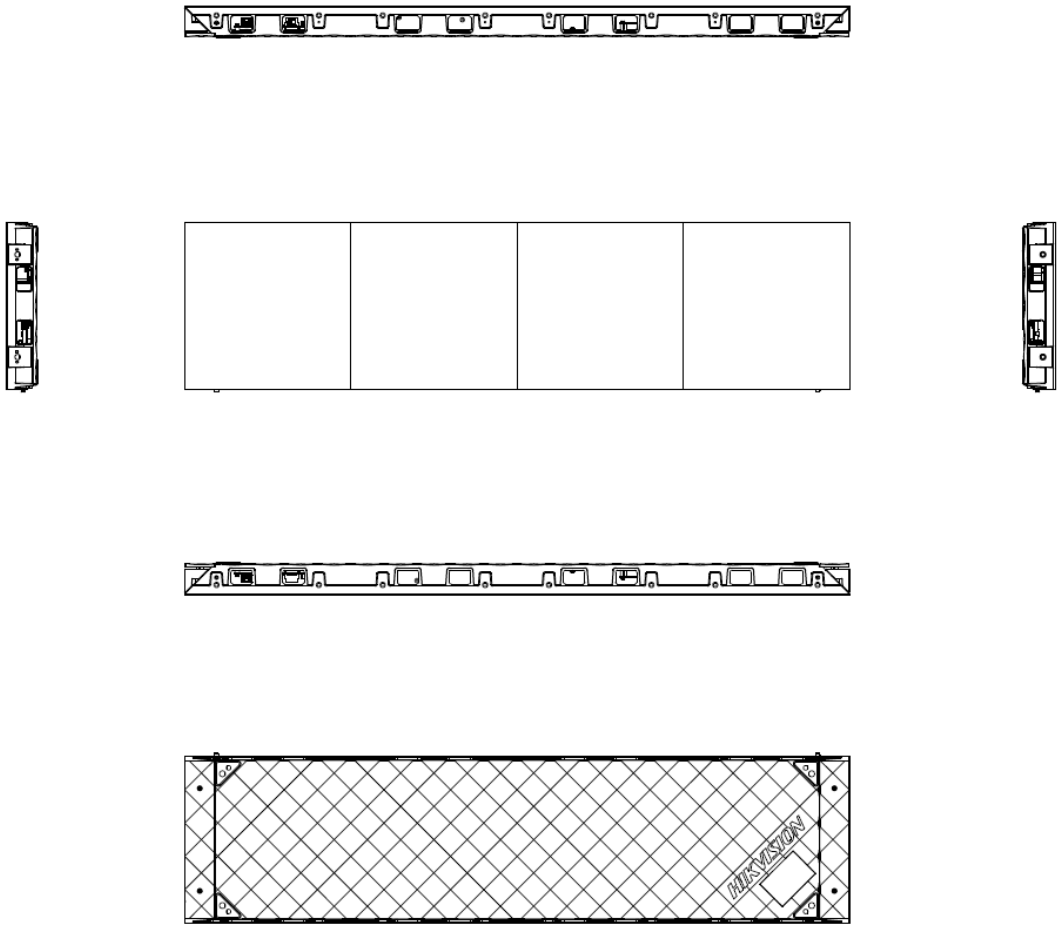


Figure 3-1 Cabinet 1 (1000 mm × 250 mm × 50 mm)

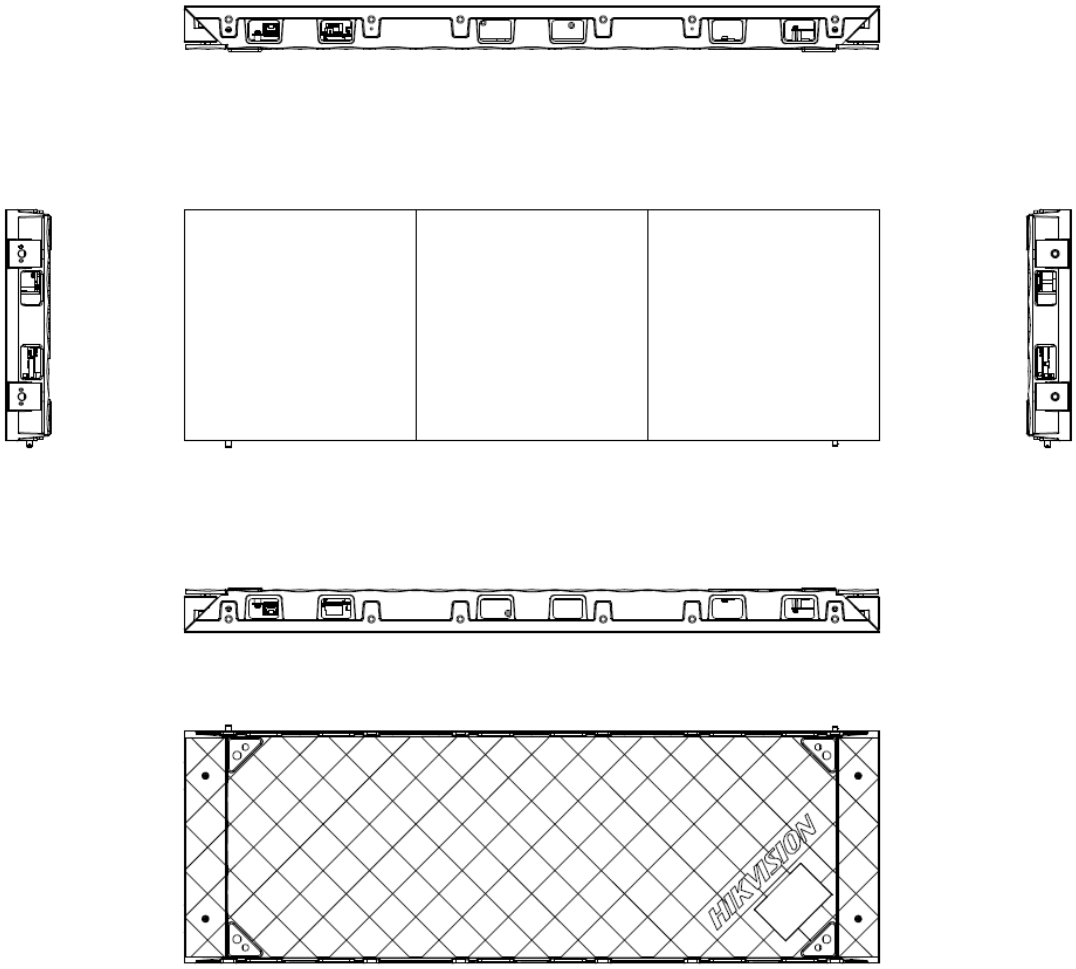


Figure 3-2 Cabinet 2 (750 mm × 250 mm × 50 mm)

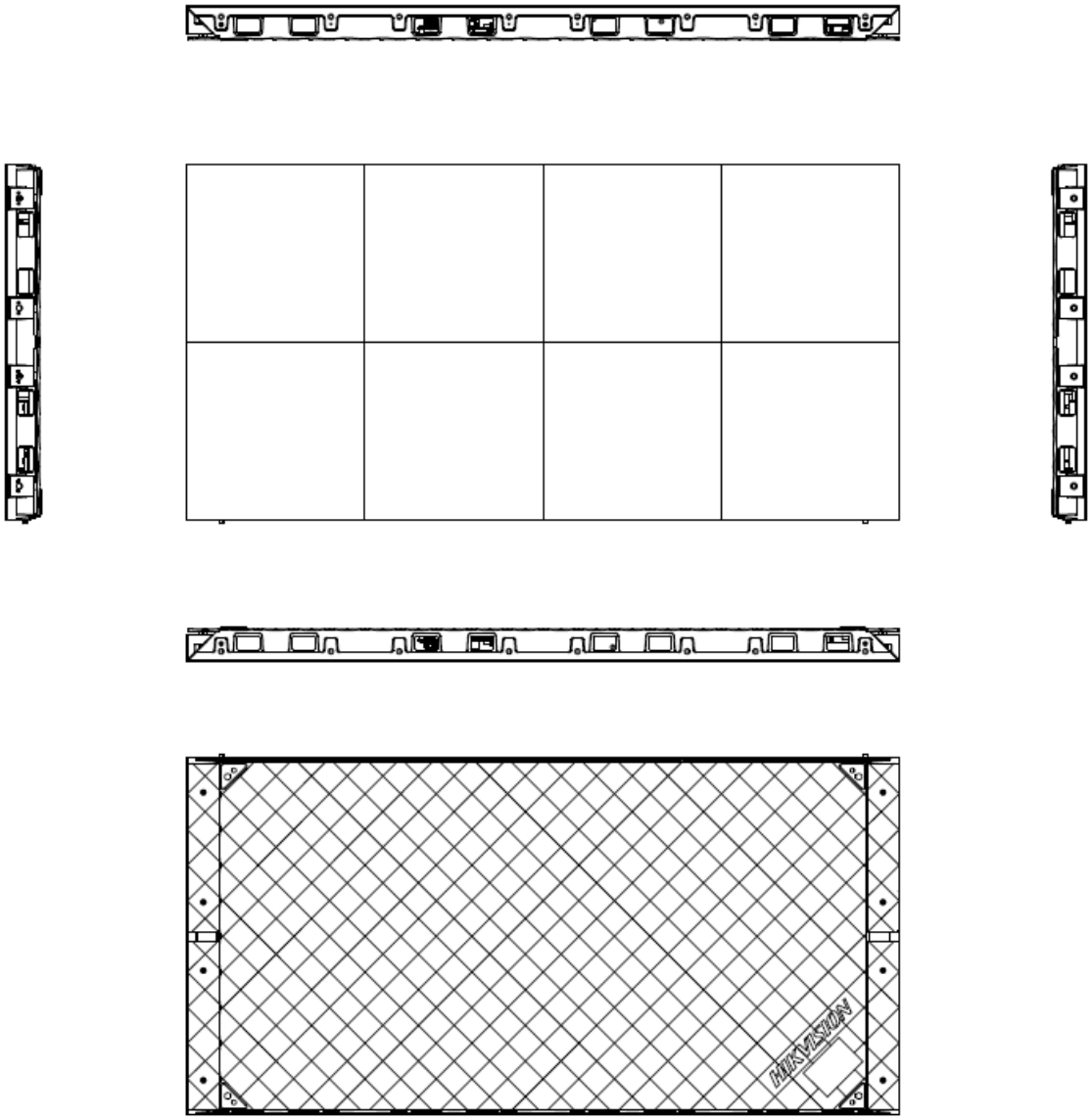


Figure 3-3 Cabinet 3 (1000 mm × 500 mm × 50 mm)

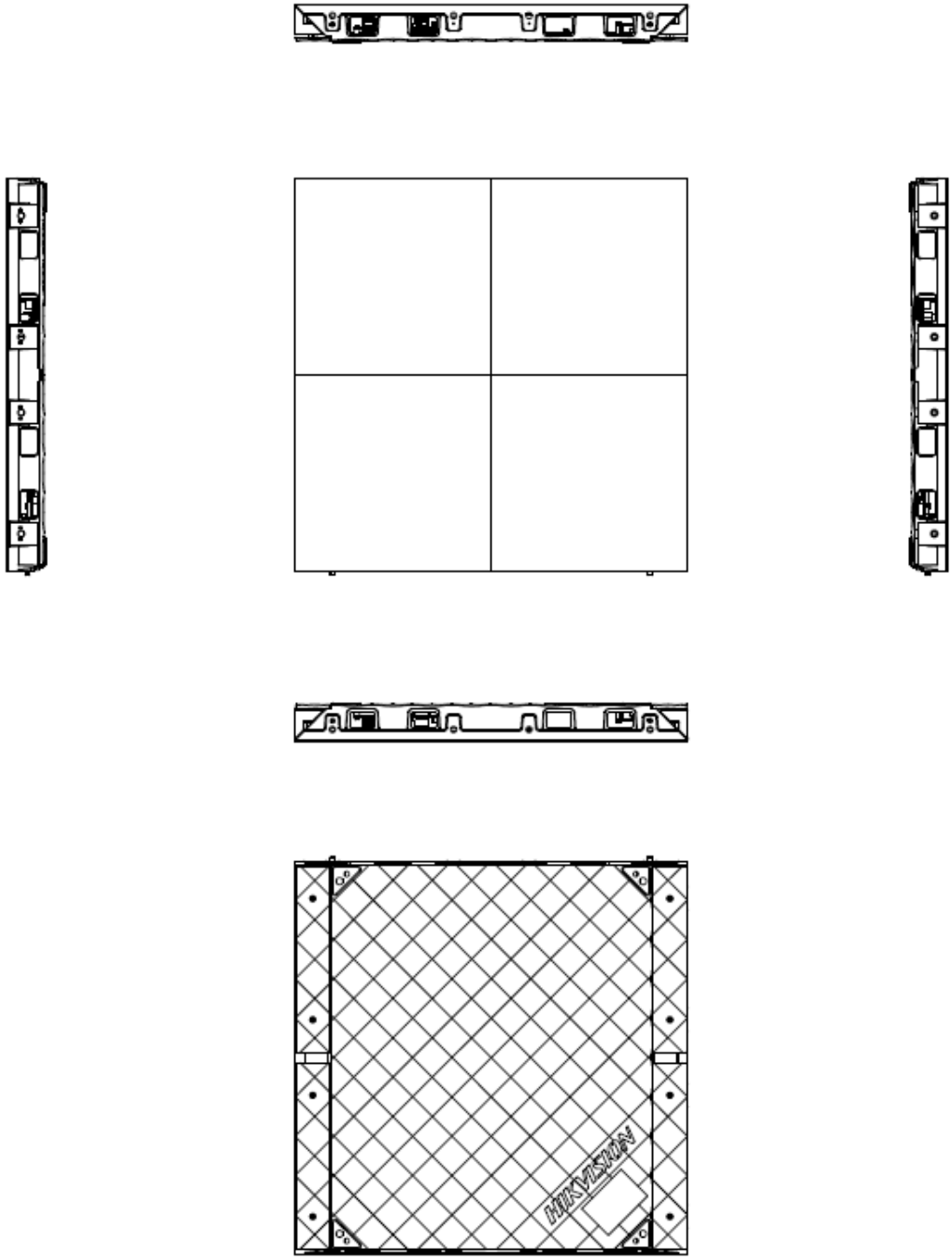


Figure 3-4 Cabinet 4 (500 mm × 500 mm × 50 mm)

3.2 Install Cabinets

3.2.1 Precautions

Read the following precaution tips before you install the LED screens:

- Install the LED screens after the decoration construction is completed.

- Avoid humid or high-PH environment to prevent damage to the LED lamps.
- Do not expose the device to rain or humid environment to reduce the risk of fire or electric shock.
- Electric discharge may last for a short period of time after the power is shut down. Please wait two minutes after the power is shut down to operate the device.
- Only use the original power cord delivered with the device. Contact authorized dealer to purchase power cord with same specifications.
- Please do not frequently plug and unplug the power cord when the power is on.

3.2.2 Stitch Cabinet Frames

Cabinet Frame Locating

Align two cabinet frames with the locating studs, locating holes, and installation holes. Single cabinet frame is equipped with two locating studs, two locating holes, two sets of horizontal installation holes, and several sets of vertical installation holes.

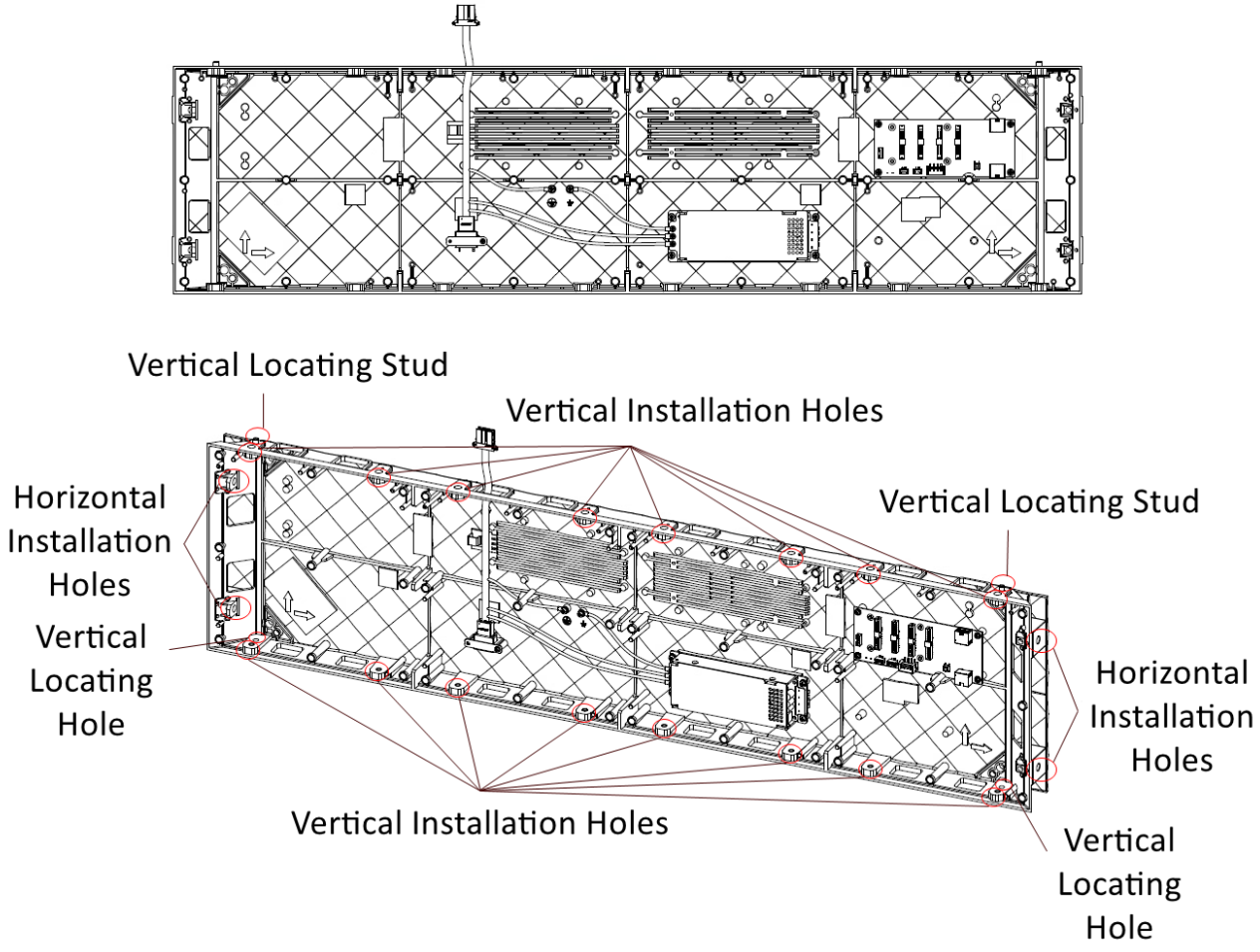


Figure 3-5 Cabinet Frame Appearance

Select the Stitching Direction of Cabinet Frames

The installation direction is marked on the cabinet frame. You can select the stitching direction of the cabinet frame based on your real needs.

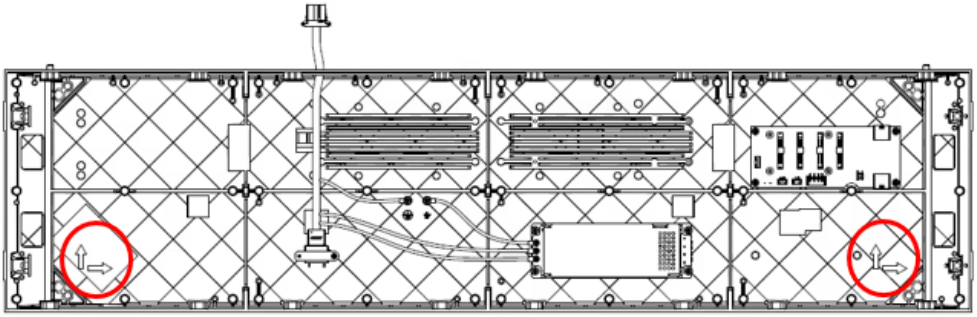


Figure 3-6 Stitching Direction of Cabinets

Stitch Cabinet Frames Horizontally

Step 1 Align the installation holes in the horizontal direction of the two adjacent frames, and adjust the cabinet frames to the relative height.

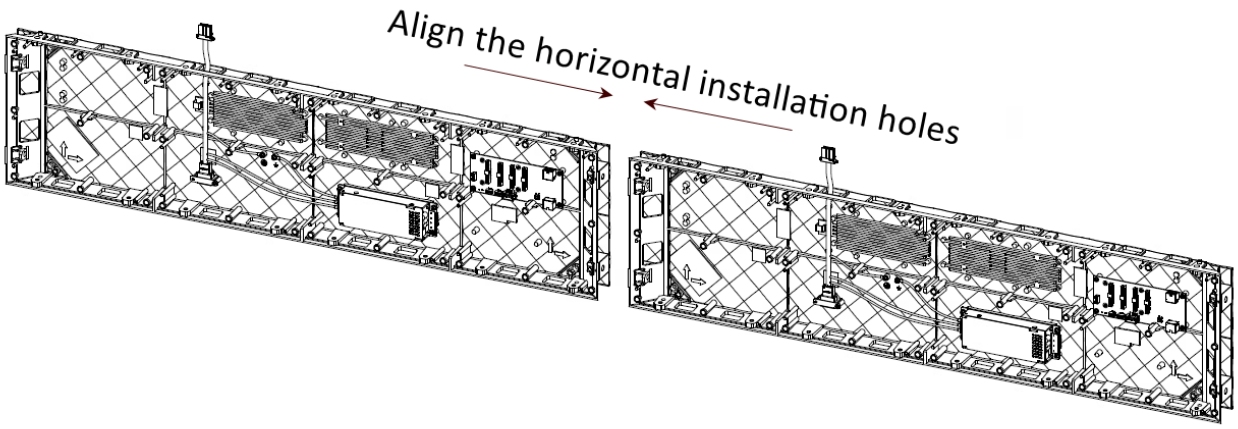


Figure 3-7 Align the Cabinets Horizontally

Step 2 Insert the M6 screws from right to left into the horizontal installation holes.

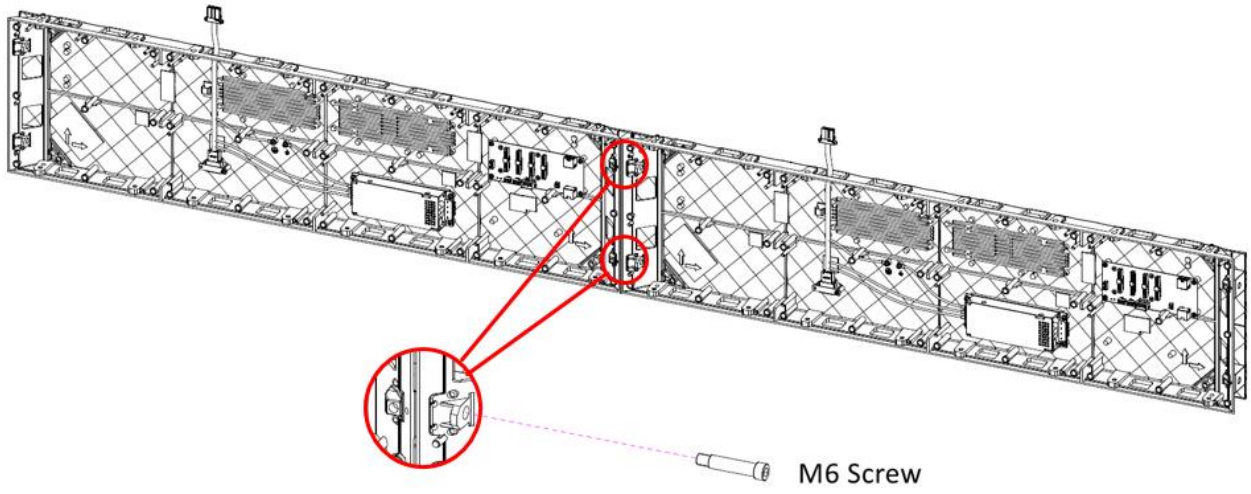


Figure 3-8 Fix the Cabinet Frames

Step 3 After the seams between the two cabinet frames have been adjusted, use a hex wrench to fasten the M6 screws.

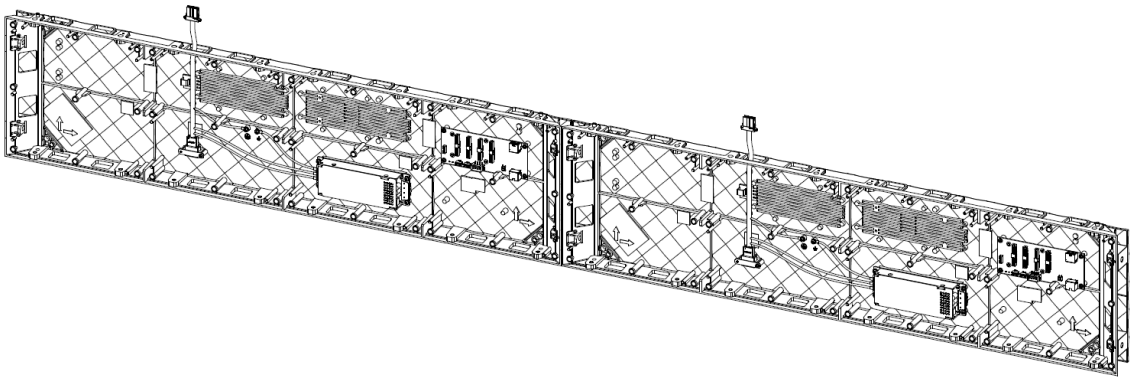


Figure 3-9 Finish the Horizontal Stitching

Step 4 Repeat the above steps to complete the horizontal stitching of remaining cabinet frames.

Stitch Cabinet Frames Vertically

Step 1 Insert the power output Interface of the lower cabinet through the wiring hole of the adjacent cabinet and into the power input connector of the adjacent cabinet.

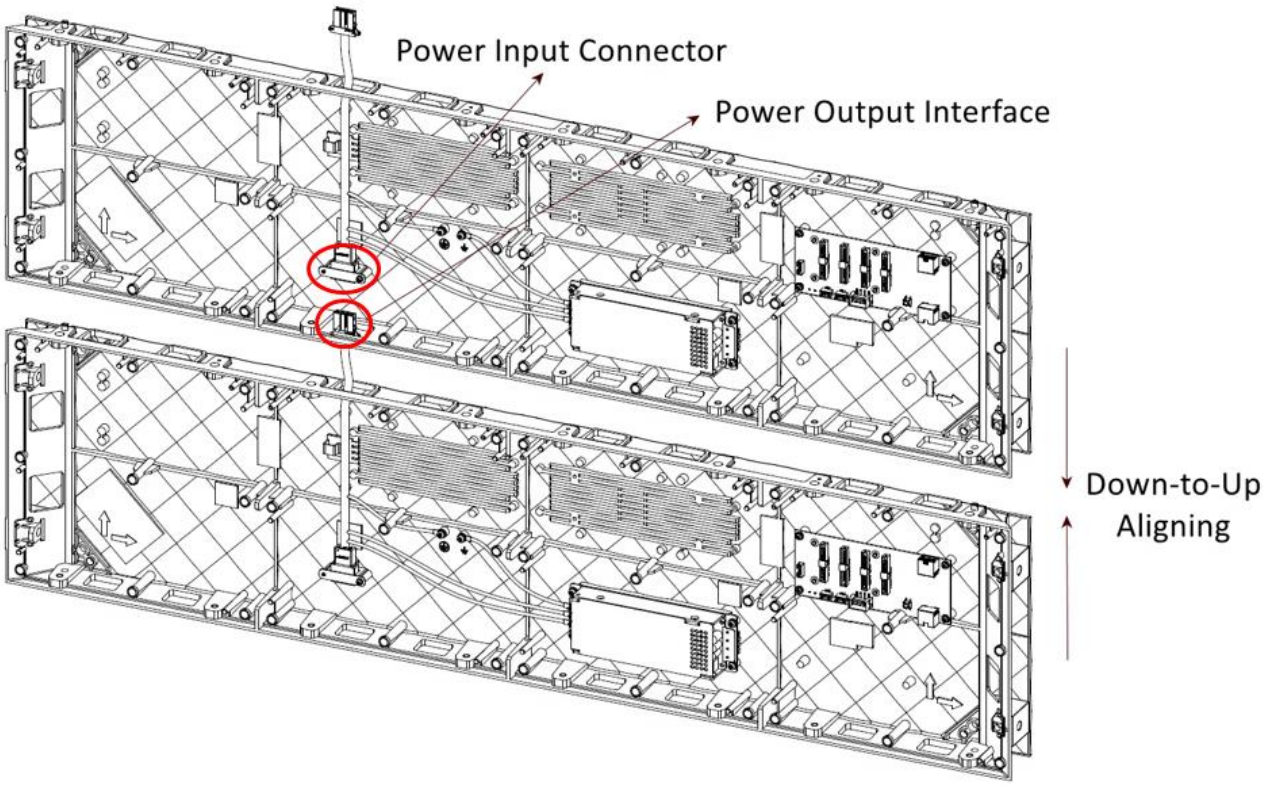


Figure 3-10 Connect the Power Output Interface

Step 2 Align the locating studs in the vertical direction of the two adjacent cabinet frames to the locating holes, and adjust the cabinet frames vertically against each other.

Step 3 Insert the M6 screws from bottom to top into the vertical installation holes.

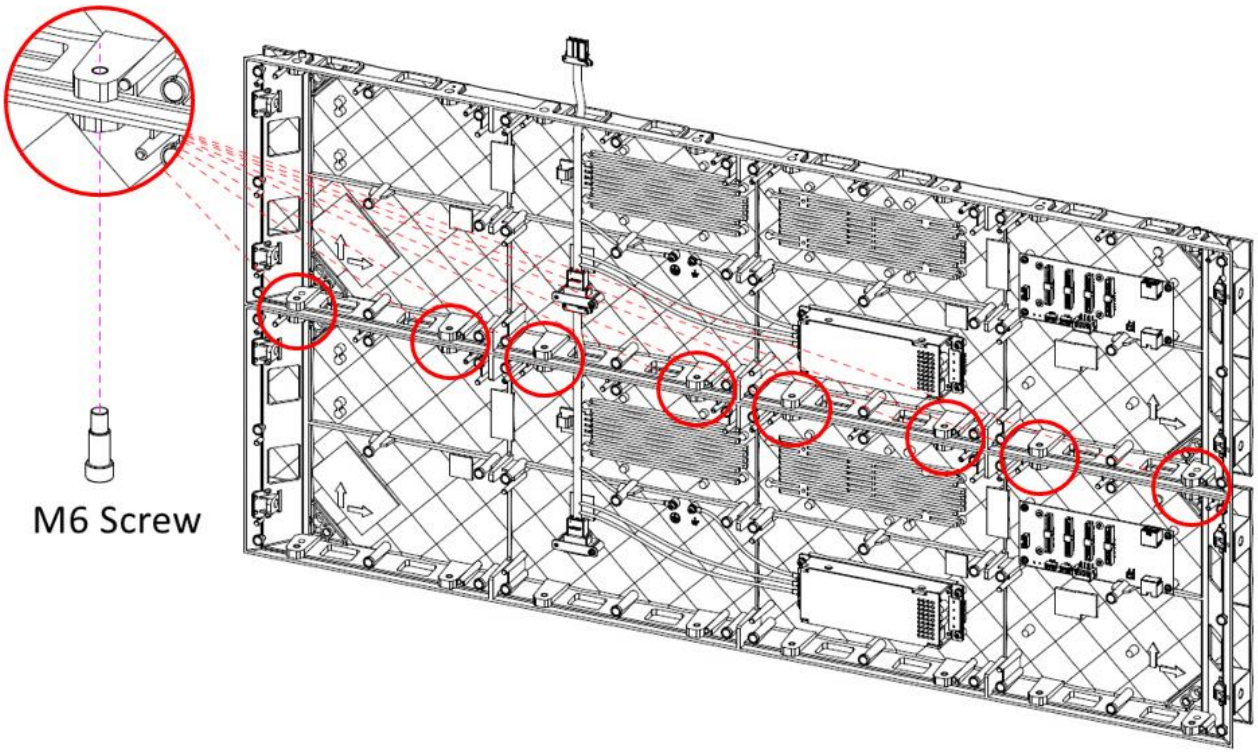


Figure 3-11 Fix the Cabinet Frames

Step 4 After the seams between the two cabinet frames have been adjusted, use a hex wrench to fasten the M6 screws.

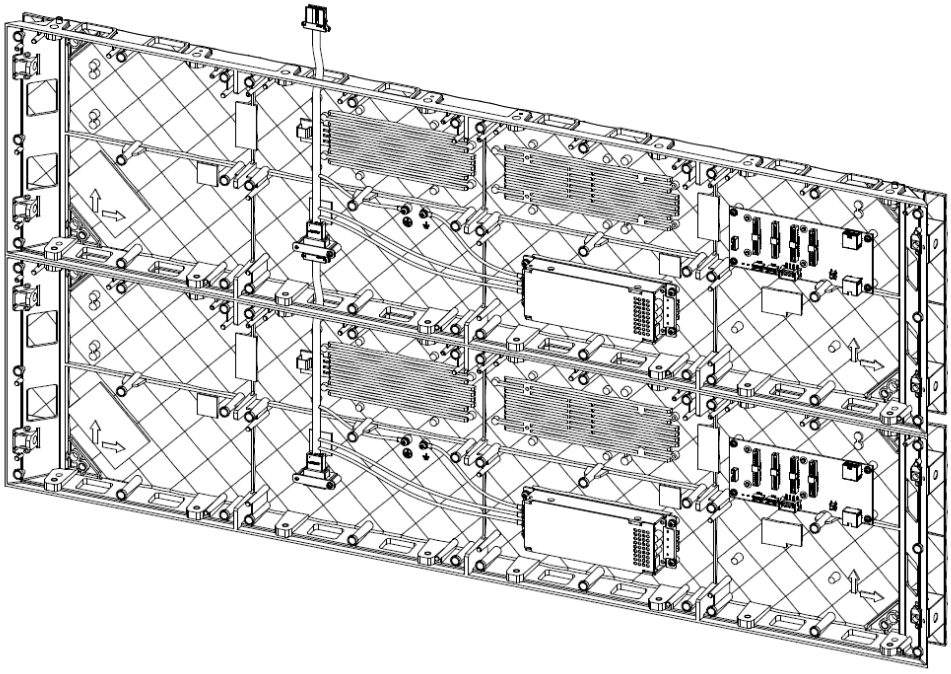


Figure 3-12 Finish the Vertical Stitching

Step 5 Repeat the above steps to complete the vertical stitching of remaining cabinet frames.

Stitch Cabinet Frames to a 90° Right Angle

Step 1 Use a screwdriver to remove the screws securing the cover plates and blocks on both sides of the cabinet.

Step 2 Repeat the above steps to remove the cover plates and blocks on both sides of the other cabinet.

Step 3 Adjust the two cabinet frames to a 90° right angle by bringing the short sides of the two cabinet frames close together and aligning the four installation holes of the frames.

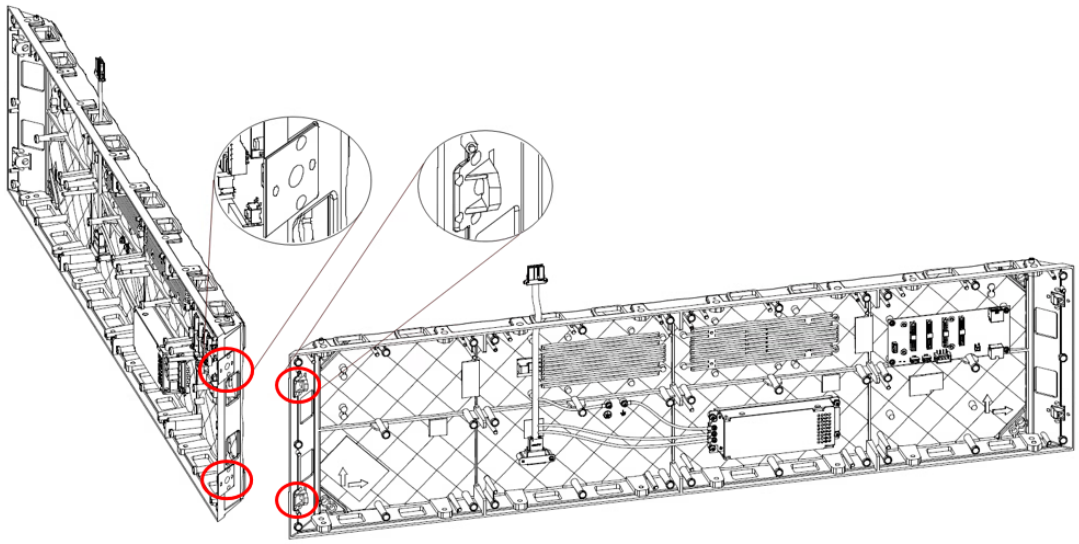


Figure 3-13 Adjust the Two Cabinet Frames to A Right Angle

Step 4 Insert the M6 screws from right to left into the horizontal installation holes.

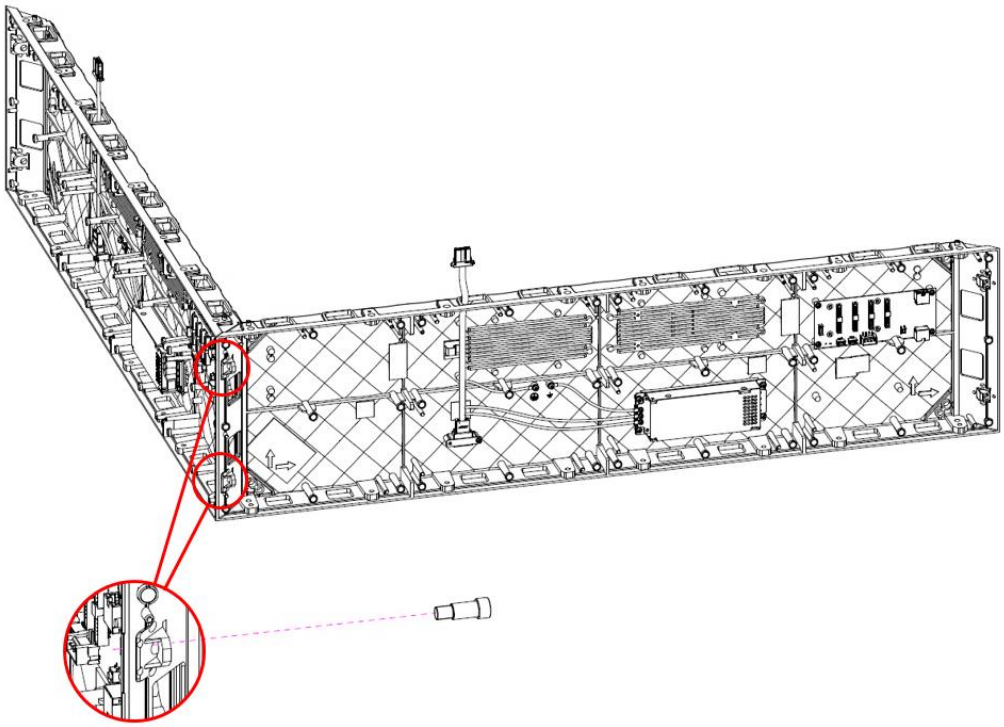


Figure 3-14 Fix the Cabinet Frames

Step 5 After the seams between the two cabinet frames have been adjusted, use the hex wrench to tighten the screws to complete the 90° right-angle stitching between the cabinet frames of the first row at the bottom.

Step 6 Repeat the above steps and stitch cabinet frames vertically to complete the 90° right angle stitching between the remaining rows of cabinet frames.

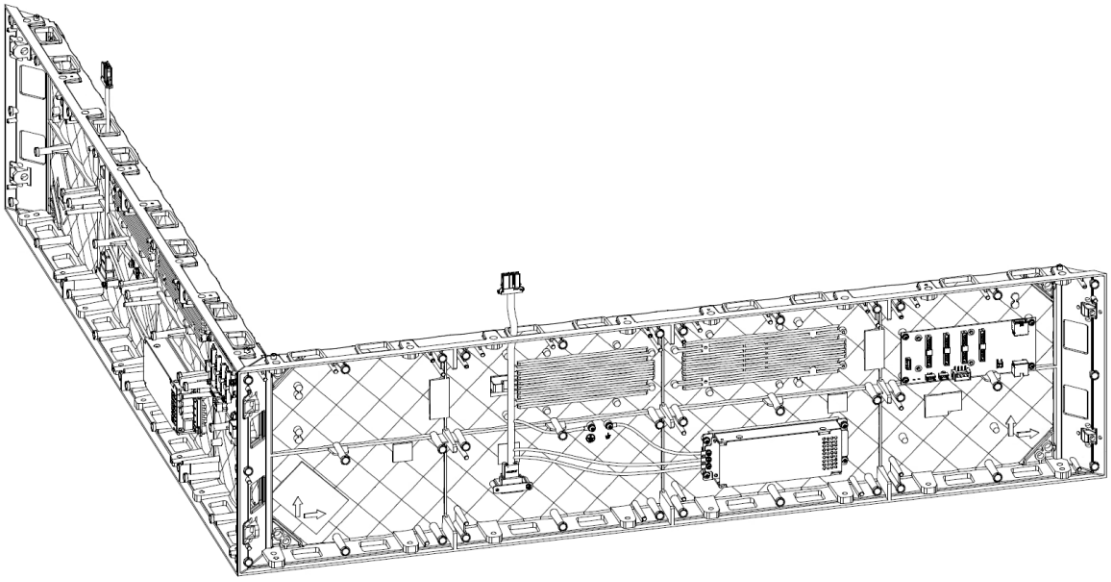


Figure 3-15 Finish the 90° Right Angle Stitching of Cabinet Frames

Rotate and Stitch Cabinet Frames

You can rotate and stitch cabinet frames horizontallly.

Step 1 Align the installation holes in the horizontal direction of the two adjacent frames, and adjust the cabinet frames to the relative height. Connect the power cord and network cable internally.

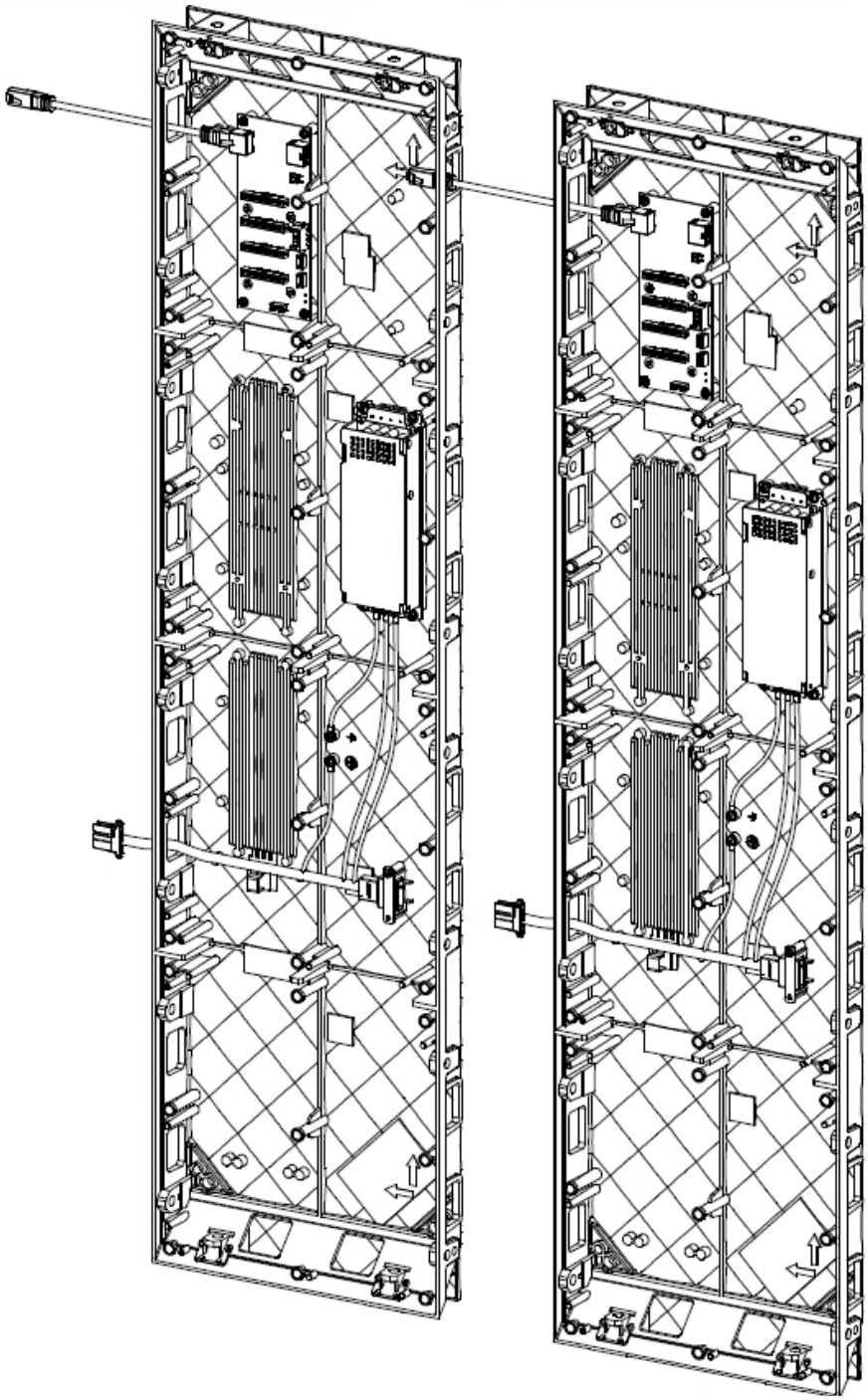


Figure 3-16 Connect the Power Cord and Network Cable Internally

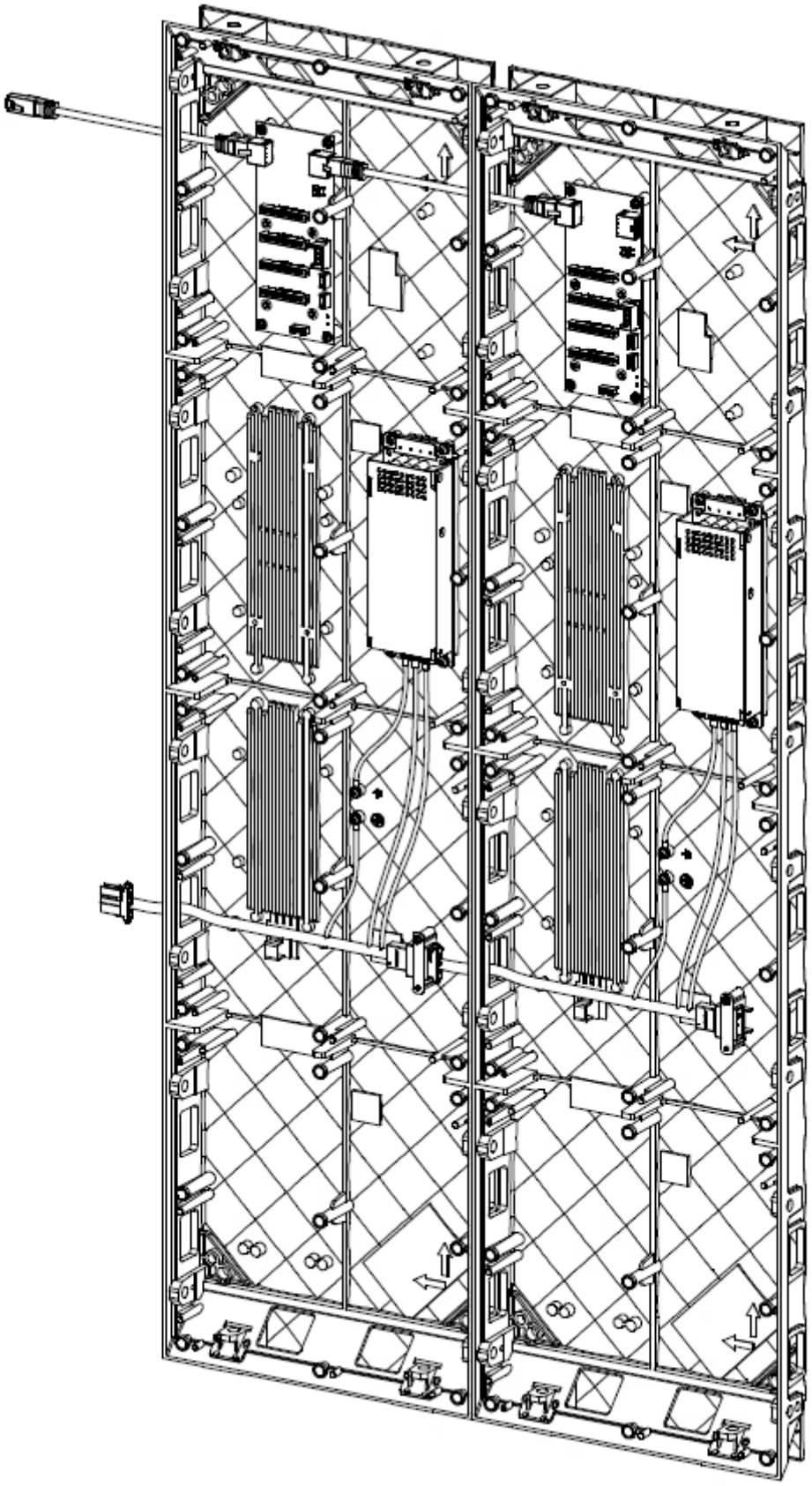


Figure 3-17 Finish the Internal Connection of Power Cord and Network Cable

Step 2 Insert the M6 screws from right to left into the installation holes.

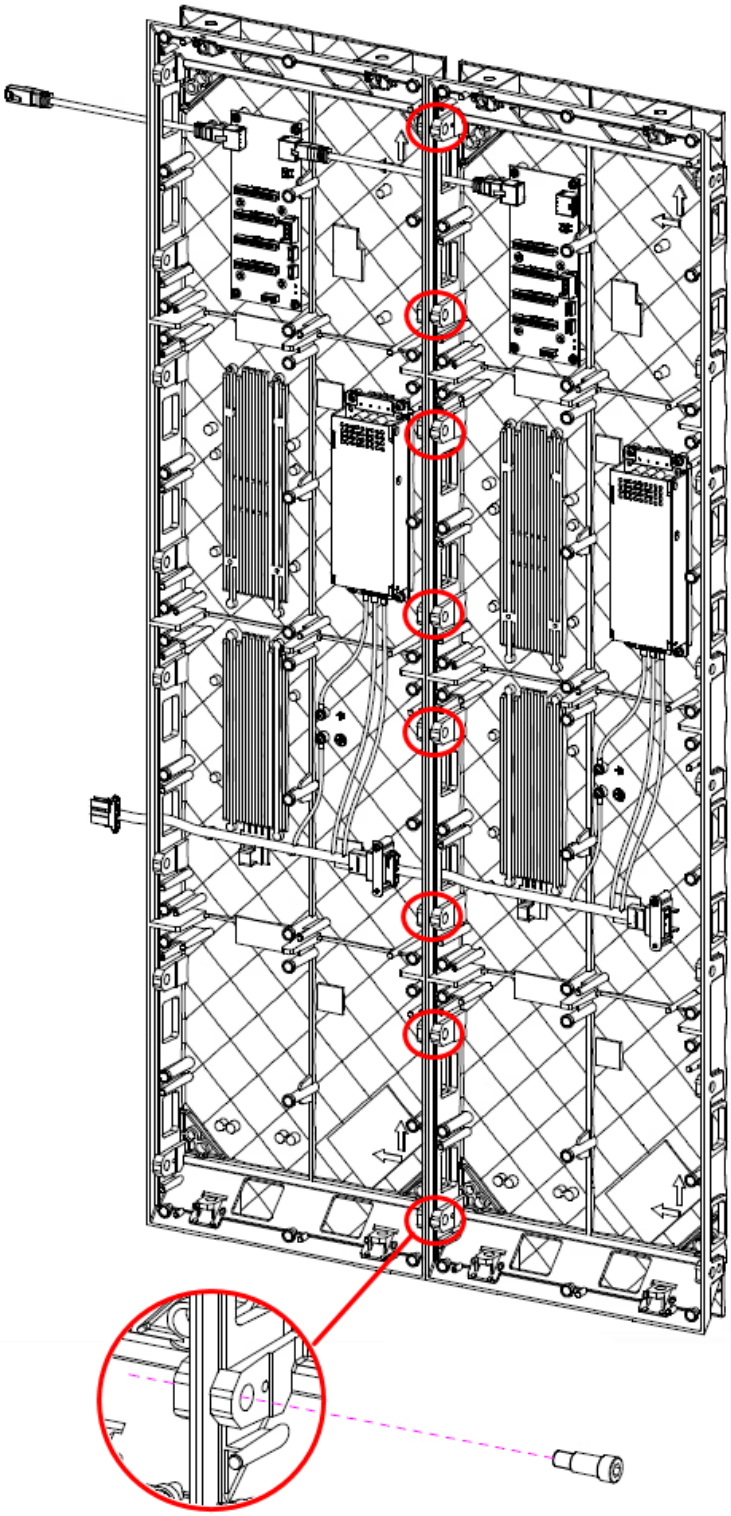


Figure 3-18 Fix the Cabinets

Step 3 After the seams between the two cabinet frames have been adjusted, use a hex wrench to fasten the M6 screws.

Step 4 Repeat the above steps to complete the rotating and stitching of remaining cabinet frames.

You can also rotate and stitch cabinet frames vertically.

Step 1 Align the installation holes in the vertical direction of the two adjacent frames, and adjust the cabinet frames vertically against each other.

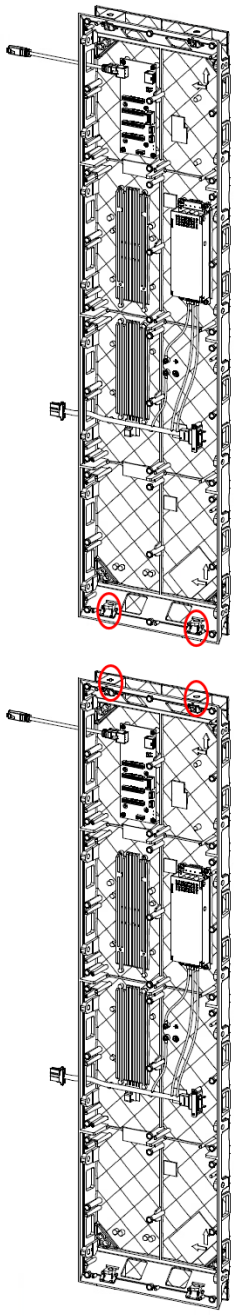


Figure 3-19 Align the Cabinets Vertically

Step 2 Insert the M6 screws from top to bottom into the installation holes.

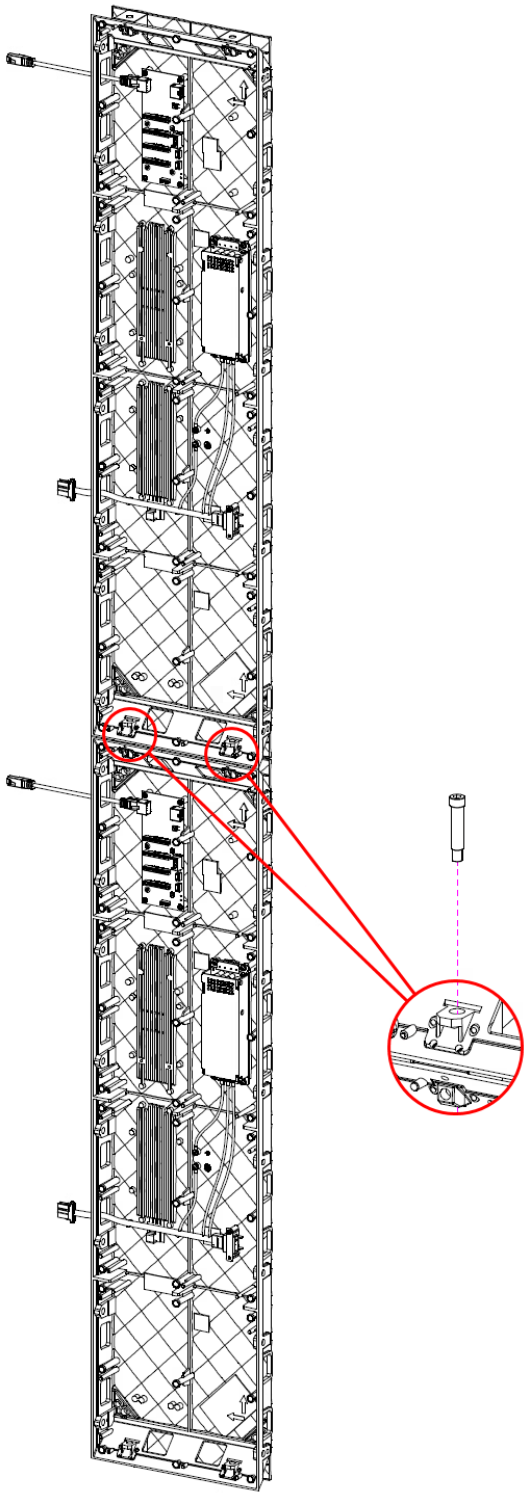


Figure 3-20 Fix the Cabinets

Step 3 After the seams between the two cabinet frames have been adjusted, use a hex wrench to fasten the M6 screws.

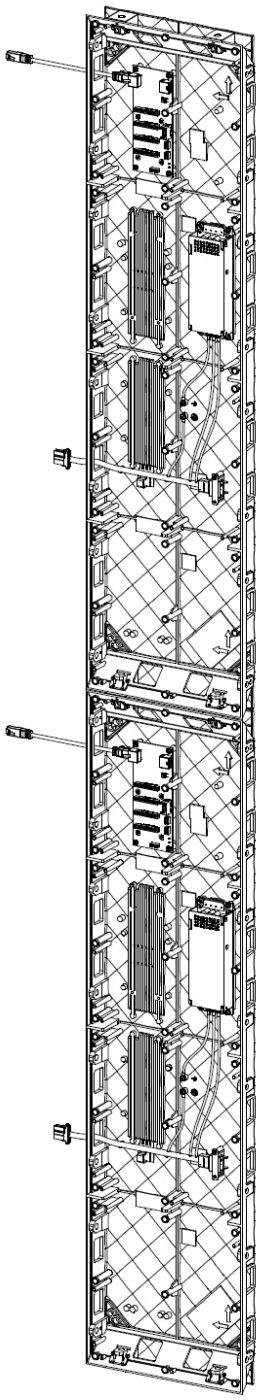


Figure 3-21 Finish the Rotating Stitching of Cabinets

Step 4 Repeat the above steps to complete the rotating and stitching of remaining cabinet frames.

Mixed Stitching of Different Cabinet Frames

Cabinets of varying specifications can be mixed and stitched together. Please calculate and select the specific stitching method based on the width and height of each cabinet. In cases where the

width of the lower cabinets does not align with that of the adjacent upper cabinets, resulting in misalignment during stitching, You can remove the locating studs with the unaligned edge of the lower cabinets before stitching. Taking a screen size of 2500 mm × 1250 mm as an example, refer to the following figure for details on how to stitch these cabinets.

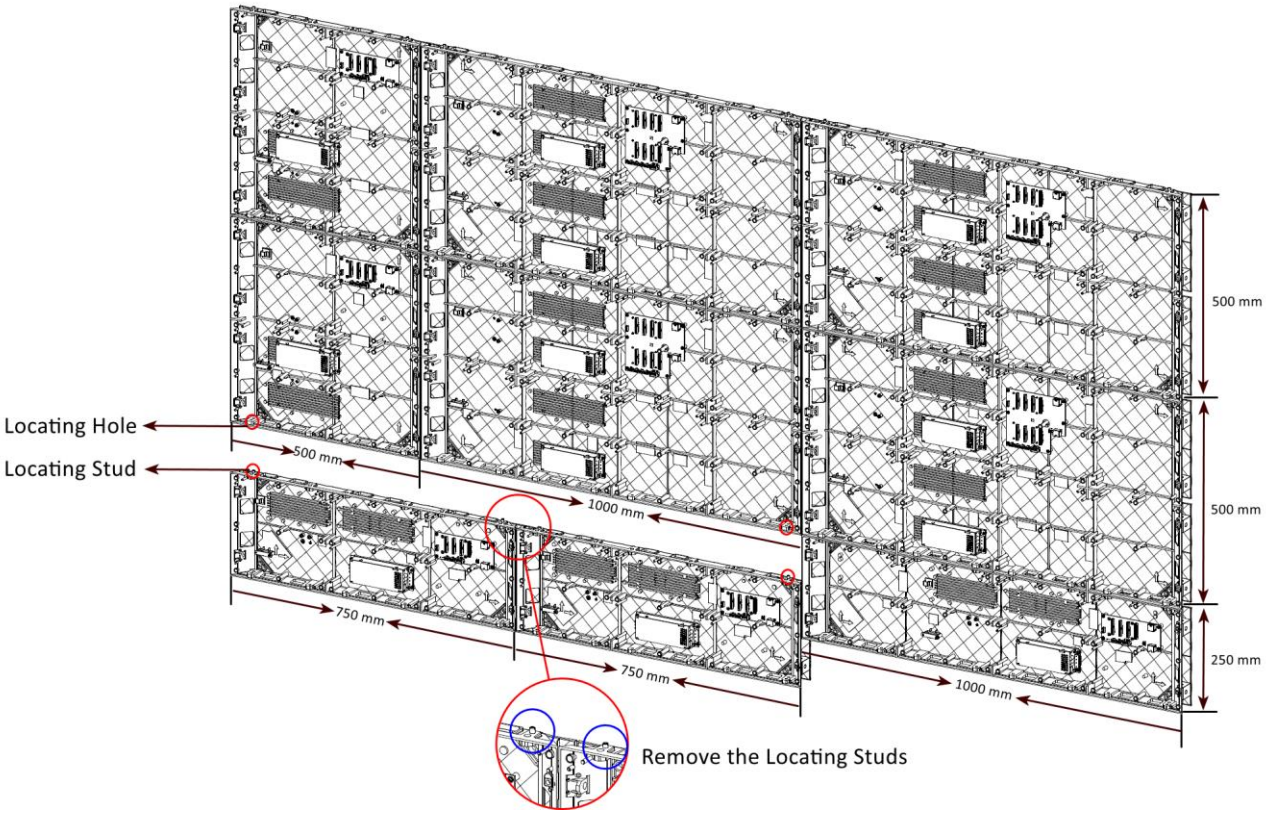


Figure 3-22 Remove Locating Studs

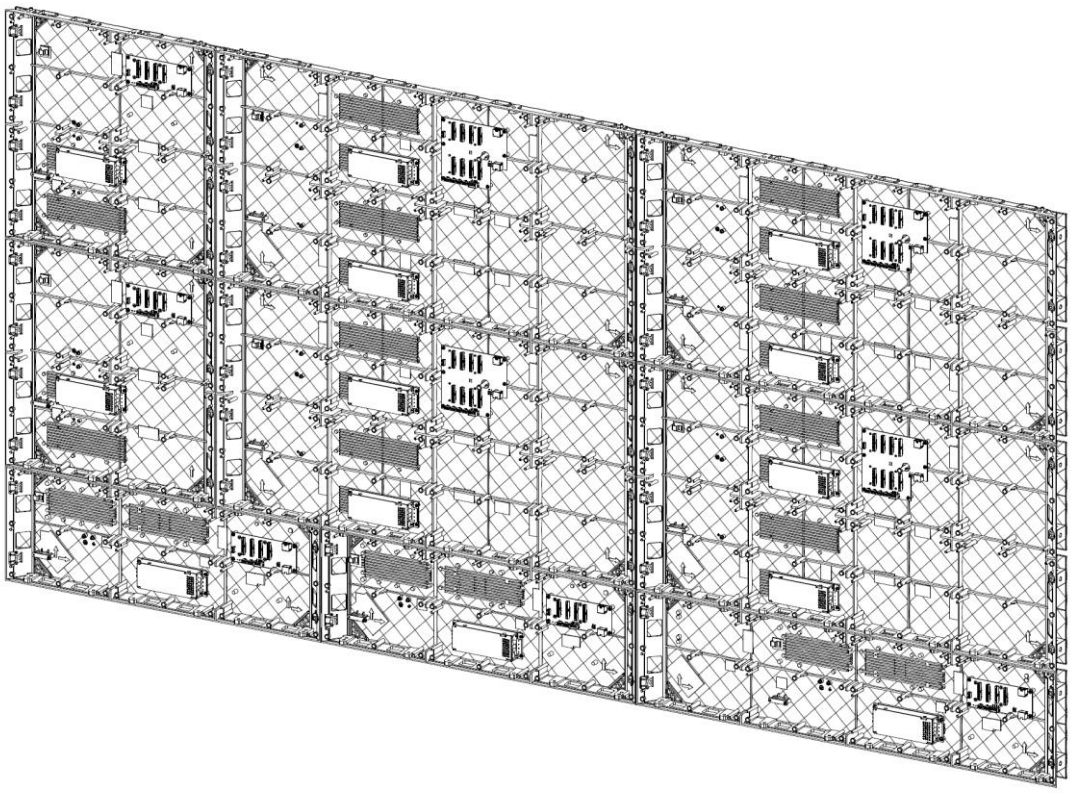


Figure 3-23 Finish the Mixed Stitching of Cabinets

3.3 Connect the Power Cords and Network Cables

3.3.1 Connect the Power Cords

Internal Power Cord Connection

Each cabinet is equipped with a power input connector and a power output interface internally. The internal power cords can be connected in cascade in each row, and the external power cords are needed according to the load capacity of the external power cords.

Pass the power output interface inside the cabinet through the wiring hole at the bottom of the adjacent cabinet, and insert the interface into the power input connector of the adjacent cabinet.

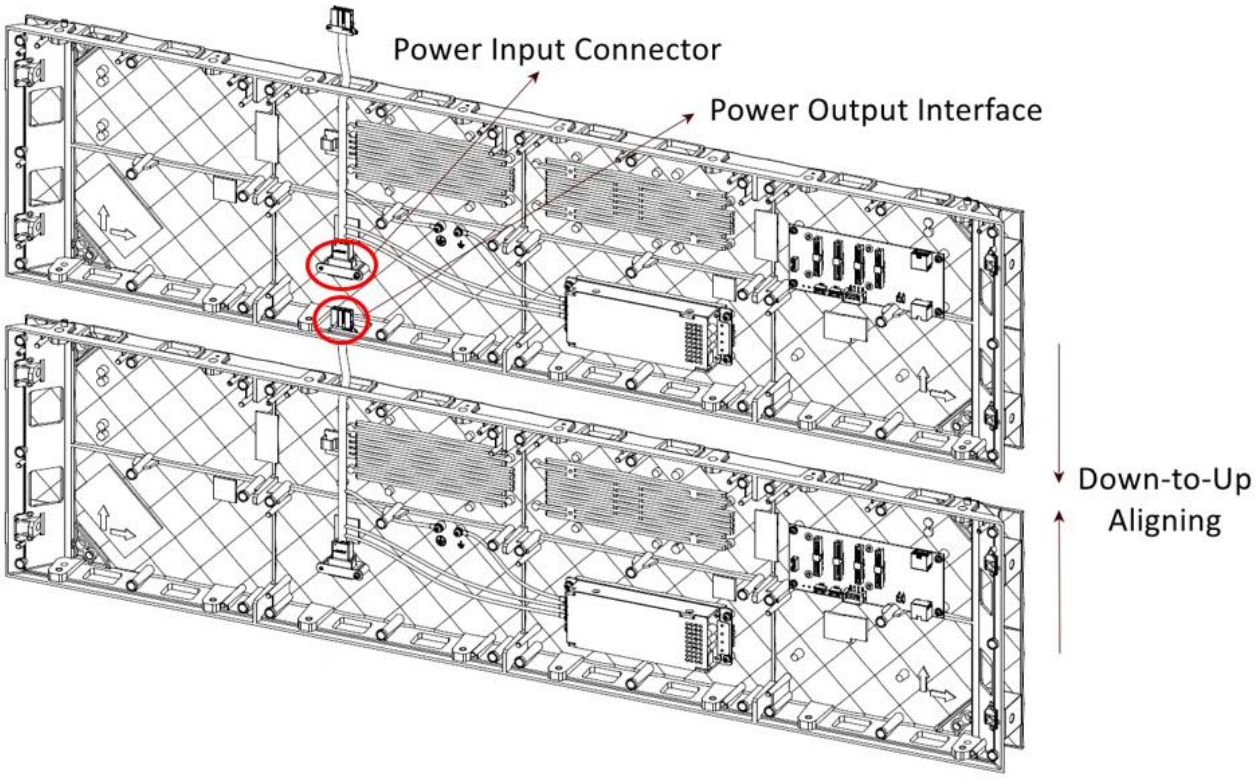


Figure 3-24 Connect the Power Cord Internally

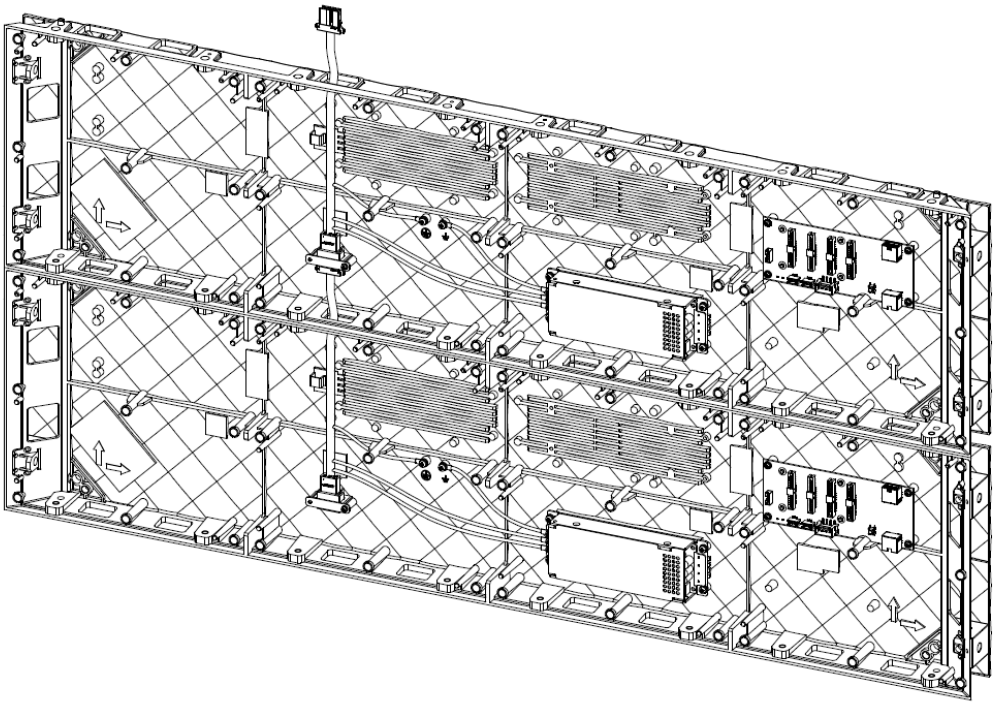


Figure 3-25 Internal Power Cords Connected

External Power Cord Connection

If the actual number of cabinets exceeds the max. load of the power cord, you need to connect the overloaded cabinets to the external power supply.

Step 1 Pass the power output interface through the wiring hole at the bottom of the cabinet to connect the internal power supply.

Step 2 Remove the cover plates on the wiring holes on the left or right of the first overloaded cabinet and pull the power cords through the holes to connect to the external power supply.

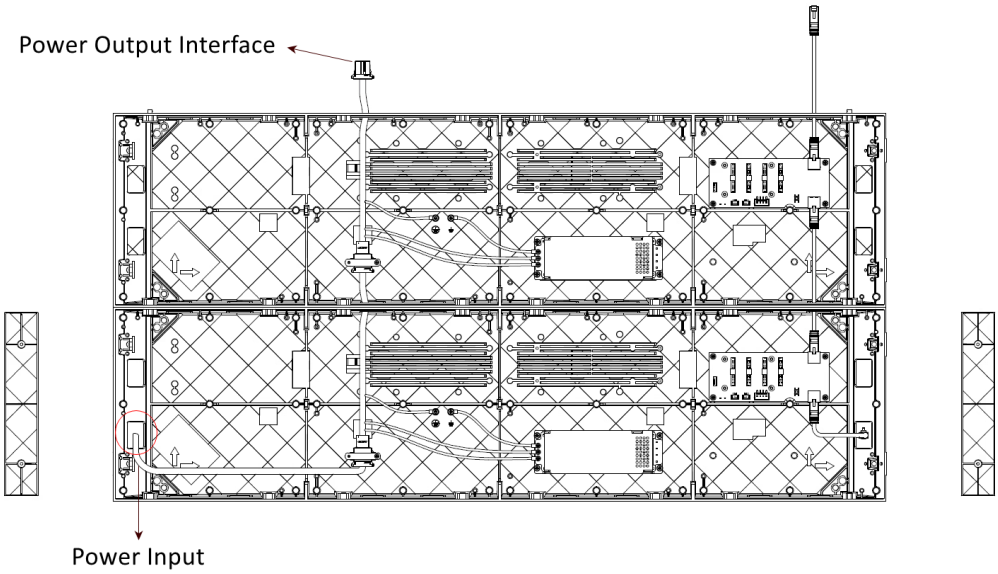


Figure 3-26 Connect the Power Cord Externally (Front View)

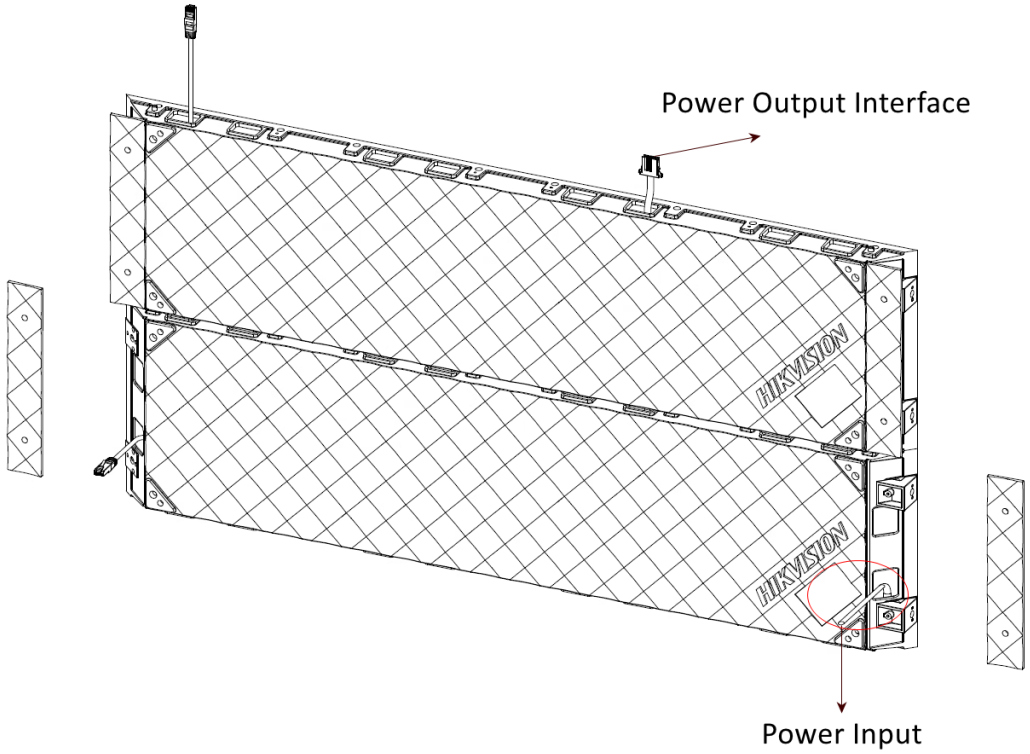


Figure 3-27 Connect the Power Cord Externally (Rear View)

Take 3 × 3 P2.6 cabinets (7 cabinets within the max. load of the power cord, the remaining 2 cabinets beyond the max. load of the power cord) for example. The P2.6 cabinet dimension is 1000 mm × 250 mm × 50 mm.

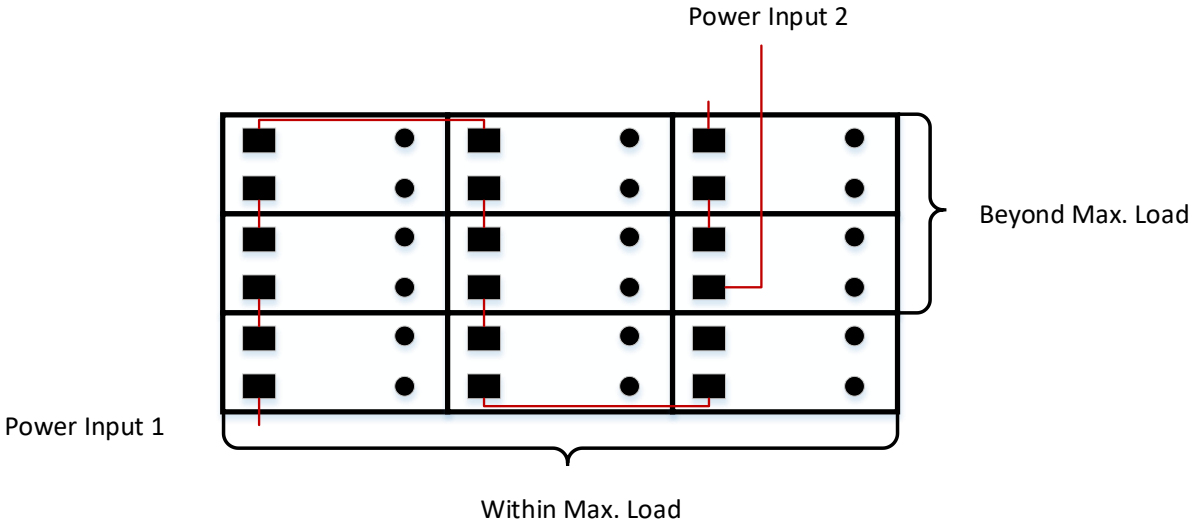


Figure 3-28 Power Cords Connection Diagram

3.3.2 Connect the Network Cables

Each cabinet is equipped with a network input interface and a network output interface internally. The internal network cables can be connected in cascade in each row, and the external network cables for sending card connections are needed according to the load capacity of the network interfaces of the sending card.

Internal Network Cable Connection

Step 1 Pass one end of the network cable through the wiring hole of cabinet, and insert it into one network interface.

Step 2 Insert the other end of the network cable into the network interface of the adjacent cabinet.

Step 3 Repeat the above steps to complete the longitudinal cascade connection of the network cables in the remaining cabinets.

External Network Cable Connection

Step 1 Refer to the steps of connecting a network cable internally to complete the network cable connection within the max. load.

Step 2 Connect a network cable from the wiring hole externally to the network interface of the first row of the cabinet that beyond the max. load.

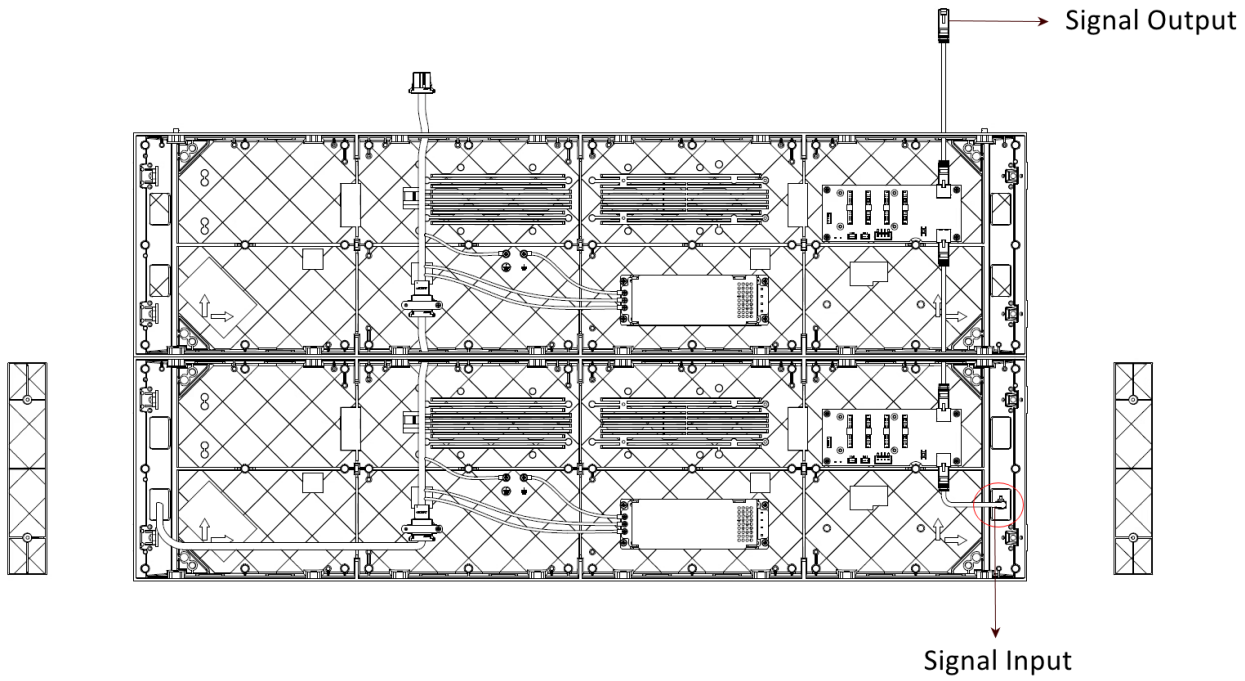


Figure 3-29 Connect the Network Cable Externally (Front View)

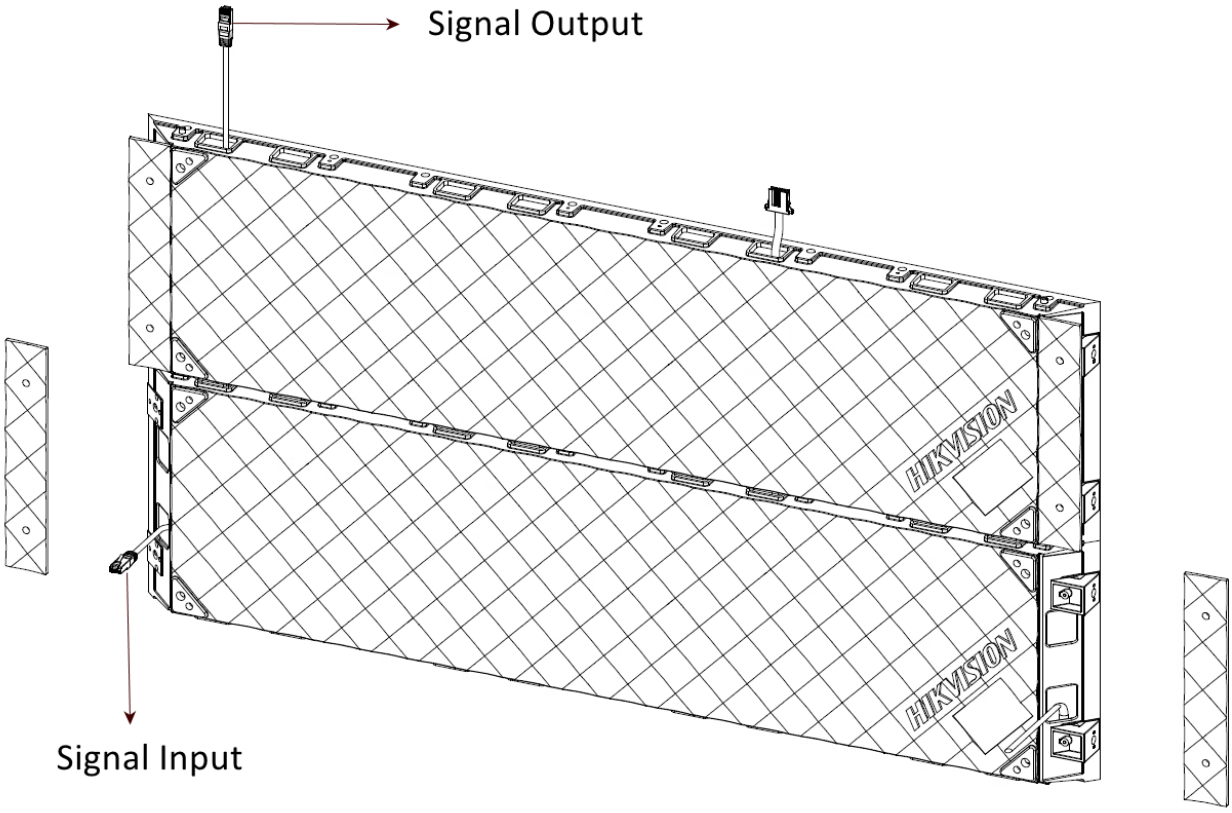


Figure 3-30 Connect the Network Cable Externally (Rear View)

Note

The figures shown above are for reference only. The actual connection can be flexibly adjusted according to your needs, so long as each single network interface is not overloaded.

Take 5 × 4 P2.6 cabinets (17 cabinets within the max. load of the power cord, the remaining 3 cabinets beyond the max. load of the power cord) for example. The overloaded cabinets are connected to the second network interface of sending card. The P2.6 cabinet dimension is 1000 mm × 250 mm × 50 mm.

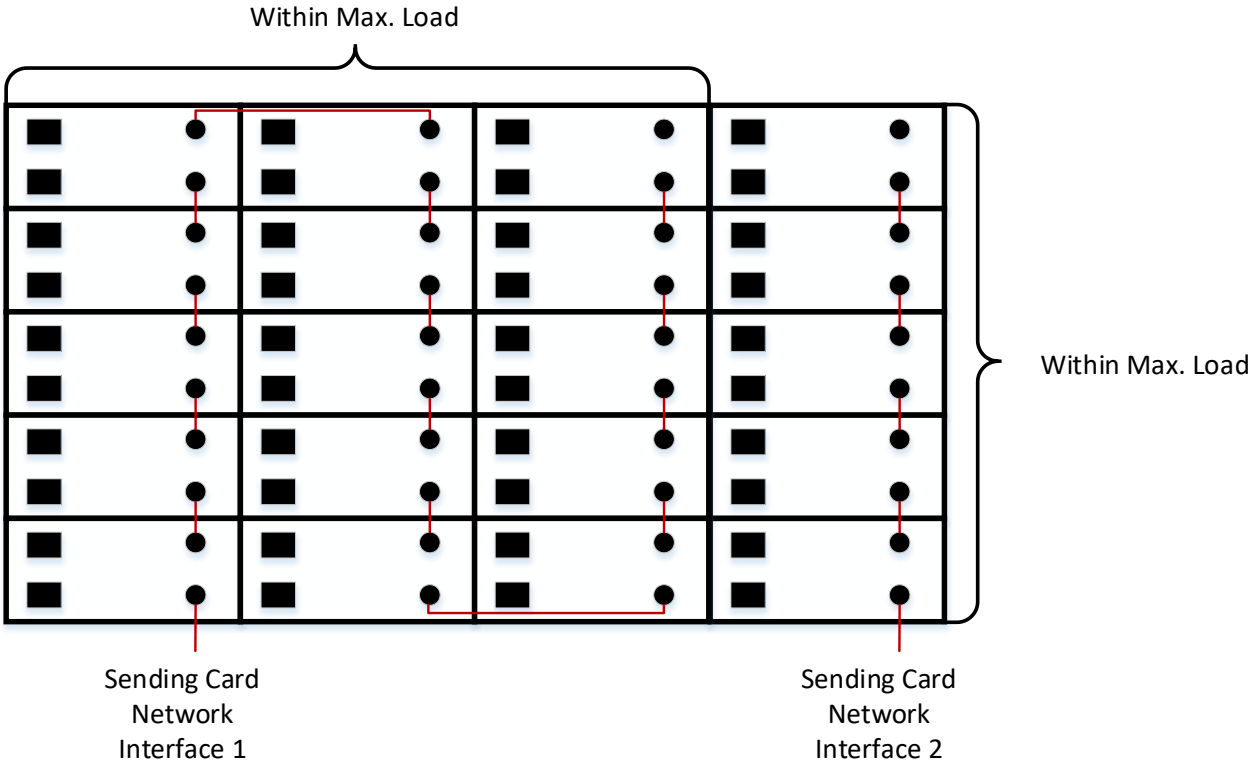


Figure 3-31 Network Cables Connection Diagram

3.4 Install the Lamp Board

The number of lamp boards on each cabinet depends on the cabinet dimension. The actual device prevails.

The lamp board is fixed on the cabinet frame by magnetic attraction. Take a cabinet with the dimension of 1000 mm × 250 mm × 50 mm as an example to introduce the installation of the lamp board.

Step 1 According to the arrow direction on the back of the lamp board, put the lamp board to the corresponding position of the cabinet frame, and initially align the lamp board with the edge of the cabinet frame.

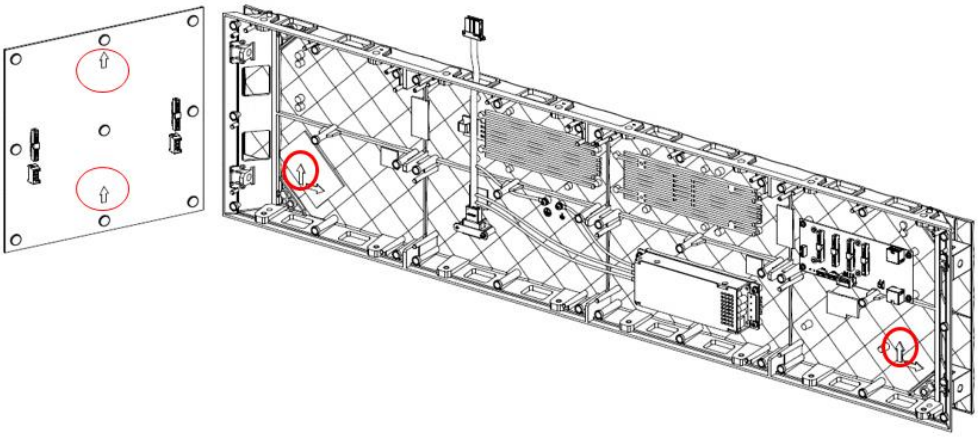


Figure 3-32 Lamp Board Installation Direction

Step 2 One end of the signal cables is already connected to the slot on the back board when it is shipped, insert the other end of the signal cables into the slot on the back of the lamp board.

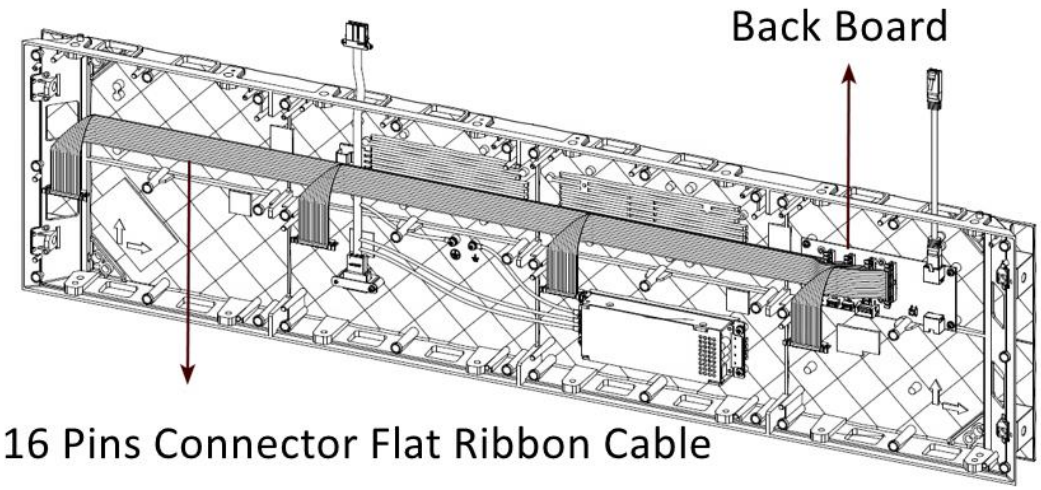


Figure 3-33 Default Status of Cabinet

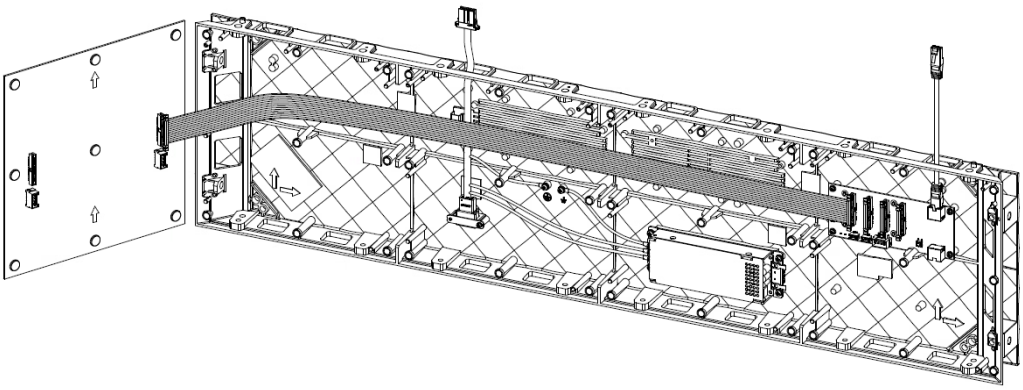


Figure 3-34 Connect the Lamp Board

Step 3 Align and adsorb one side of the lamp board with one side of the cabinet frame, align and adsorb the magnet sheet on the back of the lamp board with the magnet screw on the cabinet frame, and slowly attach the remaining three sides of the lamp board.

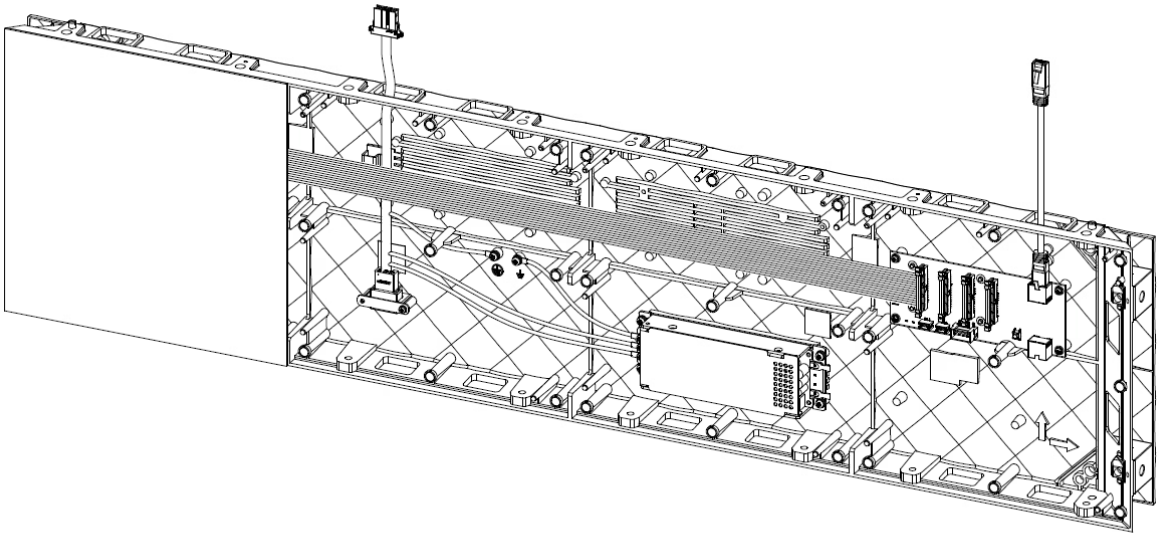


Figure 3-35 Install the First Lamp Board

Step 4 Repeat the above steps to install the remaining lamp boards.

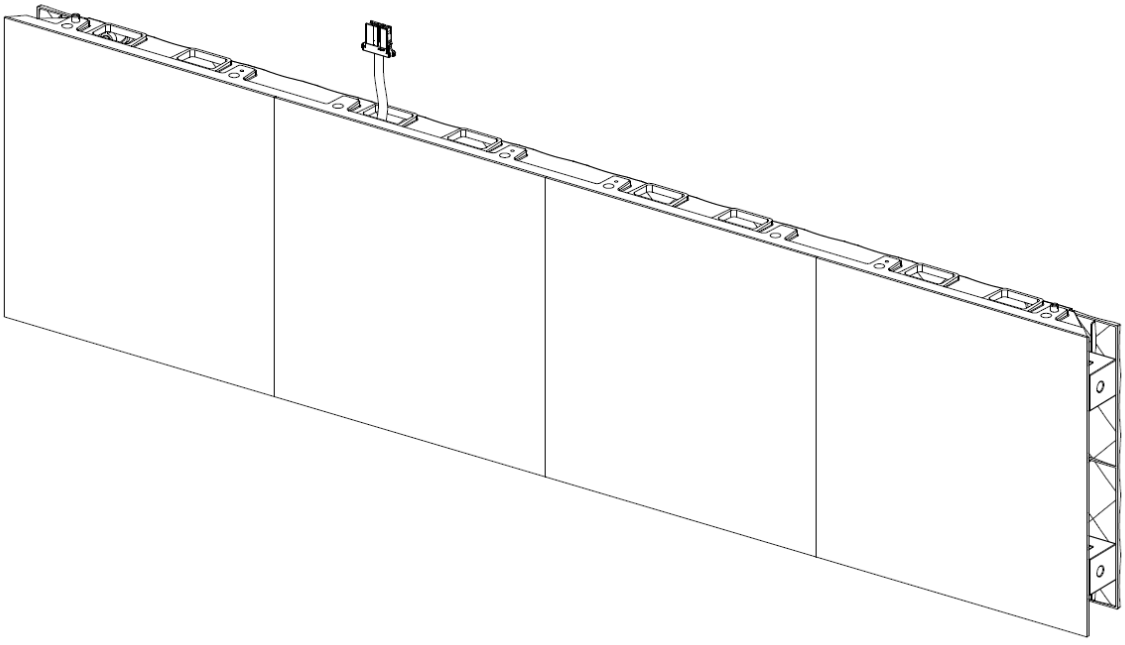


Figure 3-36 Install the Remaining Lamp Boards

When rotating and stitching the lamp board, ensure that the installation direction of lamp board is aligned with the placement direction of cabinet.

Step 1 According to the arrow direction on the back of the lamp board, put the lamp board to the corresponding position of the cabinet frame, and initially align the lamp board with the edge of the cabinet frame.

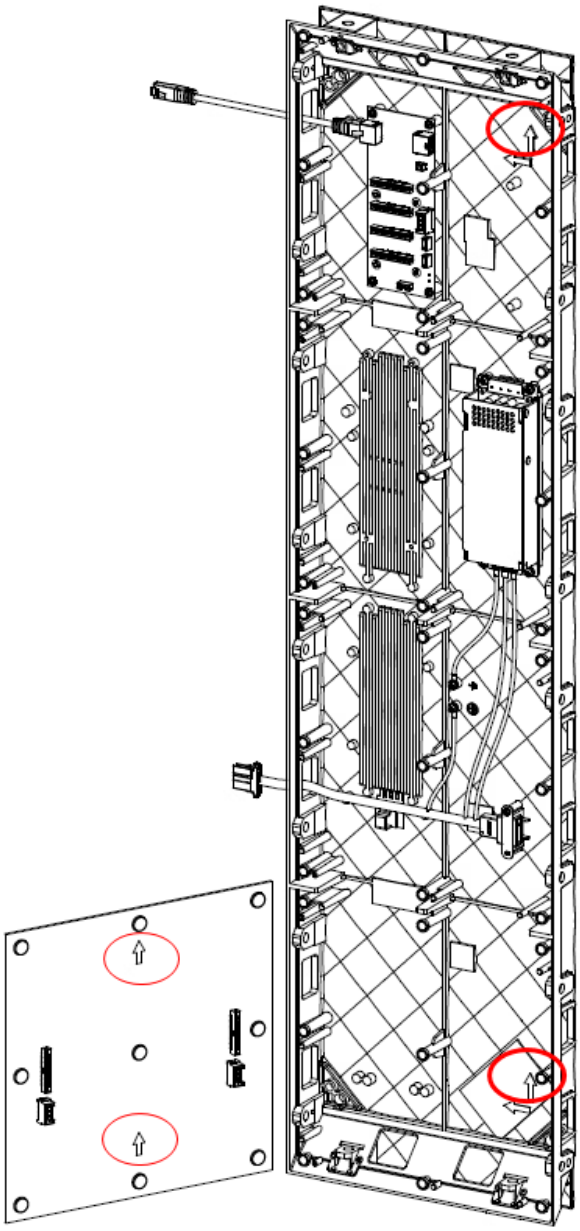


Figure 3-37 Installation Direction of Lamp Board

Step 2 One end of the signal cables is already connected to the slot on the back board when it is shipped, insert the other end of the signal cables into the slot on the back of the lamp board.

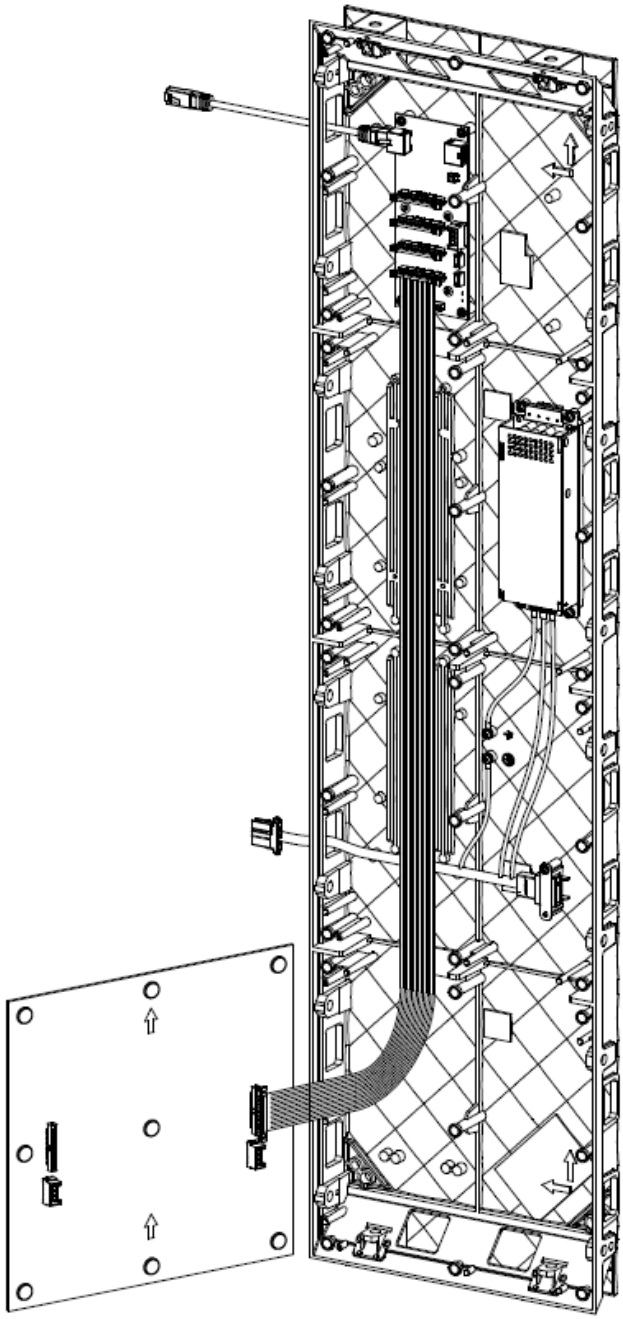


Figure 3-38 Connect the Lamp Board

Step 3 Align and adsorb one side of the lamp board with one side of the cabinet frame, align and adsorb the magnet sheet on the back of the lamp board with the magnet screw on the cabinet frame, and slowly attach the remaining three sides of the lamp board.

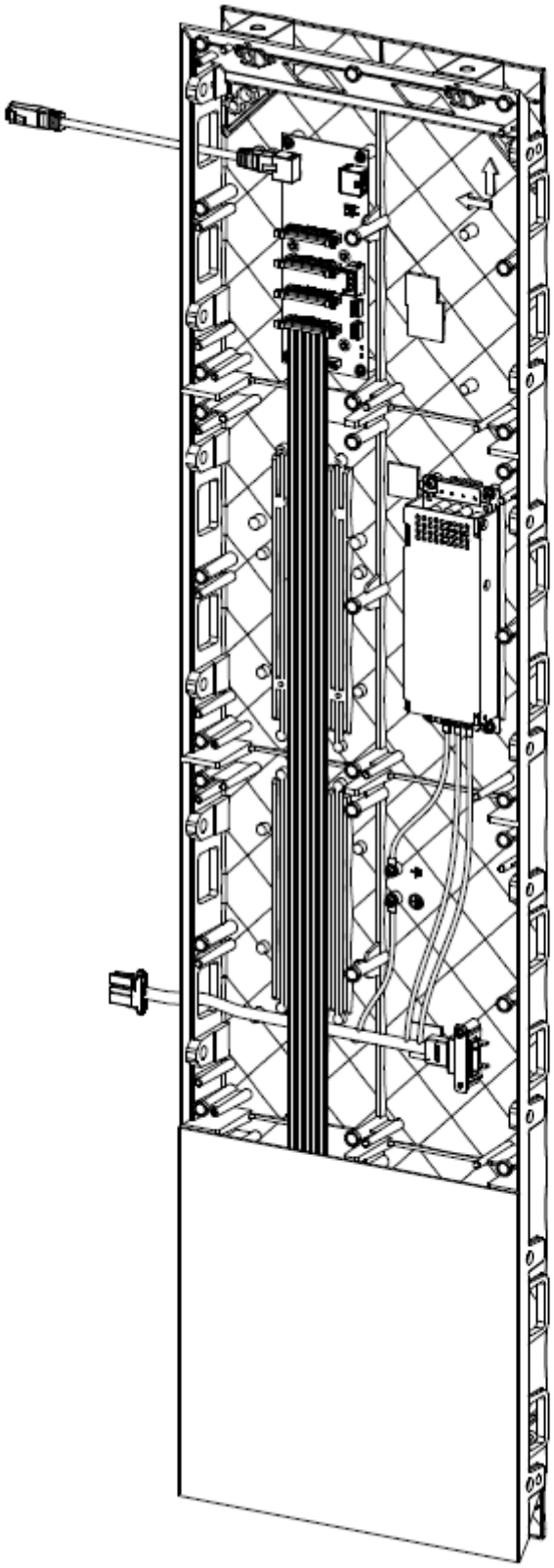


Figure 3-39 Install the First Lamp Board

Step 4 Repeat the above steps to install the remaining lamp boards.

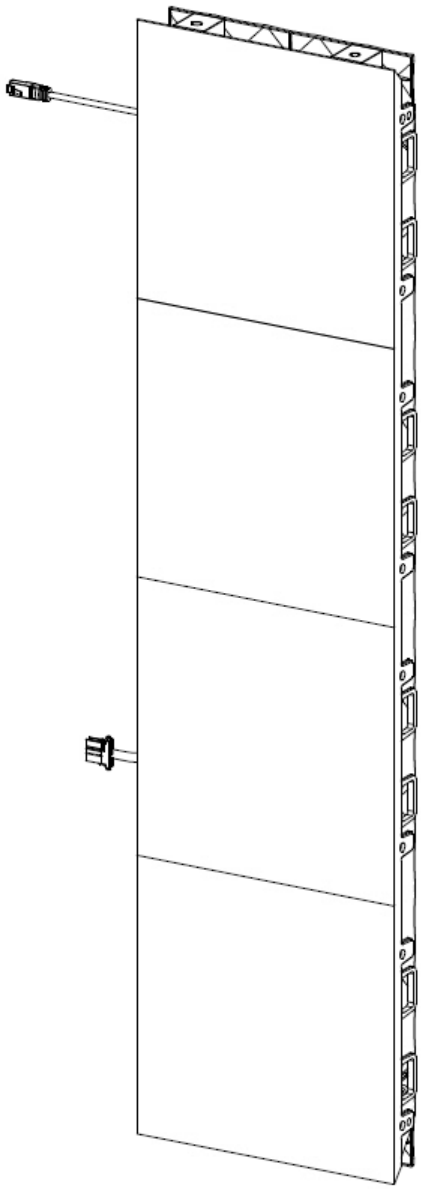


Figure 3-40 Install the Remaining Lamp Boards

Use flexible ribbon cables to connect lamp boards to the receiving card slots marked with the same sequence numbers from right to left or from top to bottom. The connection relationship between lamp boards and the receiving card slots is shown in the following figure.

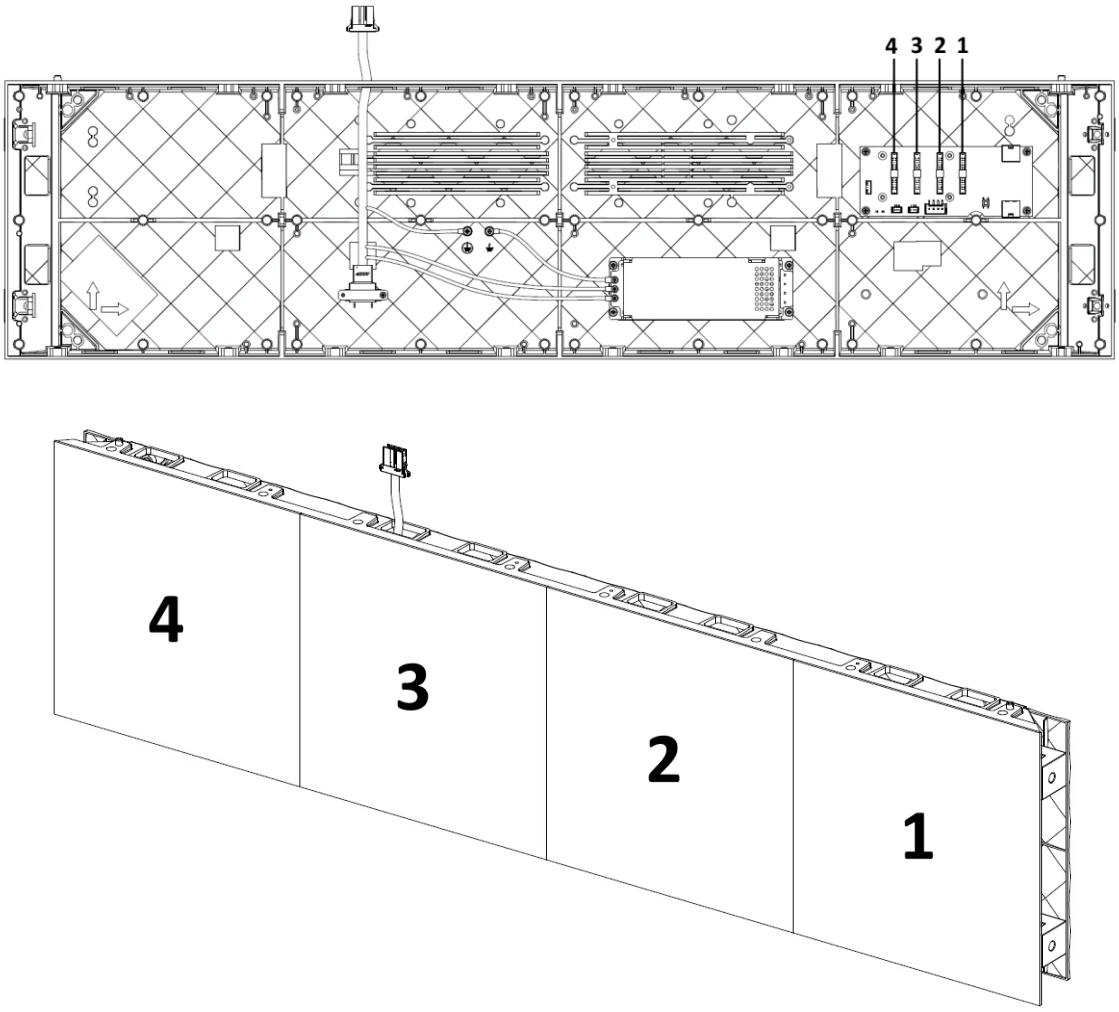


Figure 3-41 Cabinet 1 (1000 mm × 250 mm × 50 mm)

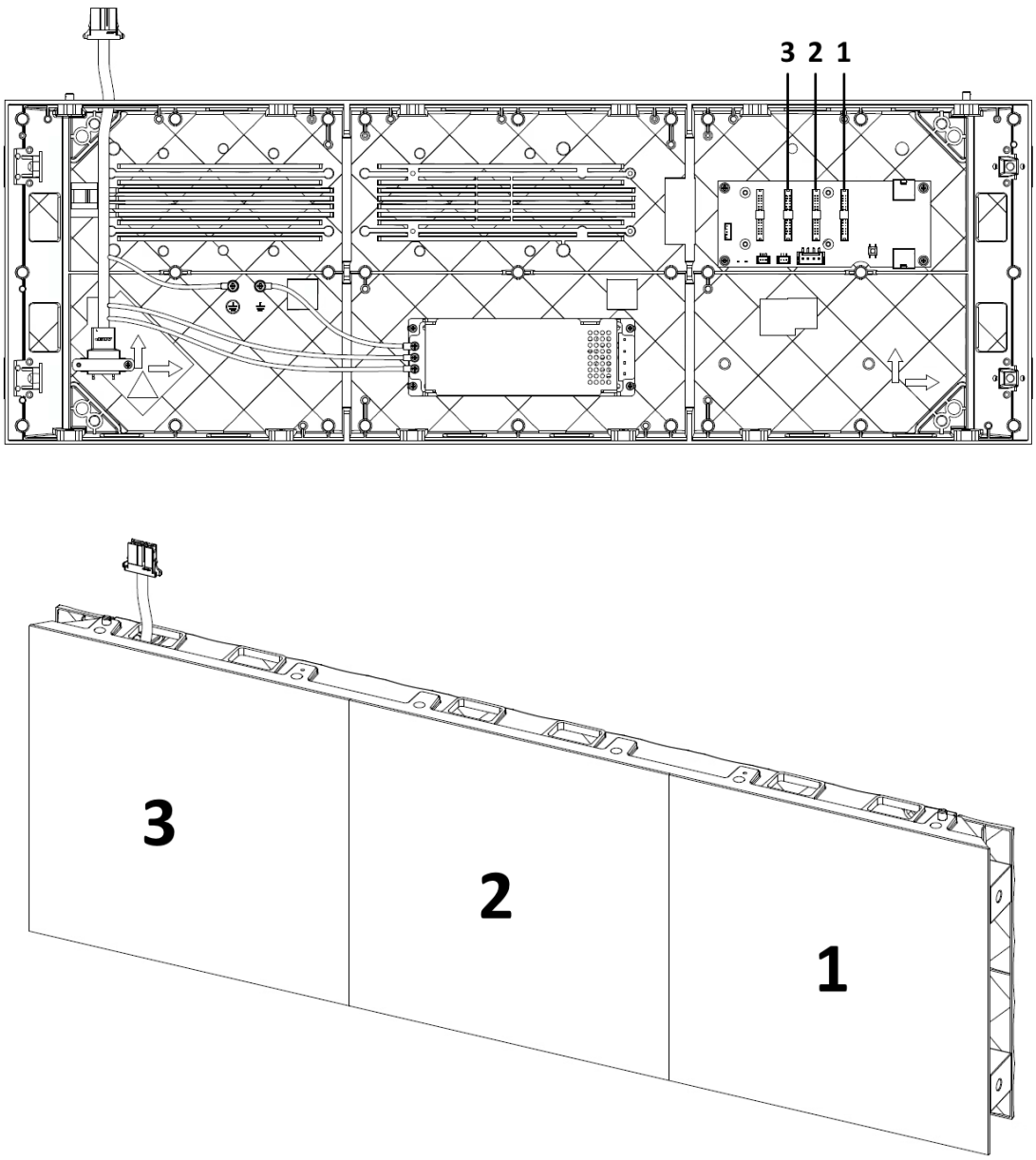


Figure 3-42 Cabinet 2 (750 mm × 250 mm × 50 mm)

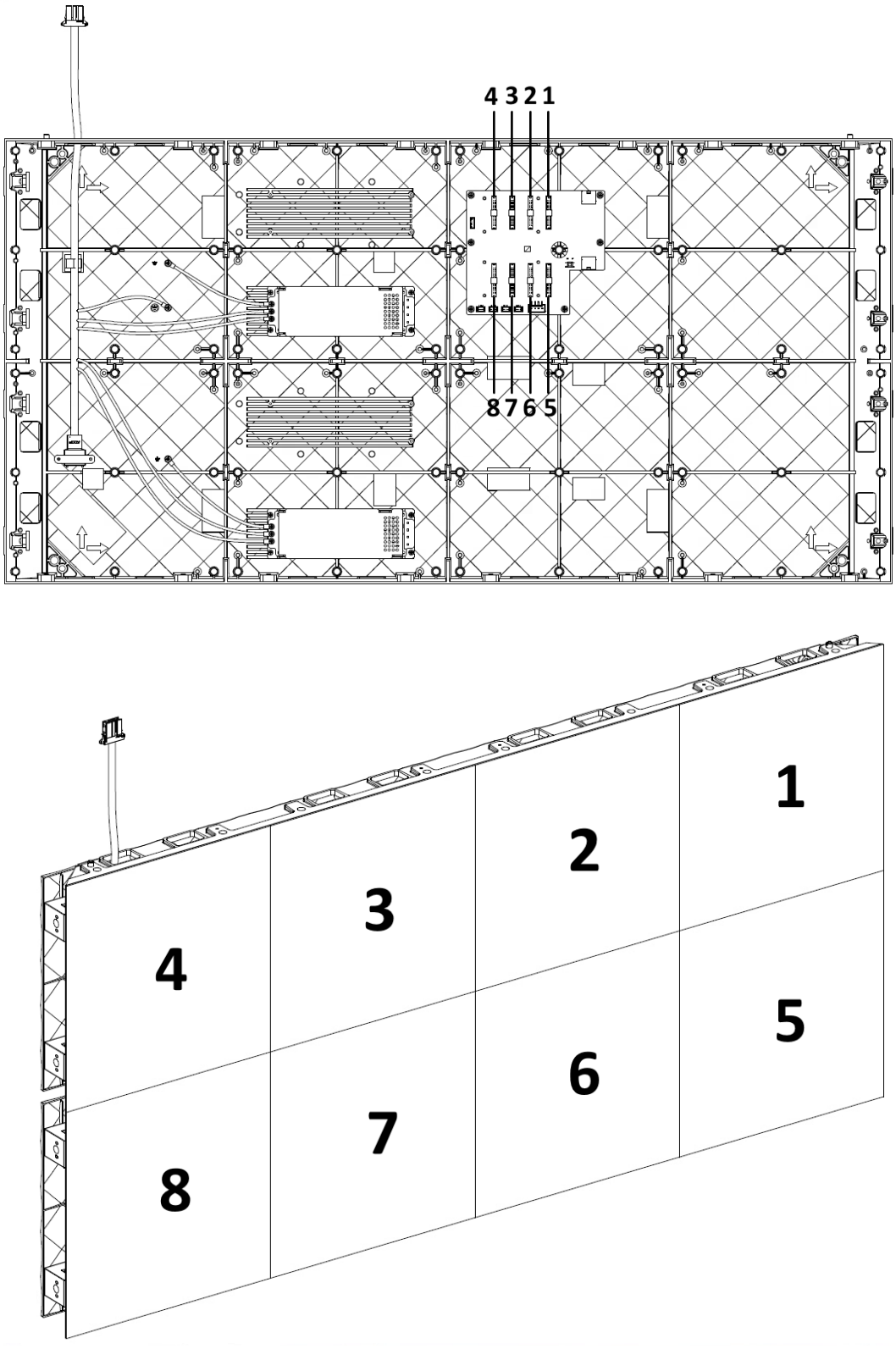


Figure 3-43 Cabinet 3 (1000 mm × 500 mm × 50 mm)

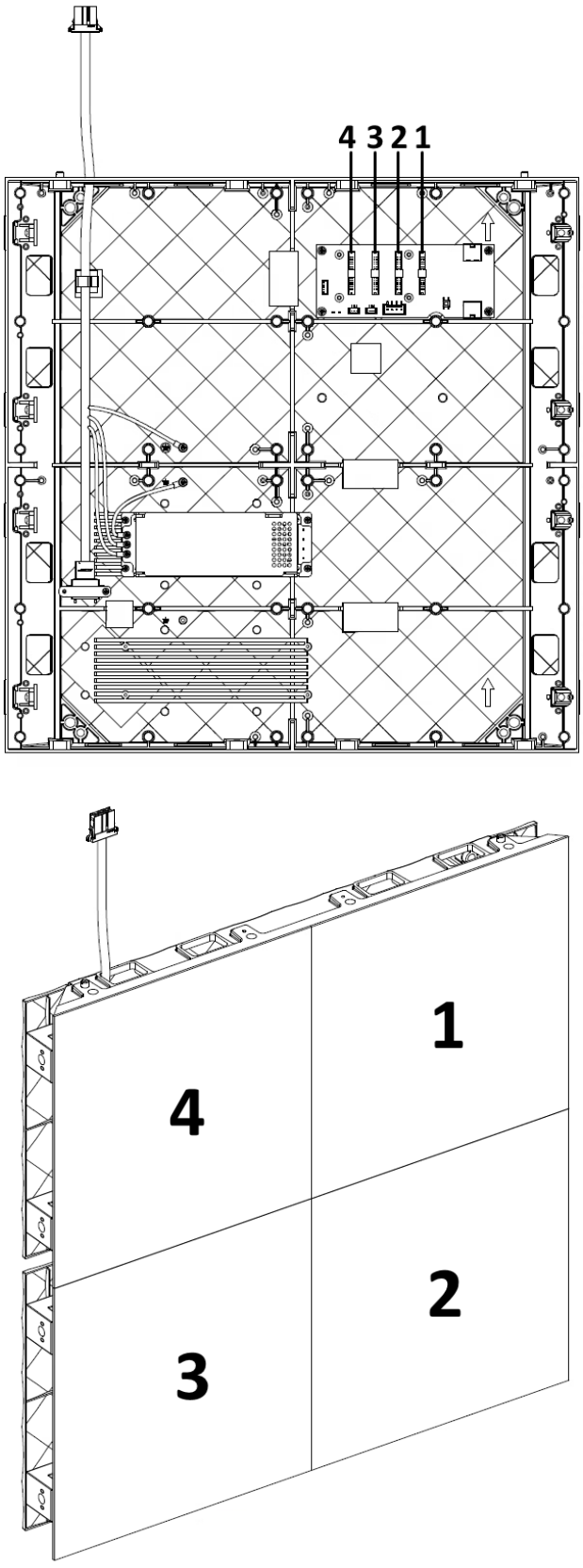


Figure 3-44 Cabinet 4 (500 mm × 500 mm × 50 mm)

3.5 Maintain the Cabinet

3.5.1 Maintain the Lamp Board

You can maintain the lamp board from the front side.

Front Maintenance

Before You Start

Switch off the external power supply before you maintain the lamp board.

Step 1 Use a LED vacuum pump to remove the first lamp board.

Step 2 Remove the signal cables attached to the slots on the back of the lamp board for maintenance.

Step 3 After the maintenance, assemble the lamp board back according to the direction of the arrow on the back of the lamp board. Align and absorb one side of the lamp board with one side of the cabinet frame, and insert the cable plugs into the slot on the back of the lamp board.

Step 4 Align and absorb the magnet sheets on the back of the lamp board with the magnet screws on the cabinet frame, and slowly attach the remaining three sides of the lamp board.

3.5.2 Maintain the Power Supply

You can maintain the power supply from the front side.

Front Maintenance

Before You Start

Switch off the external power supply before you maintain the power supply.

Step 1 Disassemble the lamp boards. More details see 3.5.1 Maintain the Lamp Board.

Step 2 Disconnect the power output interface from the upper power connector.

Step 3 Unscrew the screws around the power supply and on the three power cords to remove the power supply for maintenance.

Step 4 After the maintenance, assemble the power supply back to the cabinet and connect the power cords in order according to the original sequence. Tighten the screws.

Step 5 Connect the power output interface to the upper-level power connector.

Step 6 Connect the signal cables to the slot on the back of the lamp board and assemble the board back.

Step 7 Turn on the power supply and observe whether the power indicator is normal.

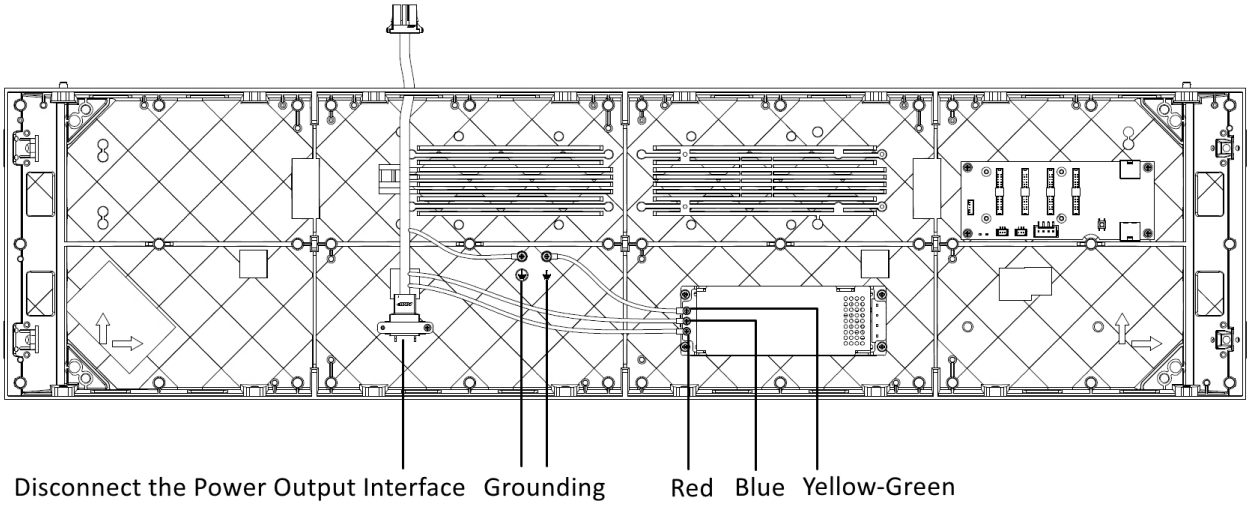


Figure 3-45 Maintain the Power Supply

3.5.3 Maintain the Receiving Card

Before You Start

Switch off the external power supply before you maintain the receiving card.

Step 1 Disassemble the lamp boards. More details see 3.5.1 Maintain the Lamp Board.

Step 2 Unscrew the screws around the back board and remove the back board. Disassemble the receiving card on the back board for maintenance.

Step 3 After the maintenance, use signal cables to connect the receiving card with the back board. Pay attention to the direction of the receiving card.

Step 4 (Optional) If the thermal pad is removed together with the receiving card, stick the thermal pad back after completing the receiving card maintenance.

Step 5 Tighten the screws to fasten the back board to the cabinet.

Step 6 Connect the power output interface to the upper-level power connector.

Step 7 Connect the signal cables to the slot on the back of the lamp board and assemble the board back.

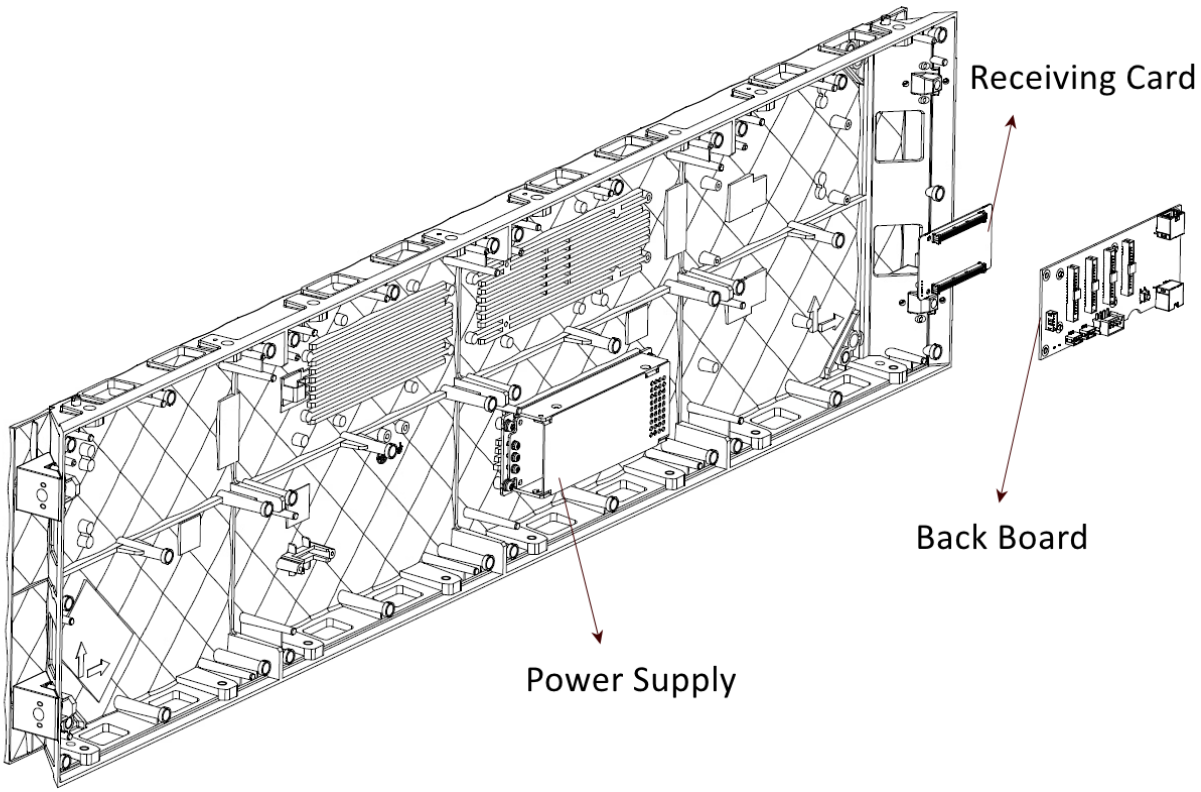


Figure 3-46 Maintain the Receiving Card

Chapter 4 Software Debugging

The device supports configuration on the client of LED display unit. For more details about the installation and configuration process, scan the QR code to get the installation guide.

Figure 4-1 User Manual of the LED Batch Controller

Chapter 5 Package Information

5.1 Packing List

The accessories in the package are listed in the following table.

Table 5-1 Packing List

Accessory	Amount
Cabinet	1
Lamp Bead	10
Driver IC	Several
Regulatory Compliance and Safety Information	1
Iron Joint Sheet	4
M6 Screw	Several

5.2 Package

5.2.1 Package Dimension

Package dimensions are listed in the following table.

Table 5-2 Package Dimension

Cabinet Dimension	Package Dimension	Package Form
1000 mm (W) × 250 mm (H) × 50 mm (D)	1180 mm × 136 mm × 330 mm	1 Cabinet in 1 Carton Box
	1237 mm × 1041 mm × 652 mm	10 Cabinet in 1 Carton Box
750 mm (W) × 250 mm (H) × 50 mm (D)	876 mm × 136 mm × 330 mm	1 Cabinet in 1 Carton Box
	915 mm × 1041 mm × 705 mm	10 Cabinet in 1 Carton Box
500 mm (W) × 500 mm (H) × 50 mm (D)	876 mm × 136 mm × 330 mm	1 Cabinet in 1 Carton Box
	1237 mm × 1041 mm × 652 mm	10 Cabinet in 1 Carton Box
1000 mm (W) × 500 mm (H) × 50 mm (D)	1180 mm × 136 mm × 605 mm	1 Cabinet in 1 Carton Box
	1237 mm × 1041 mm × 652 mm	5 Cabinet in 1 Carton Box

Figure 5-1 Lie a Wooden Pallet

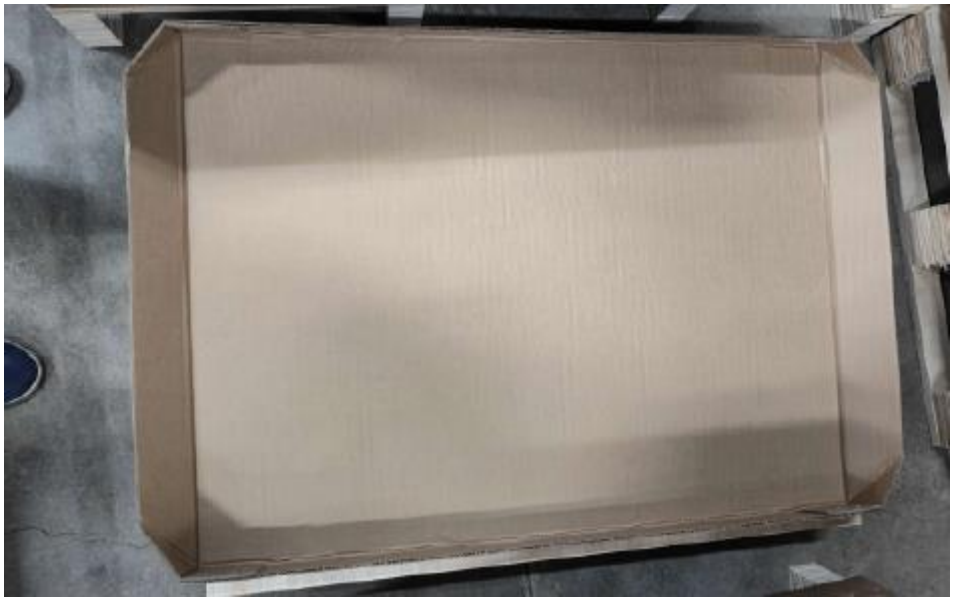


Figure 5-2 Put a Carton Box on the Pallet

Figure 5-3 Put Two Cabinets in the Carton Box

Figure 5-4 Put Ten Cabinets in the Carton Box

Chapter 6 Warranty Policy

6.1 Warranty Scope

This warranty policy applies to LED display products (hereinafter referred to as “Products”) purchased directly from Hangzhou Hikvision Digital Technology Co., Ltd. (hereinafter referred to as “Hikvision”) or Hikvision’s overseas channel partners and OEM and within the warranty period. Any product not purchased directly from Hikvision does not apply to this warranty policy.

6.2 Warranty Period

The warranty period shall be in accordance with the specific sales contract. Please make sure the warranty card or other valid warranty documents are in safekeeping. The warranty period starts from the shipment date of the product and is determined by its serial number.

6.3 Warranty Service

Products shall be installed and used strictly in comply with the installation instructions and cautions are stated in the product manual. If products have defects in quality, materials, and manufacture during normal use, Hikvision will provide warranty service for products under this warranty policy.

6.4 Warranty Service Types

6.4.1 Free and Remote Technical Support Service

Remote technical support service is provided through instant message tools such as telephone, mail, and other means to solve simple and common technical problems. This service is applicable for technical problems including but not limited to the connection of signal cables and power cable, system problems of software use and parameter settings, and replacement of the module, power supply, PCB board, etc.

6.4.2 Return to RMA Center for Repair Service

1) For problems that can not be solved by online remote service, Hikvison’s engineer will confirm with the customers whether to provide service by returning the product to the RMA center.
2) If RMA center repair service is needed, the customer shall bear the freight, insurance, tariff, and customs clearance for return delivery of the returned products or parts to Hikvision’s RMA center. Hikvision will send back the repaired products or parts to the customer and only bear one-way freight.
3) Hikvision will reject unauthorized return delivery via pay upon arrival and will not be liable for any tariffs and customs clearance fees. Hikvision shall not be held liable for any defects,

damages, or losses of the repaired products or parts due to transportation or improper packaging. (The customer can ask for the right empty package box from Hikvision's RMA center).

6.4.3 Repair Service Scope

- Repair dead lamp
- Replace driver IC chip
- Repair the solder pad

6.4.4 Repair Time

Within 7 working days after receiving the product from the RMA center.

6.4.5 Return Visit

Make phone interviews from time to time to learn the actual screen situation.

6.4.6 Repair Conditions

We recommend:

1) When the screen has over 0.3‰ of dead lamps, you can ask for the repair (Take 1080P LED display as an example, repair service is available when the number of dead lamps is over 60.)
   Dead lamp rate: Proportion of dead lamps after installation and maintenance.
2) PCB failure, power module failure, or physical damage to the lamp board. (The number of failures is more than the spare parts.)

6.5 Disclaimer

No warranty liability shall be bared by Hikvision for defects or damages due to the following conditions:

1. Unless written agreed otherwise, this Warranty Policy does not apply to consumables, including but not limited to connectors, networks, fiber optic cables, cables, power cables, signal cables, aviation connectors, and other wires and connections.
2. Defects, malfunctions, or damages caused by improper use, improper handling, improper operation, improper installation/disassembly of the display, or any other customer misconduct. Defects, malfunctions, or damages caused during transportation.
3. Unauthorized disassembly or repair without permission of Hikvision.
4. Improper use or maintenance without the guidance of the product manual.
5. Manmade damages, physical damages, accident damages, and product misuse, such as component defect damage, PCB board defect, etc.
6. Product damage or malfunction caused by Force Majeure Events, including but not limited to war, terrorist activities, floods, fires, earthquakes, lightning, etc.

7. The product shall be stored in a dry, ventilated environment. Any product defects, malfunctions, or damages caused by storage in an external environment that does not comply with the product manual, including but not limited to extreme weather, humidity, salt haze, pressure, lightning, sealed environment, compressed space storage, etc.
8. Products used in conditions not meeting product parameters include, but not limited to lower or higher voltage, extreme or excessive power surges, and improper power conditions.
9. Defects, malfunctions, or damages caused by non-compliance with technical guidelines, instructions, or precautions during the installation.
10. Natural loss of brightness and color under normal conditions. Normal degradation in the performance of the Product, normal wear and tear.
11. Lack of necessary maintenance.
12. Other repairs not caused by product quality, design, and manufacturing.
13. Valid warranty documents cannot be provided. The product serial number is torn or damaged. The product shell or other external parts are damaged.
14. Repairs after warranty period.
15. Products that have too significant damages caused by mishandling, accidents, improper maintenance, and failure to comply with the product manual to be prepared.
16. Product malfunctions caused by unmatched play or control devices that are not provided by Hikvision. If Products are damaged arising out of the aforementioned unmatched devices and require Hikvision’s repair, the charging rate shall be as Hikvsion`s request.
17. If the products are out of the warranty period and the customer still wants to have repair service, the customer shall bear the two-way freight, insurance, tariff, and customs clearance for return delivery of the returned products or parts to Hikvision’s RMA center, and also bear the maintenance cost.

6.6 Process for Warranty Service

6.6.1 Remote Service Process

Submit service requirements through the website, email, telephone, and other service channels of Hikvision with the contract number. Specific content of the service and contact information shall be provided.

6.6.2 Process of Returning to RMA Center

Submit service requirements through the website, email, telephone, and other service channels of Hikvision with warranty card or contract number. A packing list of the returned product and postal information to receive the repaired product shall be provided.

Hikvision’s postal information is stipulated on Hikvision`s website.

Customer instructions:

1) Shall provide a brief fault report. The report can be attached to the surface of the repaired item.
2) Shall provide packing list, including contract number, model, and quantity of the repaired item.
3) Shall provide receipt postal information, including company name, address, consignee, contact information, etc.
4) Shall provide required repair parts and repair materials. For example, if the lamp bead is damaged, send the lamp board and replacement lamp bead together. All LED spare parts of board and lamp beads are included with the order.
5) To avoid causing damages to the returned products during transportation, please be cautious about the package and protection of the products. Hikvision is not responsible for any damages to the returned products or parts during delivery.

6.7 General Terms

This warranty policy is a standard application of Hikvision. No other third party (including any agent, distributor, or sales representative) is authorized to make any representations or warranties that are different from this warranty policy. Unless otherwise confirmed by Hikvision in written forms of contract or other documents, any warranty clauses that conflict with this warranty policy shall be deemed to be automatically invalid. The final power of interpretation of this warranty policy shall be vested in Hikvision.

In the event of any conflict between this Warranty Policy and Hikvision RMA Policy V5.0, the Hikvision RMA Policy V5.0 shall prevail.

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