

Full-Color LED Splicing Display Unit

Installation Guide

Legal Information

©2022 Hangzhou Hikvision Digital Technology Co., Ltd. All rights reserved.

About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website

(https://www.hikvision.com/).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

Trademarks

HIKVISION and other Hikvision's trademarks and logos are the properties of Hikvision in various jurisdictions.

Other trademarks and logos mentioned are the properties of their respective owners.

H⊇III[™]: The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI

Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

Disclaimer

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS MANUAL AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. THE USE OF THE PRODUCT BY YOU IS AT YOUR OWN RISK. IN NO EVENT WILL HIKVISION BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA, CORRUPTION OF SYSTEMS, OR LOSS OF DOCUMENTATION, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, IN CONNECTION WITH THE USE OF THE PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSS.

YOU ACKNOWLEDGE THAT THE NATURE OF THE INTERNET PROVIDES FOR INHERENT SECURITY RISKS, AND HIKVISION SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER-ATTACK, HACKER ATTACK, VIRUS INFECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKVISION WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW. ESPECIALLY, YOU ARE RESPONSIBLE, FOR USING THIS PRODUCT IN A MANNER THAT DOES NOT INFRINGE ON THE RIGHTS OF THIRD PARTIES, INCLUDING WITHOUT LIMITATION, RIGHTS OF PUBLICITY, INTELLECTUAL PROPERTY RIGHTS, OR DATA PROTECTION AND OTHER PRIVACY RIGHTS. YOU SHALL NOT USE THIS PRODUCT FOR ANY PROHIBITED END-USES, INCLUDING THE DEVELOPMENT OR PRODUCTION OF WEAPONS OF MASS DESTRUCTION, THE DEVELOPMENT OR PRODUCTION OF CHEMICAL OR BIOLOGICAL WEAPONS, ANY ACTIVITIES IN THE CONTEXT RELATED TO ANY NUCLEAR EXPLOSIVE OR UNSAFE NUCLEAR FUEL-CYCLE, OR IN SUPPORT OF HUMAN RIGHTS ABUSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATTER PREVAILS.

Symbol Conventions

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

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

Safety Instruction

For safety concerns, the device has been strictly tested before shipment. However, incorrect installation or usage may lead to hazardous results such as electric shock and fire. To ensure the service life and best performance of the device, please read the notice and plate signs carefully and follow the safety instructions. Keep this guide properly for later use.

<u>/</u>Caution

- To ensure safety, the installation parts and the wall should support four times the weight of the device.
- 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.
- Please set the brightness of the LED display within 500 nits to avoid power overload.
- The device may generate radio interference in indoor environment. Necessary precautions may be required.
- To reduce the risk of fire or electric shock, please do not expose the device to rain or humid environment.
- 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 the correct wire sequence of the terminals connected to the AC power supply.
- Do not place anything containing liquid on the device to avoid the risk of fire or electric shock caused by liquid-splashing.
- 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.

• 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.



Warning

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Disconnect the power plug before maintenance.
- Make sure the power supply is well-grounded.
- The protective grounding of the device should be reliably connected to the building protective grounding.
- 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.
- A disconnecting device should be provided on the outside of the equipment. 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 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.
- Please strictly follow the installation method in this guide.
- The external wire connection between device and hazardous electronic terminals should be operated by professionals.
- This is a class A product and may cause radio interference in which case the user may be required to take adequate measures.
- The socket-outlet shall be installed near the device and easily accessible.
- This equipment is not suitable for use in locations where children are likely to be present.
- This product can work normally only at the altitude below 5000 meters.

- 1. Do not ingest battery. Chemical Burn Hazard!
- 2. This product contains a coin/button cell battery. If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- 3. Keep new and used batteries away from children.
- 4. If the battery compartment does not close securely, stop using the product and keep it away from children.
- 5. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
- 6. CAUTION: Risk of explosion if the battery is replaced by an incorrect type.
- 7. Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- 8. Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- 9. Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- 10. Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- 11. Dispose of used batteries according to the instructions.

Contents

Chapter 1 Product Introduction1
1.1 Overview
1.2 Product Components1
Chapter 2 Rack Installation2
2.1 About Rack2
2.2 Install the Rack2
2.2.1 Precautions
2.2.2 Install the Wall-Mounted Rack2
2.2.3 Install the Ultrathin Rack 10
2.2.4 Install the All-in-One Rack 24
Chapter 3 Cabinet Installation43
3.1 Introduction
3.2 Install the Cabinets43
3.2.1 Precautions
3.2.2 Stitch Cabinet Frames43
3.2.3 Wiring
3.2.4 Install Lamp Boards on the Cabinets 54
Chapter 4 Software Debugging57
4.1 Activation
4.2 Login
4.3 Configure Signal Cables
4.4 Configure Screen Splicing60
Chapter 5 Installation Guide QR Code

Chapter 1 Product Introduction

1.1 Overview

The full-color LED splicing display unit adopts thin and die-casting cabinet design. The four cabinets can be spliced into a 2K standard resolution display quickly. The large cabinet design can not only reduce the spliced seams and installation difficulty, but also make the display surface flatter. The device simulates the display application mode with embedded and integrated control system, making it easy to debug. The input signal can be displayed instantly after the corresponding input signal is connected. The remote controller can control the device conveniently. The humanized user interface makes it easy to operate. The device is widely applicable to the medium and small-sized splicing video wall scenes including monitoring centers, seminar rooms, commercial chains places, government and enterprise exhibition halls, 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.

The product are rack-mount system. Its installation process consists rack installation and cabinet installation. The following two chapters describe how to install the rack and cabinets 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 both front-maintenance cabinets and back-maintenance cabinets. Different rack models are applied to different project scales and installation environment. Thus, the illustrations of racks 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 height.
- 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

Steps

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

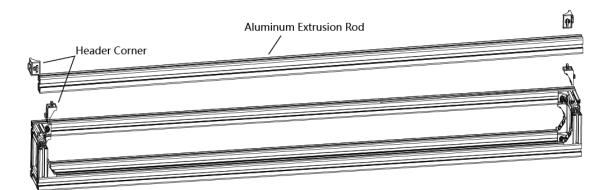


Figure 2-1 Assemble the Base Frame



Figure 2-2 Base Frame Assembled

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

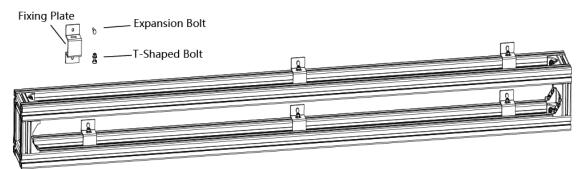


Figure 2-3 Fix the Base Frame onto the Wall

Install the Rack Frame

Steps

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

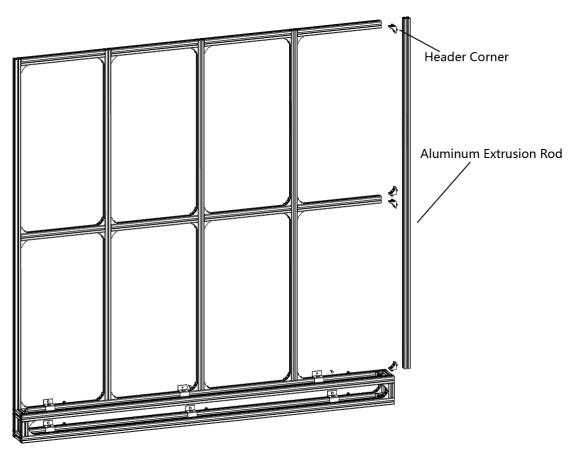


Figure 2-4 Assemble the Rack Frame

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

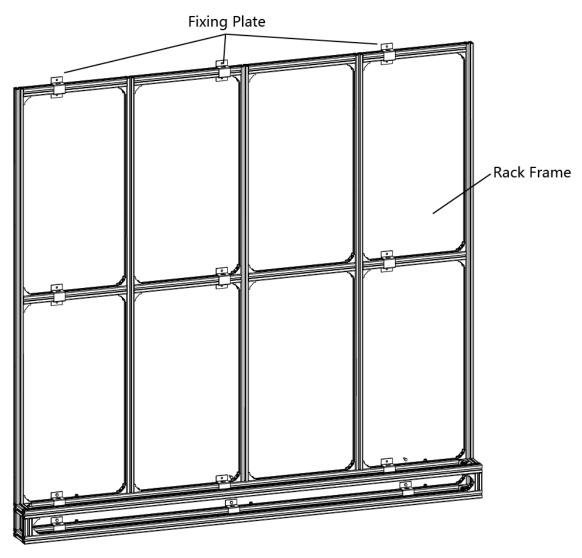


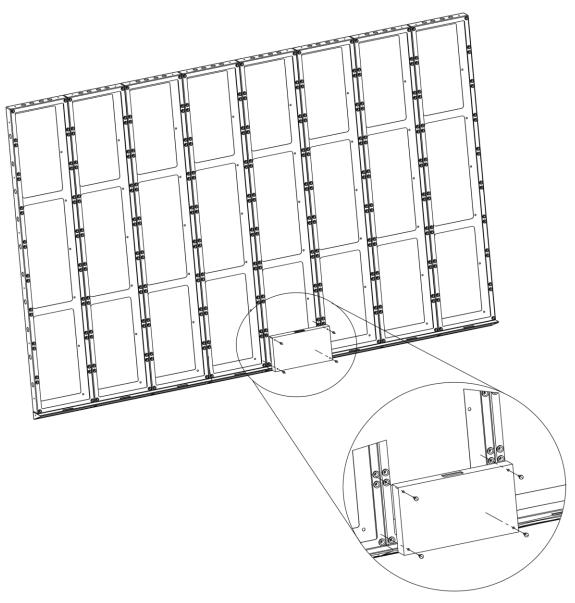
Figure 2-5 Fix the Rack Frame onto the Wall

Install Cabinets into the Rack Frame

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

Steps

1. Place the mounting screws in the holes on the front side of the cabinet and lock the floating nuts on the rack frame.



Full-Color LED Splicing Display Unit Installation Guide

Figure 2-6 Fix the Screen

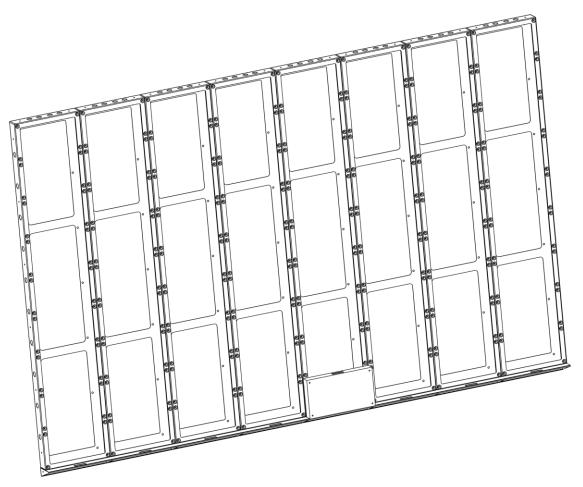


Figure 2-7 Screen Fixed

2. Install the cabinets from middle to both sides until the first row of cabinets are installed.

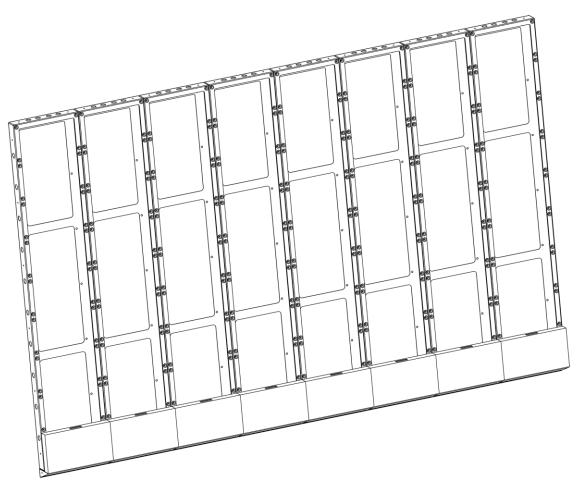


Figure 2-8 Screens Fixed

- 3. Repeat the above steps to install other cabinets on the above rows.
- 4. Use a level to measure and ensure that the cabinets are flat and vertical.

iNote

- Do not fix the screws between the connectors in case that cabinets are too tight for future adjustment.
- In normal cases, lock out LED lamp boards after they are adjusted horizontally or vertically as the boards will probably be moved during the installation of other lamp boards.
- Ensure that the screen is flat and there is no obvious gap between screens. Otherwise, make some adjustments.

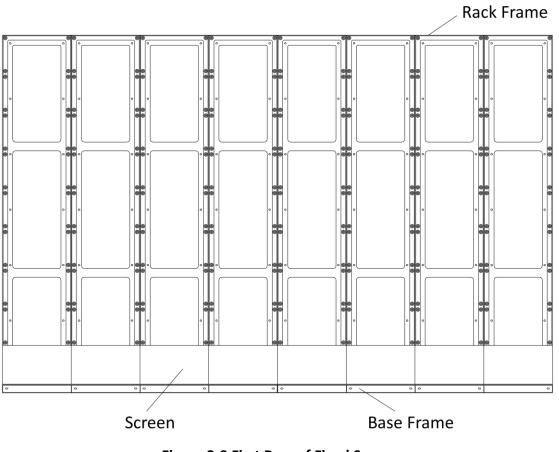
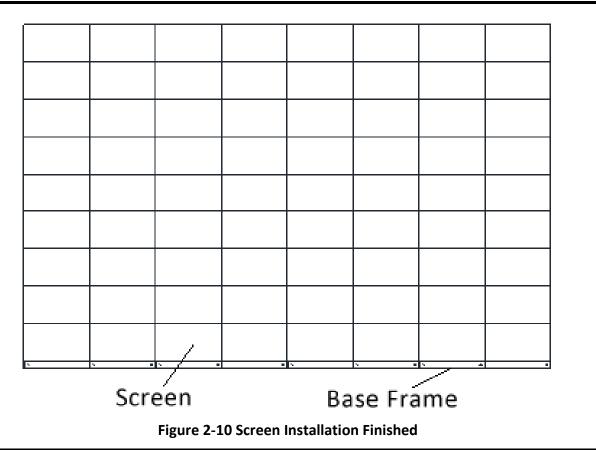


Figure 2-9 First Row of Fixed Screens

iNote

- For details about cabinet stitching, see <u>3.2.2 Stitch Cabinet Frames</u>.
- For details about lamp boards installation, see <u>3.2.4 Install Lamp Boards on the Cabinets</u>.
- 5. Repeat the above steps to install other cabinets.



iNote

- 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 modules. The bottom bracket under the wire outlet should completely cover the bottom hole only to let the wire out, to prevent the molten material from dripping to the bottom in case of 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 back-maintenance products.

Install the Bottom Chassis

Steps

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

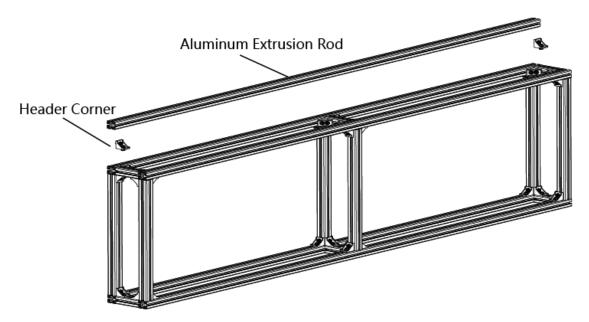


Figure 2-11 Assemble the Base Frame Unit

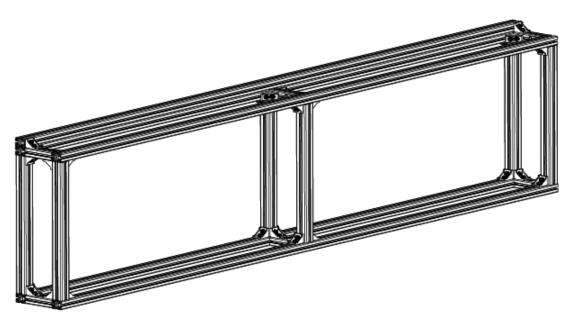


Figure 2-12 Base Frame Unit Assembled

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

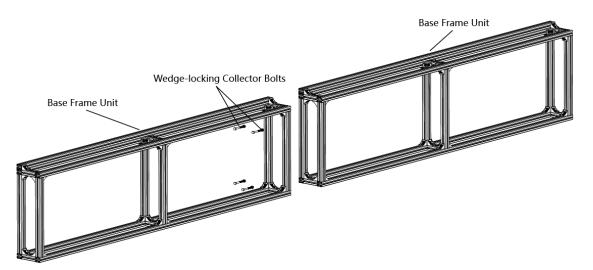


Figure 2-13 Connect the Base Frame Units

3. Insert the anchor bolts into the base frame and tighten the bolts.

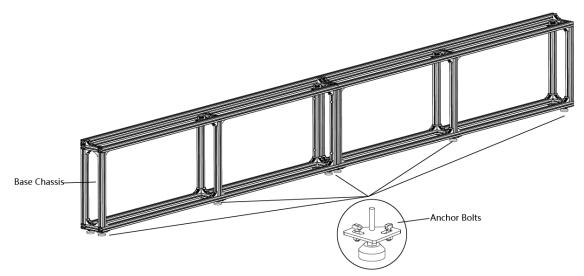


Figure 2-14 Assemble the Base Frame

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

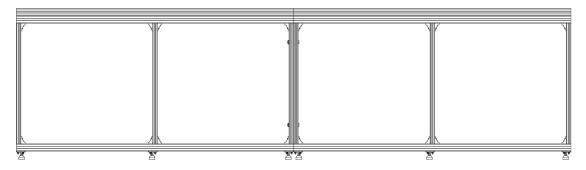


Figure 2-15 Leveled Bottom Chassis

Install the Rack Frame

Steps

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

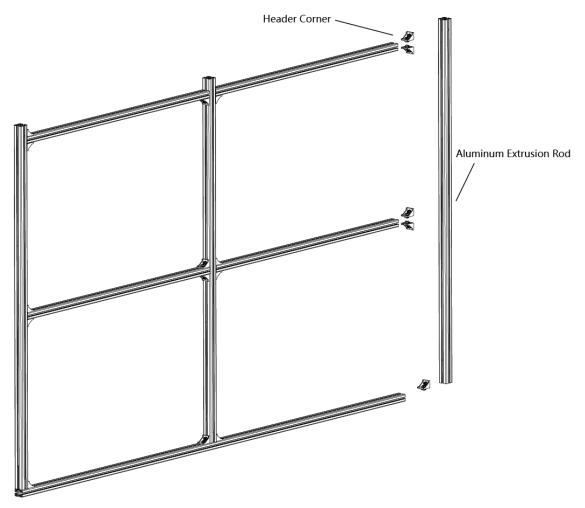


Figure 2-16 Assemble the Rack Frame Unit

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

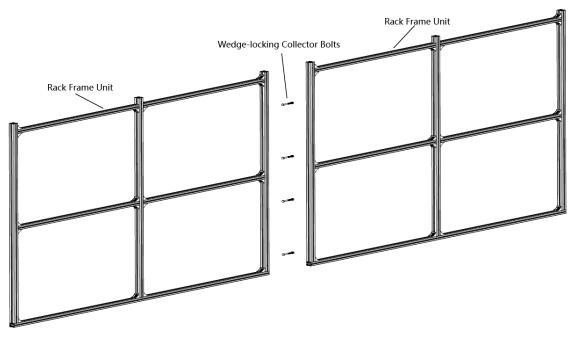


Figure 2-17 Connect the Rack Frame Units

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

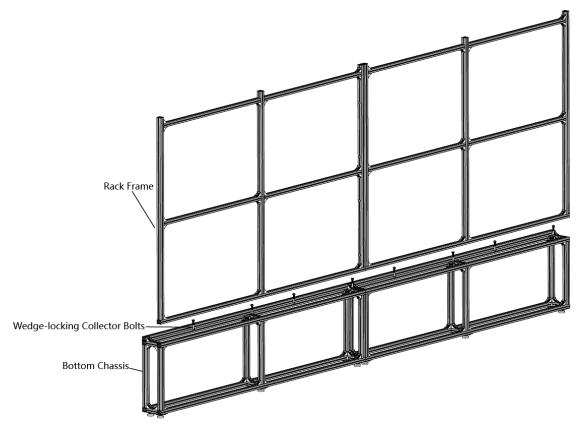


Figure 2-18 Align the Rack Frame to the Base Chassis

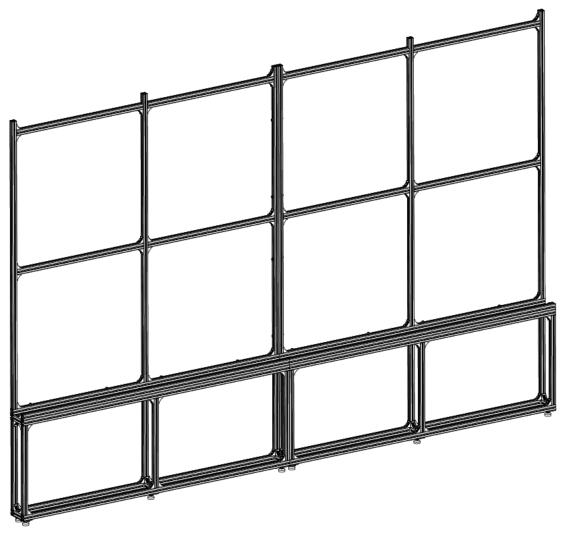


Figure 2-19 Frames Aligned

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

Steps

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

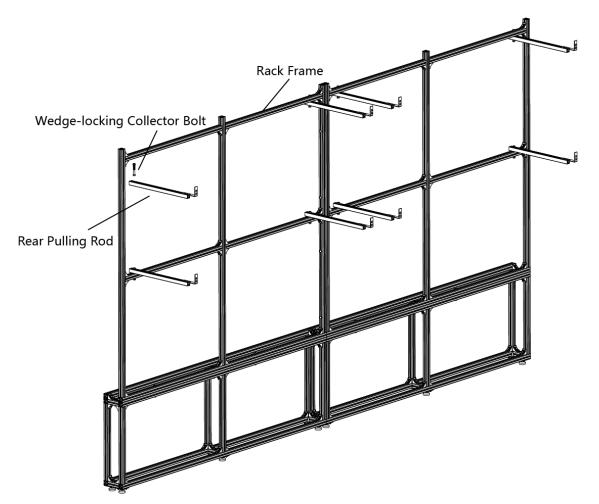


Figure 2-20 Fix the Rear Pulling Rods into the Rack frame

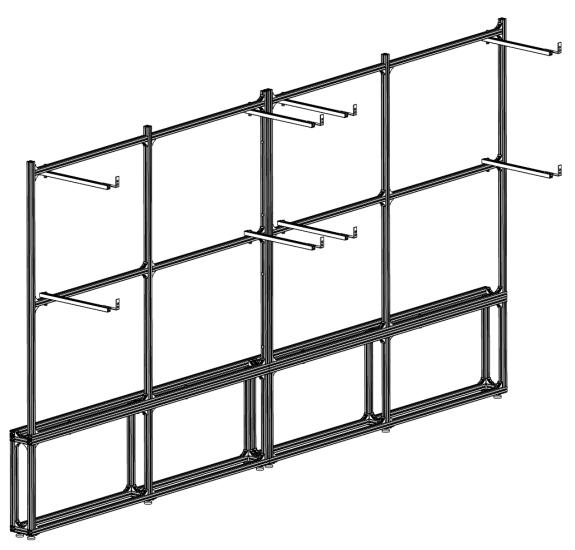


Figure 2-21 Rear Pulling Rods Fixed

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

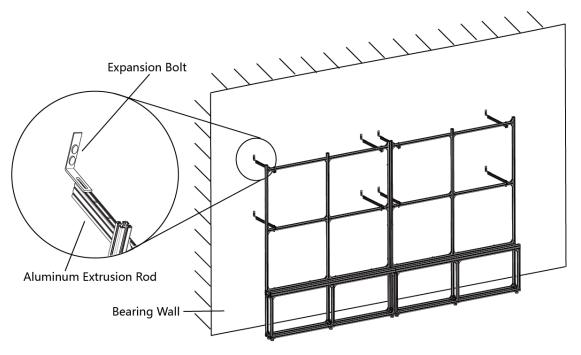
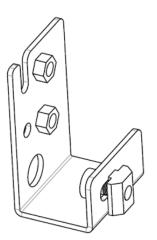


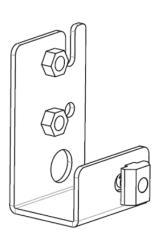
Figure 2-22 Fix the Rear Pulling Rods onto the Bearing Wall

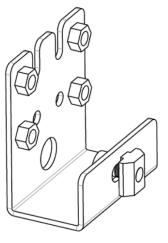
Install the Connectors

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 locating positions of the connectors respectively.



Type A Connector





Type B Connector

Figure 2-23 Connectors

Type C Connector

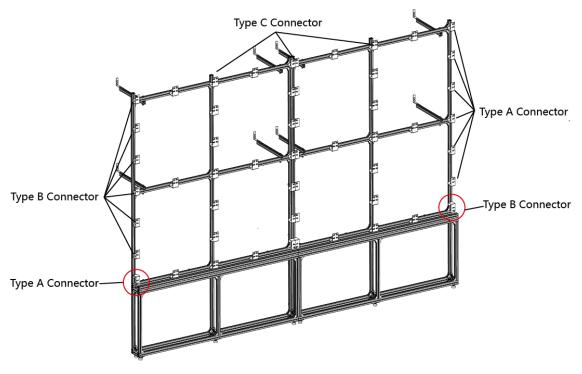


Figure 2-24 Connectors Installed

iNote

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

Steps

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

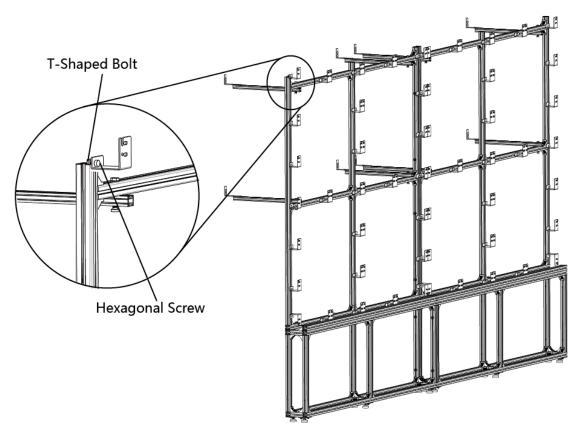


Figure 2-25 Install the Connectors

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, take the following steps to install the cabinets into the rack frame:

Steps

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 screens.

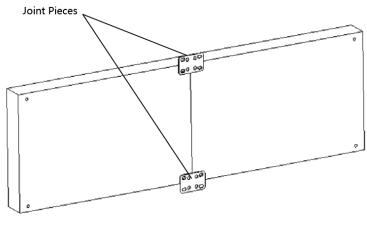


Figure 2-26 Fix the Screen with Joint Pieces

iNote

- Install the cabinets from the bottom to the top, from the middle to the sides.
- Do not fix the screws between the connectors in case that cabinets are too tight for future adjustment.
- In normal cases, lock out LED lamp boards after they are adjusted horizontally or vertically as the boards will probably be moved during the installation of other lamp boards.
- Ensure that the screen is flat and there is no obvious gap between screens. Otherwise, make some adjustments.
- 2. Repeat the above steps to install the other cabinets in the lowest row.

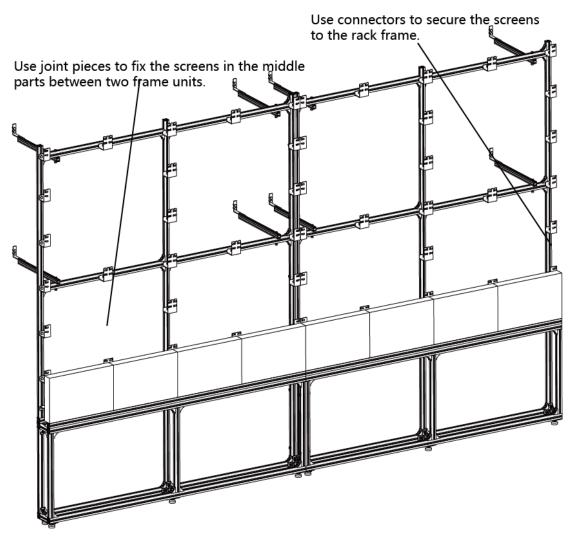


Figure 2-27 Fix the Screens

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

iNote

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 afterwards.

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

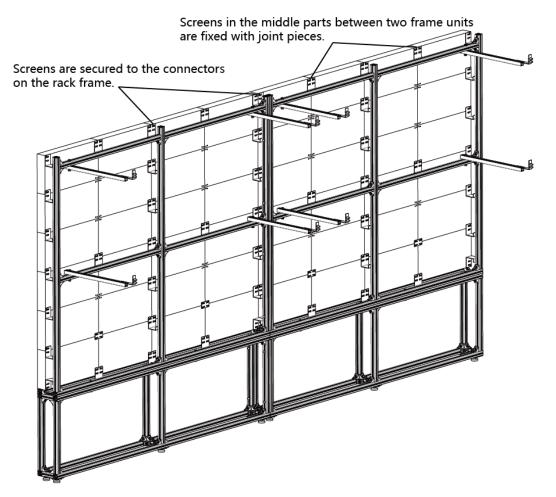


Figure 2-28 Screens Fixed

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.

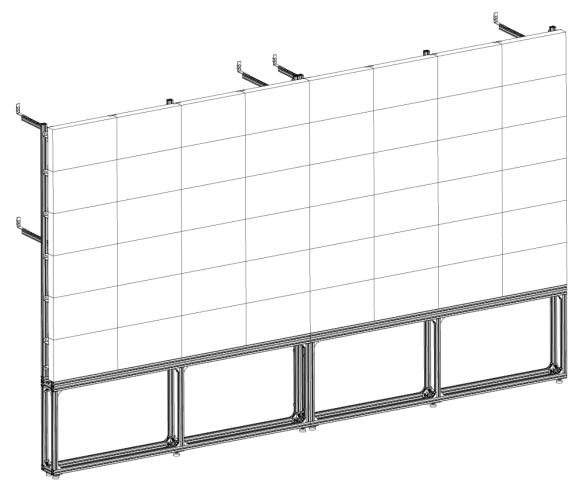


Figure 2-29 Screen Installation Finished

iNote

- For details about cabinet stitching, see <u>3.2.2 Stitch Cabinet Frames</u>.
- For details about lamp boards installation, see <u>3.2.4 Install Lamp Boards on the Cabinets</u>.

2.2.4 Install the All-in-One Rack

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

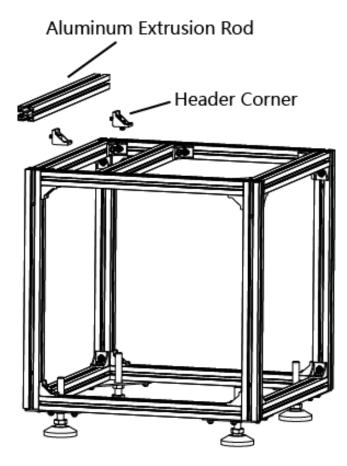
Install the Bottom Chassis

Steps

1. Use header corners to connect aluminum extrusion rods.

iNote

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





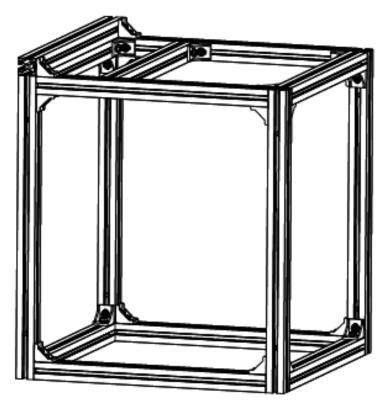


Figure 2-31 Base Frame Unit Assembled

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

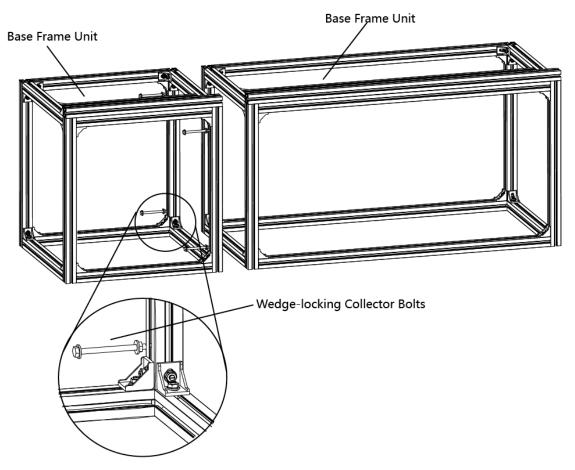


Figure 2-32 Connect the Base Frame Units

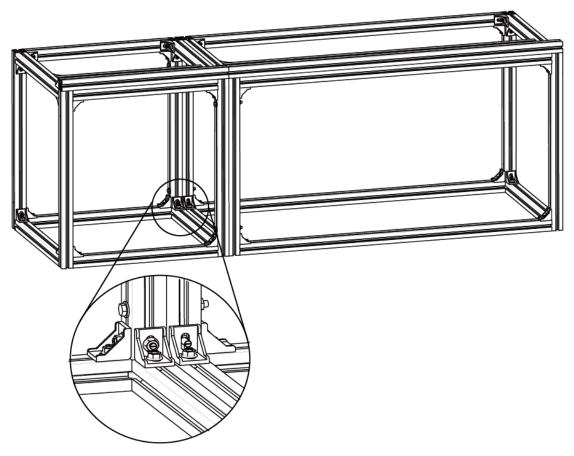


Figure 2-33 Base Frame Units Connected

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

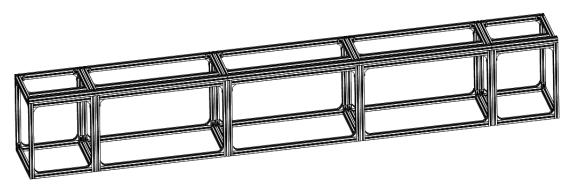


Figure 2-34 Base Frame

4. Insert the anchor bolts into the base frame and tighten the bolts.

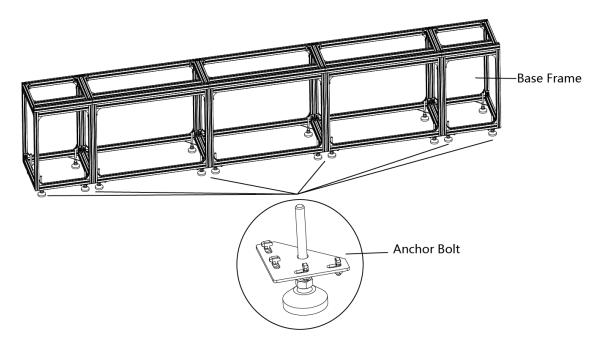


Figure 2-35 Assemble the Base Frame

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

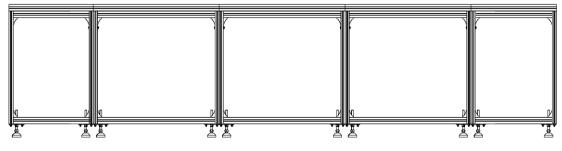


Figure 2-36 Leveled Bottom Chassis

Install the Rack Frame

Steps

1. Use header corners to connect aluminum extrusion rods.

iNote

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

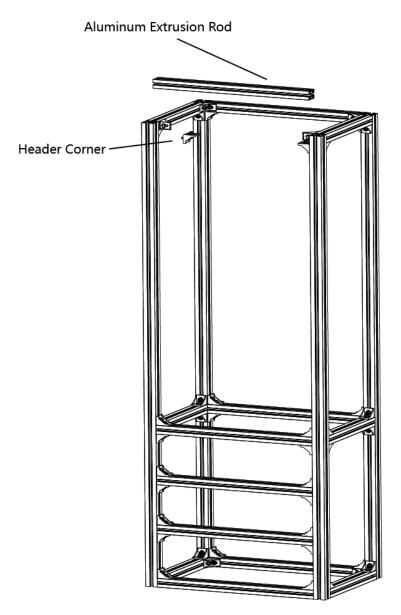


Figure 2-37 Assemble the Rack Frame Unit

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

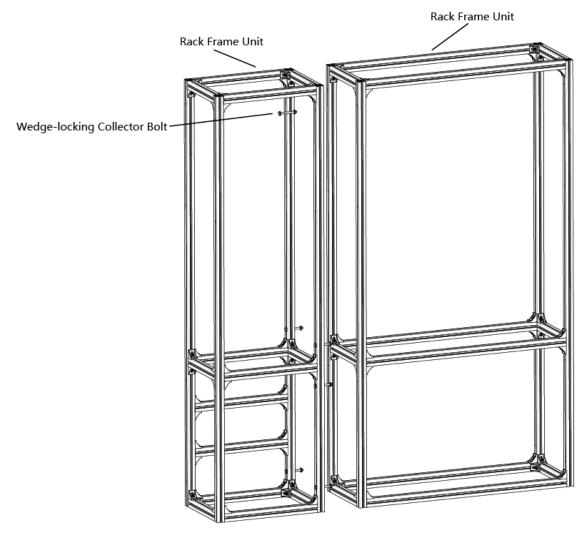


Figure 2-38 Connect the Rack Frame Units

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

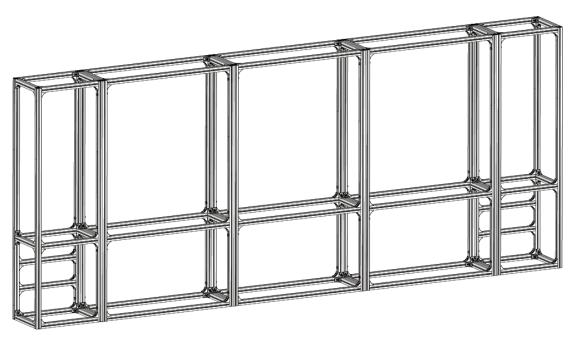


Figure 2-39 Rack Frame

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

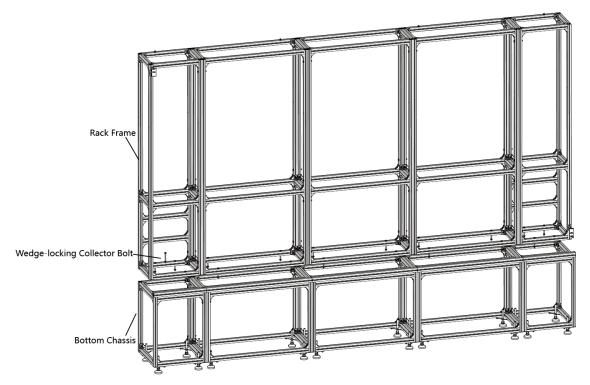


Figure 2-40 Align the Rack Frame to the Base Chassis

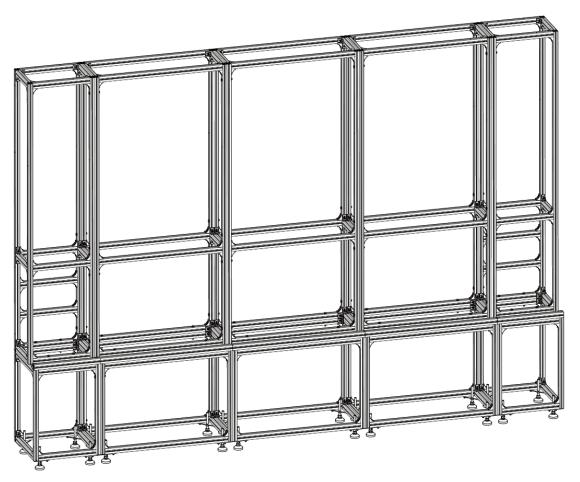


Figure 2-41 Frames Aligned

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

Steps

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

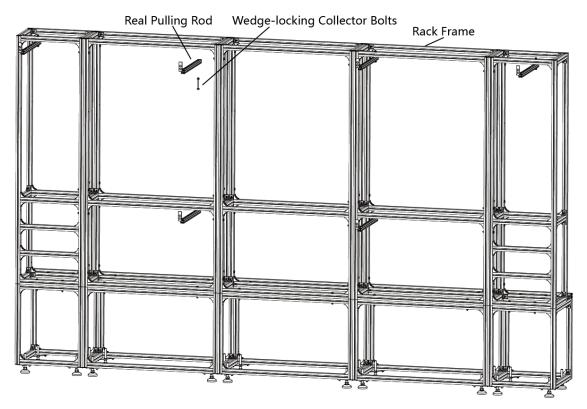


Figure 2-42 Fix the Rear Pulling Rods into the Rack Frame

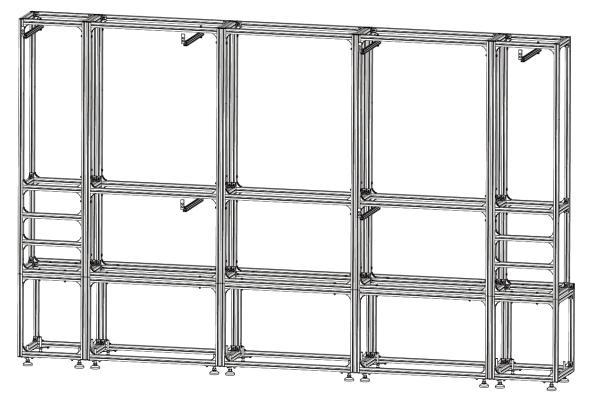
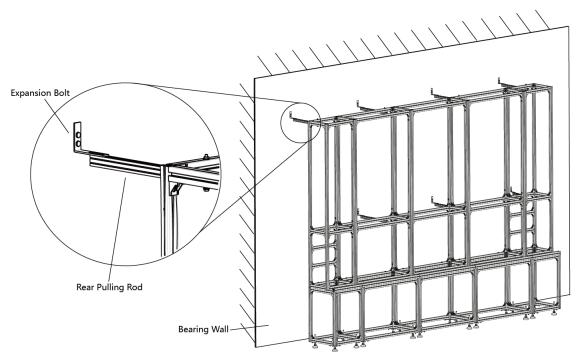


Figure 2-43 Rear Pulling Rods Fixed

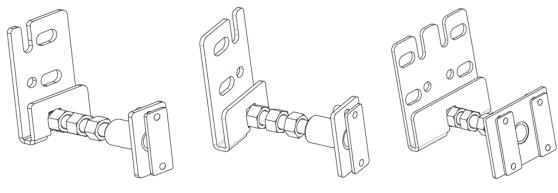


2. Use the expansion bolts to fix the rear pulling rods onto the bearing wall.

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 locating positions of the connectors respectively.



Type A Connector

Type B Connector

Figure 2-45 Connectors

Type C Connector

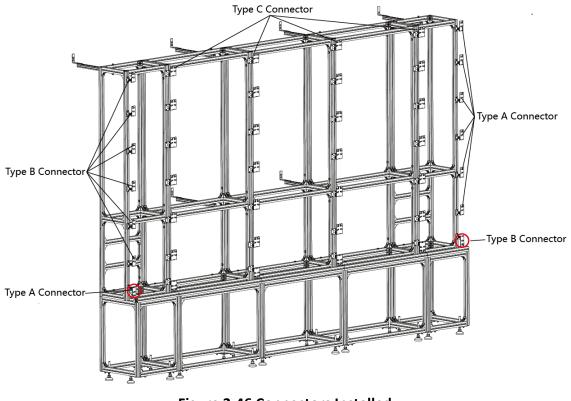


Figure 2-46 Connectors Installed

iNote

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

Steps

- 1. Twist the hexagonal screws into the screw thread plates.
- 2. Insert the screw thread plates into the slots of aluminum extrusion rods, and move the connectors to the suitable place.

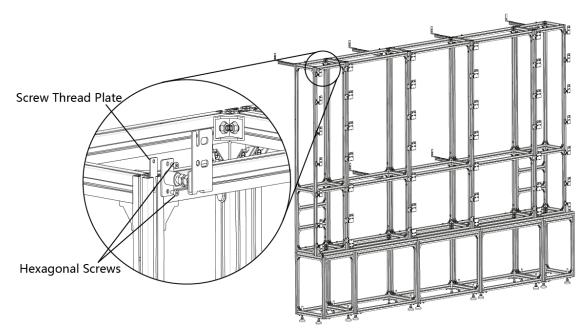


Figure 2-47 Install the Connectors

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, take the following steps to install the cabinets into the rack frame:

Steps

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 without connectors near the rear, use joint pieces to fix the screen.

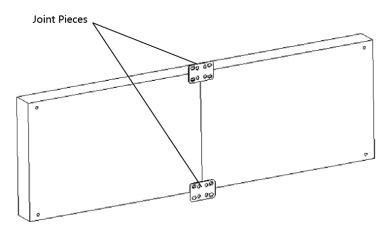
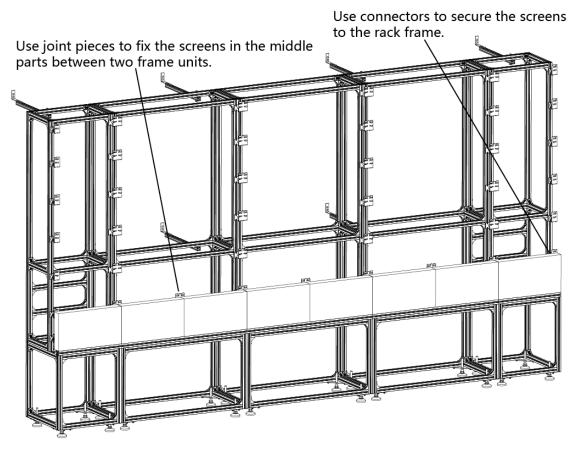


Figure 2-48 Fix the Screen with Joint Pieces

iNote

- Install the cabinets from the bottom to the top, from the middle to the sides.
- Do not fix the screws between the connectors in case that cabinets are too tight for future adjustment.
- In normal cases, lock out LED lamp boards after they are adjusted horizontally or vertically as the boards will probably be moved during the installation of other lamp boards.
- Ensure that the screen is flat and there is no obvious gap between screens. Otherwise, make some adjustments.
- 2. Repeat the above steps to install other cabinets in the lowest row.





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

iNote

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 afterwards.

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

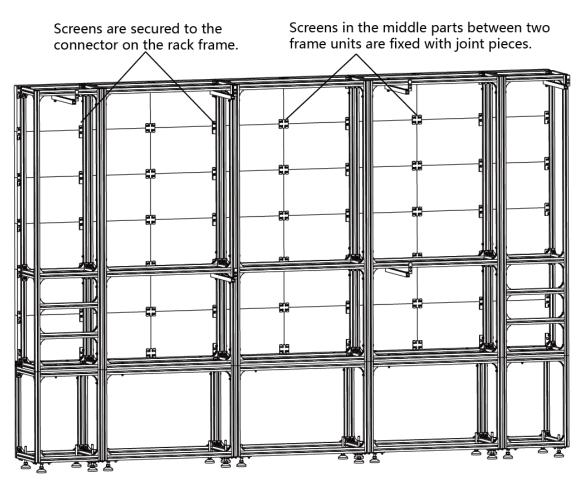


Figure 2-50 Screens Fixed

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.

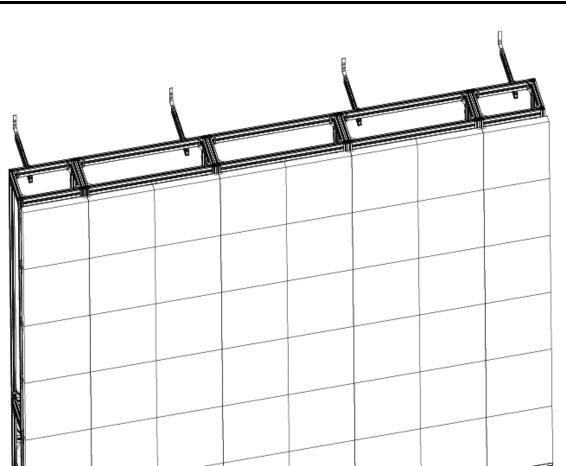


Figure 2-51 Screen Installation Finished

iNote

- For details about cabinet stitching, see <u>3.2.2 Stitch Cabinet Frames</u>.
- For details about lamp boards installation, see <u>3.2.4 Install Lamp Boards on the Cabinets</u>.

Install the Cover Plates and Door Plates for Bottom Chassis

Steps

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

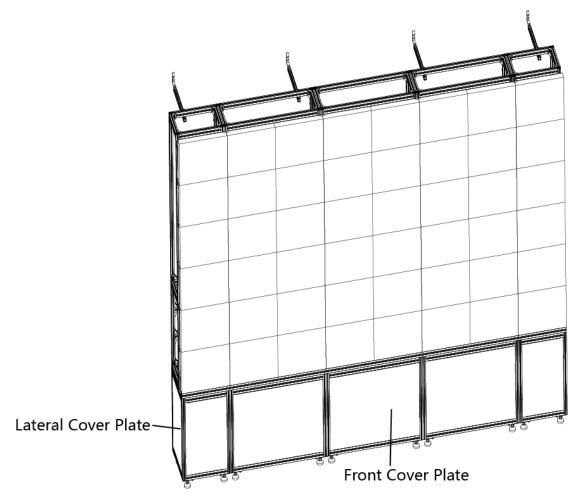


Figure 2-52 Install the Cover Plates

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.

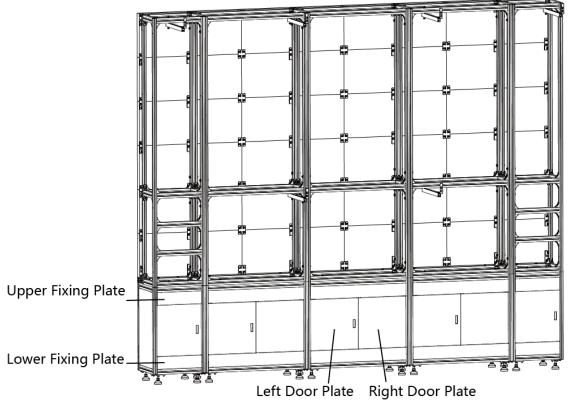


Figure 2-53 Install the Door Plates

Chapter 3 Cabinet Installation

3.1 Introduction

A cabinet is a basic unit for LED engineering 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.

3.2 Install the Cabinets

3.2.1 Precautions

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

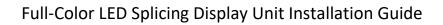
- Install the LED screens after the decoration construction is completed.
- Avoid humid or high-pH environment to prevent damage to the LED lamps.
- Do not expose the device to rain or humid environment to reduce the risk of fire or electric shock.
- Electric discharge may last for a short period of 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 cable delivered with the device. Contact authorized dealer to purchase power cable with same specifications.
- Please do not frequently plug and unplug the power cable when the power is on.

3.2.2 Stitch Cabinet Frames

Before installing the cabinets, you need to stitch the cabinet frames first.

Locate Cabinet Frames

Align two cabinet frames with the locating studs and installation holes. Each cabinet frame is equipped with two locating studs, five installation holes, and six lock connectors. Positions of the locating studs and installation holes are shown as follows.



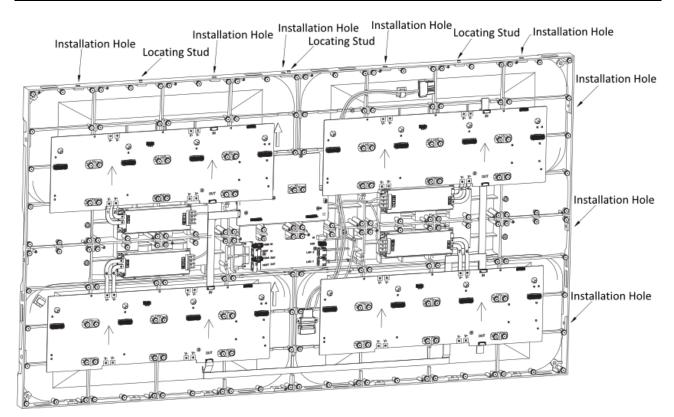


Figure 3-1 Locating Studs and Installation Holes

Stitch Cabinet Frames Horizontally

Steps

- 1. Align the installation holes in the horizontal direction of the two adjacent cabinet frames, and adjust the cabinet frames horizontally against each other.
- 2. Insert M6 screws into the installation holes to lock the cabinet frames, and do not tighten the screws yet.
- 3. Fix the lock connectors with M5 screws and adjust the flatness of the cabinet frames.
- 4. Tighten the M6 screws inserted in Step 2.

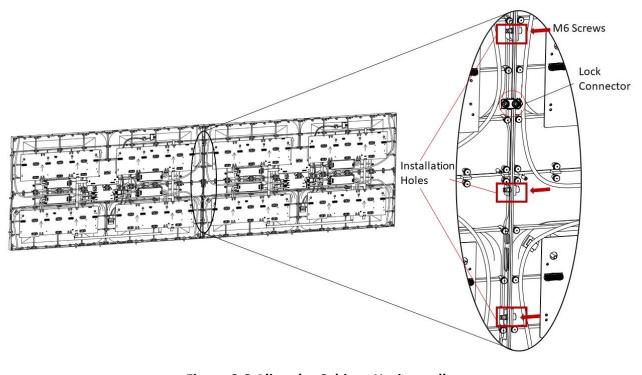


Figure 3-2 Align the Cabinet Horizontally

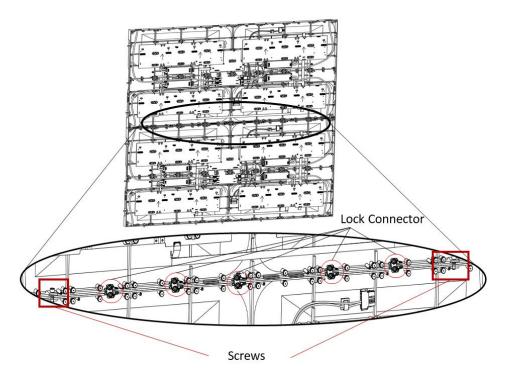
iNote

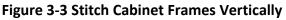
- Lock connectors, screws, and a wrench can be found in the accessory box.
- Adjust the flatness of the cabinet frames to ensure the horizontal and vertical alignment between the cabinet frames.

Stitch Cabinet Frames Vertically

Steps

- 1. Align the locating studs vertically to the locating holes of the adjacent cabinet frame, and adjust the cabinet frames vertically against each other.
- 2. Insert two M6 screws into the installation holes to lock the cabinet frames, and do not tighten the screws yet.
- 3. Fix the lock connectors with M5 screws and adjust the flatness of the cabinet frames.
- 4. Tighten the M6 screws inserted in Step 2.





iNote

- There are five installation holes reserved for stitching the cabinet frames vertically. Stitch the cabinet frames from top to bottom.
- Adjust the flatness of the cabinet frames to ensure the horizontal and vertical alignment between the cabinet frames.
- Four VESA holes for M8 screws are reserved on the back of the cabinet, which makes the standard bracket installation compatible.

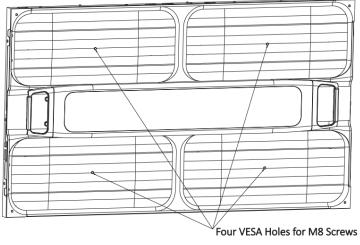


Figure 3-4 Cabinet Back

3.2.3 Wiring

After the cabinet frames are stitched, connect network cables, signal lines, and power cords before further installation.

About the Cabinets

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 five cabinets.

iNote

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

iNote

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

Interfaces of Embedded Sending Card

An embedded sending card is installed at the center of each cabinet. Refer to the figure and the table below for the interfaces on the sending card.



Figure 3-5 Interfaces on Sending Card Table 3-1 Interface Description

No.	Name	Description
1	HDMI IN	HDMI signal input
2	HDBT IN	HDBT signal input
3	HDMI OUT	HDMI signal output
4	HDBT OUT	HDBT signal output
5	IR	Infrared interface
6	USB	USB interface
7	LAN 2	LAN 2 for network access
8	LAN 1	LAN 1 for network access

Cabinet Cable Holes

There are five cable holes on the top and at the bottom of the cabinet frame respectively.

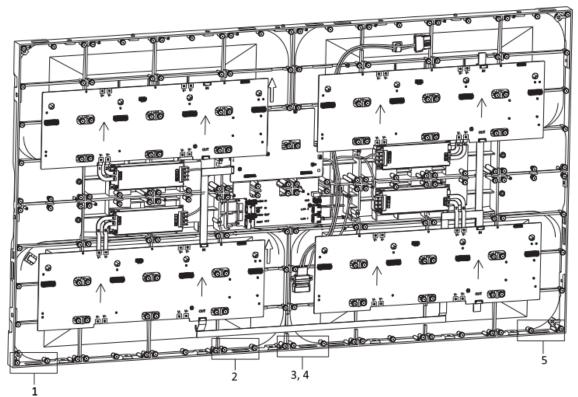


Figure 3-6 Cabinet Cable Holes Table 3-2 Usage Suggestion for Cable Holes

No.	Description
1	For HDMI/HDBT cables.
2	Reserved holes.
3, 4	For power cords.
5	For network cables/IR lines.

Connect Network Cables

iNote

The connection of network cables and signal lines should be consistent with the sending card configuration on the software client. For more details, see <u>4.3 Configure Signal Cables</u>.

Steps

1. There are eight ways to connect network cables. Choose one according to your actual needs.

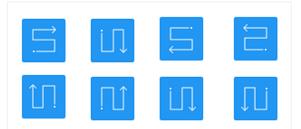


Figure 3-7 Network Cable Connection Mode

2. Pull network cables through the cable holes to connect to the LAN interfaces of sending cards in different cabinets.

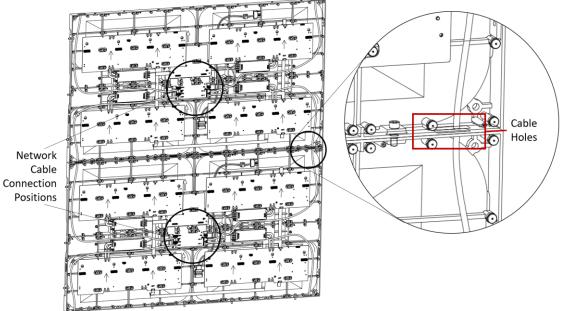


Figure 3-8 Network Cable Connection

3. Connect all cabinets in cascade.

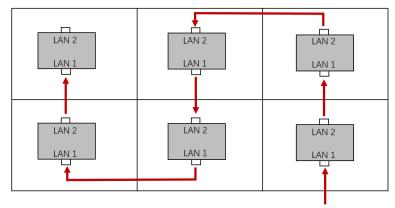


Figure 3-9 Network Cable Connection Diagram

iNote

This figure above takes $\hat{\Box}$ for example.

Connect Signal Lines

iNote

The display is stitched by 16 cabinets of 4×4 layout. You can stitch the cabinets and divide them into groups according to your actual needs. For example, you can divide the display into four groups of 2×2 layout for each group, and these groups will display images from four different signals respectively.

Steps

- 1. Choose the screen splicing mode.
- Automatic splicing: After you set the splicing scale, the screen will be divided into groups at your settings automatically. The division will start from the screen in the upper left corner.
- Manual splicing: Set the splicing scale and groups manually.
- 2. Pull the signal lines through the cable holes and connect to the signal input interfaces of sending cards in different cabinet groups.

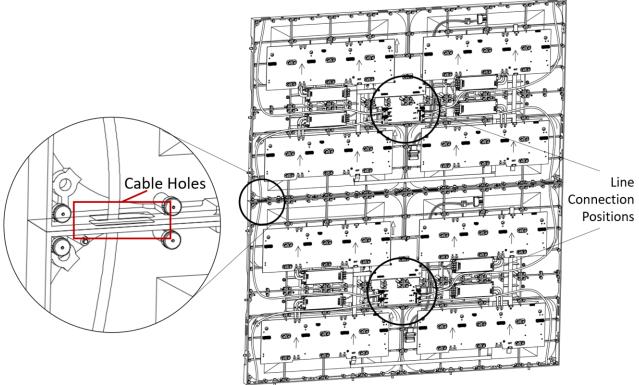
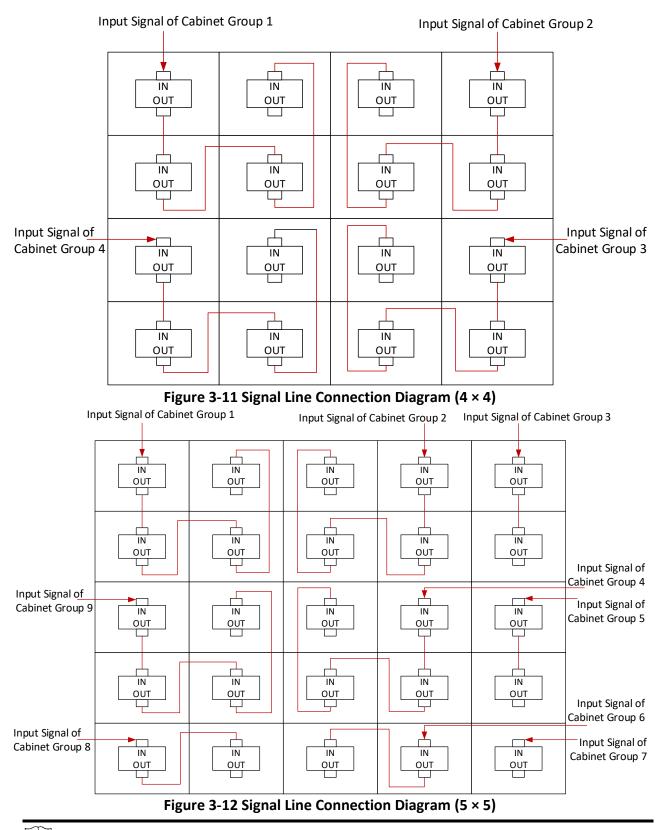


Figure 3-10 Signal Line Connection

3. Connect all cabinets. Make sure that every cabinet group is connected to a signal input and all the cabinets in one group are connected in cascade.



iNote

• The splicing scale is recommended to be set as 4 × 4. If you need other settings, please

contact our technical support.

- Figures above are for reference. You can adjust the connection within each cabinet group, as long as the output interface of a cabinet is connected to the input interface of its adjacent cabinet.
- For automatic splicing, connect the input signal from the cabinet in the upper left corner.

Connect Power Cords

Within Max. Load

If the number of cabinets is within the maximum load of the power cord, one power cord is enough to connect the cabinets.

- Internal Connection: Pull the power cords through the cable holes and connect the power cords between two cabinets.
- External Connection: Pull the power cords through the cable holes on the bottom of the first row of cabinets, and connect one end of the cords to the power cords in the upper cabinets and the other end to the external power supply.

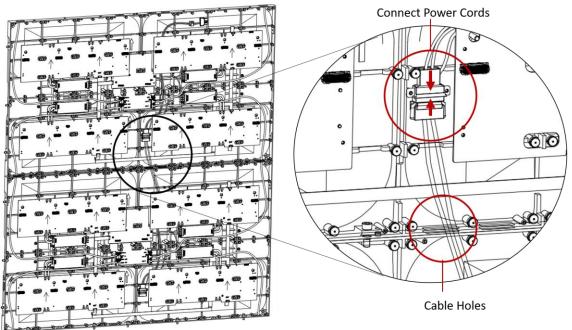


Figure 3-13 Power Cord Connection

Beyond Max. Load

If the number of cabinets exceeds the maximum load of the power cord, you need to pull extra power cords through the reserved holes next to the original power cords and connect other cabinets in the same way.

iNote

After the power cords are connected, attach the electrical warning label next to the cable hole for external power supply at the bottom of the first row of cabinets. The label is packed with the device.

Connect Infrared Lines

Pull the infrared line through the hole on the first bottom cabinet from the left or the right.

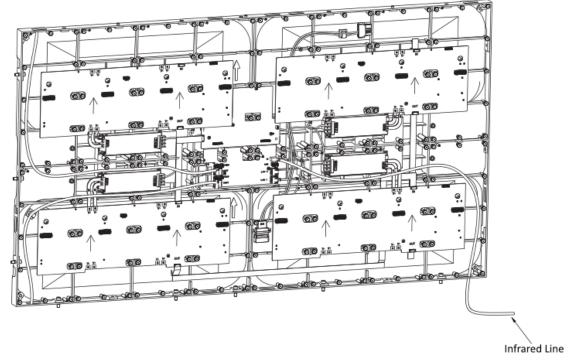


Figure 3-14 Infrared Connection

3.2.4 Install Lamp Boards on the Cabinets

Fix the lamp boards on the cabinet frames by magnetic attraction.

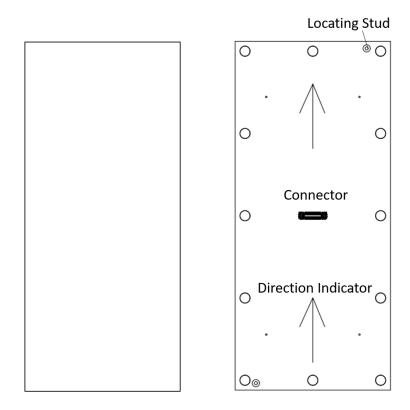


Figure 3-15 Lamp Board

Steps

1. Place the lamp boards on the front of the cabinet frames. Align the lamp boards and the edges of the cabinet frames.

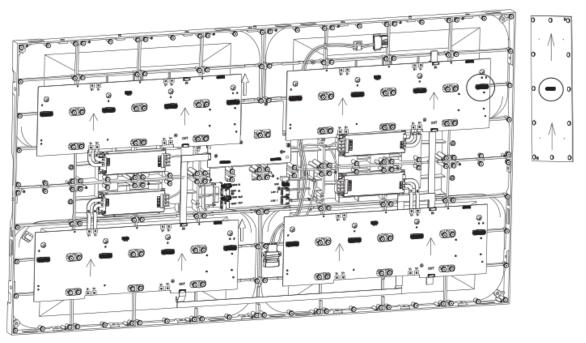


Figure 3-16 Adsorb Lamp Board

iNote

Please align the connectors and keep the arrow sign upright when adsorbing the lamp boards.

- 2. Align and adsorb the lower edges of the lamp boards with the cabinet frames, and then align the locating studs on the lamp boards to the locating holes on the cabinets. Absorb the remaining three sides of the lamp boards. The lamp board adsorbs to the cabinet automatically.
- 3. Optional: If you need to remove lamp boards, use LED vacuum pump to remove the first lamp board, and remove other lamp boards by hand.

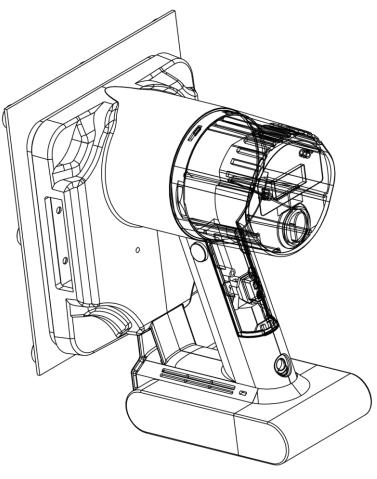


Figure 3-17 LED Vacuum Pump

Chapter 4 Software Debugging

4.1 Activation

The client can only control the screen when it is used in conjunction with the sending card. Please activate the corresponding sending card in the client first when using it for the first time.

Before You Start

- The client software has been installed correctly.
- PC and the device are in the same LAN.

Steps

1. Run the client.

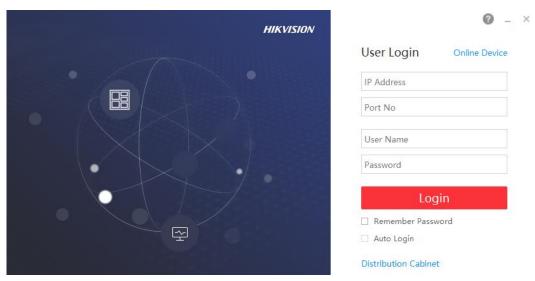


Figure 4-1 Client Interface

2. Click **Online Device** to show all online devices in the current network segment.

				Or	line Device		
otal De	evices(6)			Refresh	Device Information		
No.	IP	Device Type	Activate			MAC Address	
	10101-000		Activation			Software Version	
	and the second	-	Activation				
	and the second second	the summer of	Non-activa	ted		Serial No	
	0000	10.000	Activation		Network Parameter		
	10100	10.000000	Activation			IP Address	
		10.000	Activation				
						Port No	
						Subnet Mask	
						Gateway Address	100-001
						Password	
						Password	
							Modify
					Network Security		
							Activate
							Reset Pass
					Device Upgrade		
							Upgrade
							Login Cance

Full-Color LED Splicing Display Unit Installation Guide

Figure 4-2 Activate Online Device

- 3. Select the device to be activated and click **Activate**.
- 4. Enter **Password** and confirm the password in the popup window.

User Name	admin			
Password	•••••			
		Weak		
	Valid password range [8-16]. You can use a combination of numbers,			
	lowercase, uppercase and special character for your password with at			
	least two kinds of them contained.			
Confirm Passw				

Figure 4-3 Activation

- 5. Click **Apply** to activate the device.
- 6. Select the activated device on **Online Device** interface. Modify network parameters and enter **Password.** Click **Modify** to save the modifications.

iNote

If the device network segment has DHCP function, it will allocate the IP address by default. You can skip step 6.

4.2 Login

Before any operation, you need to log in to the LED client.

Steps

- 1. Run the client to enter the login interface.
- 2. Enter IP Address, User Name, and Password.
- 3. Click Login.
- 4. Optional: Check **remember password** to remember the login password, so there is no need to enter password for the next login.
- 5. Optional: Check **Auto Login** to Log into the client automatically.

4.3 Configure Signal Cables

Configure signal cables according to the actual receiving card connection between LED cabinets.

Steps

iNote

After configuring the screen scale, LED screen will show the signal cable connection. The connection of signal cables set via the client should be consistent with that of the actual screen connection.

- 1. Go to the Signal Cable Configuration interface.
 - Click **Next** in the Display Attribute interface.
 - Click Basic Configuration \rightarrow Signal Cable Configuration.
- 2. Check **Display Actual Lines on Screen**. You need to connect the cable according to the position prompt on the screen.
- 3. Select sending port below Please select sending port to connect.

iNote

The location prompt of each screen will indicate you to connect the signal cable. If the position prompt is **2-1**, the screen is the first screen to connect to No. 2 sending port.

Full-Color LED Splicing Display Unit Installation Guide

			Basic Configuration			
		Display Attribu	te Signal Cable (Configuration		
Please select sending port to connect		☑ Display Actual Lines on Screen			Cancel	Restore
1 3 5	5 7		1		2	
2 4 6 9 11 11 10 12 14 Line Type Custom		1	E ←	(1	
Signal Backup						
Active-Standby Network	Interface Relationship					
1 - 2	9 - 10	L				
3 - 4	11 - 12			- 0		+ 100 %
6 - 6	13 - 14			Reset Current Port	Reset A	

Figure 4-4 Signal Cable Connection

- 4. Connect signal lines.
 - Click the screen on the right side of the interface to connect signal lines.
 - Select Line Type, and select starting port and end port on the right side of the interface.
- 5. Right click on the right side of the interface after connection.
- 6. Select Complete Signal Cable Connection.
- 7. Click **OK**.

4.4 Configure Screen Splicing

You can configure splicing scale and cabinet groups via manual splicing.

Steps

1. Go to Multi-screen Display Configuration > Manual Splicing.

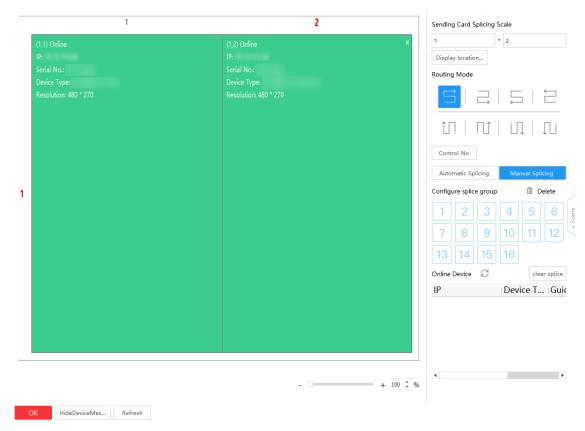


Figure 4-5 Screen Splicing Configuration

- 2. Click to choose the cabinets and add them to corresponding cabinet groups.
- 3. Click **OK**. The display will be set according to your splicing configuration.
- 4. Optional: Click **Delete** to remove the cabinets you do not need in the cabinet groups.

Chapter 5 Installation Guide QR Code

Scan the QR code to read the installation guide online.



Figure 5-1 Installation Guide QR Code

