Installation and Setup Guide

020-002222-01

LED Display System

Christie Lumia II Series

CHRISTIE®

NOTICES

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The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAN ICES-3 (A) / NMB-3 (A)

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Please help us to conserve the environment we live in!

NOTATION

Learn the hazard and information symbols used in the product documentation.

Danger! If not avoided, the following could result in death or serious injury.

Warning! If not avoided, the following could result in death or serious injury.

Caution! If not avoided, the following could result in minor or moderate injury.

Notice. If not avoided, the following could result in property damage.

Information messages provide additional information, emphasize or provide a useful tip.

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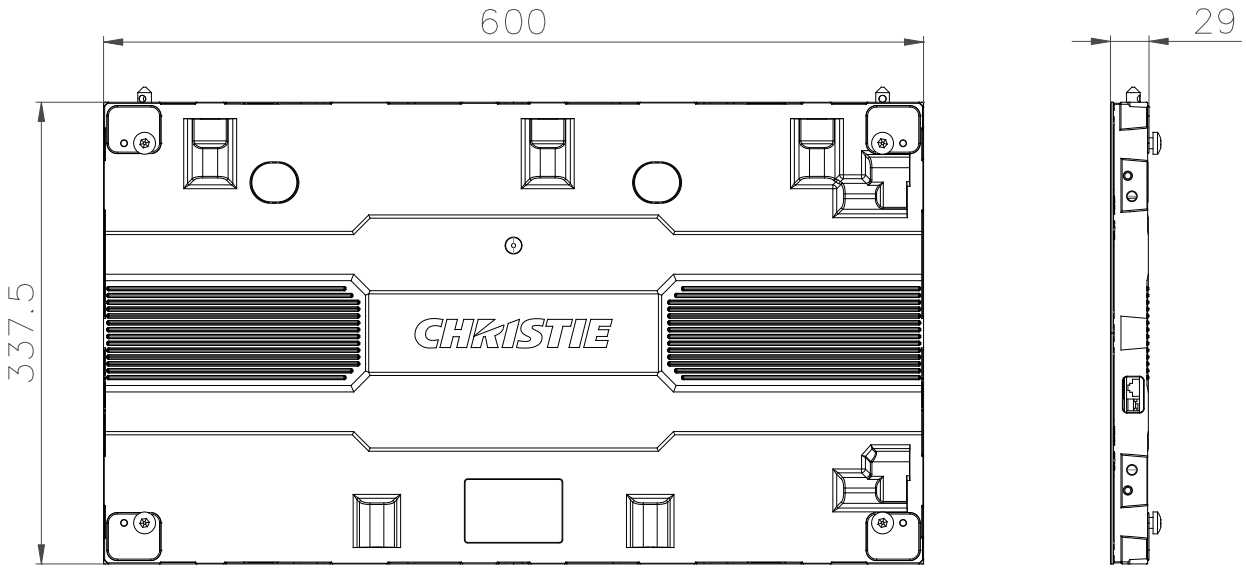
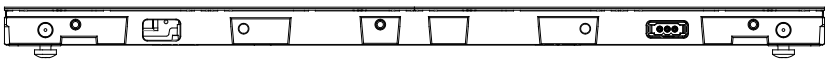
Product overview

Christie Lumia II Series features UHD resolution, high fill-factor, and advanced monitoring capabilities. The Lumia II Series is a certified LED display wall solution providing 24/7 operation for critical viewing environments. With front-access serviceability and a slim ADA-compliant design, the Lumia II Series delivers performance possible for LED displays.



REAR VIEW

SIDE VIEW



TOP VIEW

Important safeguards

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.

General safety precautions

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.

Warning! If not avoided, the following could result in death or serious injury.

- Observe all electrostatic precautions. Use a grounded wrist strap and insulated tools when handling, servicing, or cleaning electronic assemblies.
- A minimum of two people or appropriately rated lift equipment is required to safely lift, install, or move the product.
- A certified electrician must be present during installation to ensure the installation meets the local

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electrical code.

- Motors and fans may start without warning.

Notice. If not avoided, the following could result in property damage.

- Always wear clean, lint-free gloves when handling the product.

Power precautions

Ensure all power precautions are understood before installing the product.

Warning! If not avoided, the following could result in death or serious injury.

- After the replacement of the power supply, hi-pot and ground/earth bond tests must be performed. Only Christie qualified technicians who are familiar with the necessary precautions can perform these tests.
- Always connect the ground or earth first to reduce shock hazard.
- Do not return the current through the ground or earth.
- SHOCK HAZARD! The line cord has a maximum power carrying capability. For the maximum number of tiles that may be connected per daisy chain when connecting to the power supply, see the product specifications.
- SHOCK HAZARD! A permanent single-phase connection must be installed between the LED tile system and the AC power supply.
- FIRE AND SHOCK HAZARD! Do not operate the system unless certified power connections, providing the recommended voltage, are used.
- HIGH TOUCH CURRENT HAZARD! To ensure reliable grounding, the power connection must be made by using an industrial plug (pluggable type B), or be provided by a permanent connection.
- A 13-20 A double pole mains circuit breaker, certified for the applicable local regulations, is required. It must be part of the building installation and easily accessible.
- Do not use a wall breaker greater than 20 A. This could result in severe damage to the tile system in the event of a failure.

Caution! If not avoided, the following could result in minor or moderate injury.

- SHOCK HAZARD! The line cord has a maximum power carrying capability. For the maximum number of tiles that may be connected per daisy chain when connecting to the power supply, see the product specifications.
- SHOCK HAZARD! Only use the AC power cord provided with the product or recommended by Christie.
- TRIP OR FIRE HAZARD! Position all cables where they cannot contact hot surfaces, be pulled, be tripped over, or damaged by persons walking on or objects rolling over the cables.
- FIRE HAZARD! Do not use a power cord, harness, or cable that appears damaged.
- FIRE OR SHOCK HAZARD! Do not overload power outlets and extension cords.
- Only Christie qualified technicians are permitted to open product enclosures.

Terminology

Learn about the components of the LED display system.

Term	Definition
Tile	A cabinet that contains several LED modules.
Array	A group of connected tiles that from a larger display.
Controller	Controls the LED display system array and video input source. Sometimes referred to as the control unit.

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Pixel	A group of one red, one green, and one blue dot.
Subpixel	A pixel is comprised of three subpixels, one for each color: red, green, and blue. Each subpixel in LED display technology is an LED chip.
Pixel pitch	Specifies the distance from the center of one pixel to the center of the next pixel.
SMD package size	A technical supplier specification related to the pixel size and denotes the size of the surface-mounted diode (SMD).
Fill factor	Indicates the ratio between the area covered by pixels and the area not covered by pixels.

Product documentation

For installation, setup, and user information, see the product documentation available on the Christie website. Read all instructions before using or servicing this product.

1. Access the documentation from the Christie website:
    - Go to this URL: *http://bit.ly/2qXBAdX* or *https://www.christiedigital.com/en-us/digital-signage/products/led-tiles/coreplus-series*.
    - Scan the QR code using a QR code reader app on a smartphone or tablet.
2. On the product page, select the model and switch to the **Downloads** tab.

Related documentation

Additional information on this product is available in the following documents.

- Christie Lumia II Series LED Display System Service Manual (P/N: 020-002223-XX)

Technical support

Technical support for Christie Enterprise products is available at:

- North and South America: +1-800-221-8025 or *Support.Americas@christiedigital.com*
- Europe, Middle East, and Africa: +44 (0) 1189 778111 or *Support.EMEA@christiedigital.com*
- Asia Pacific (*support.apac@christiedigital.com*):
    - China: +86 10 6561 0240 or *tech-supportChina@christiedigital.com*
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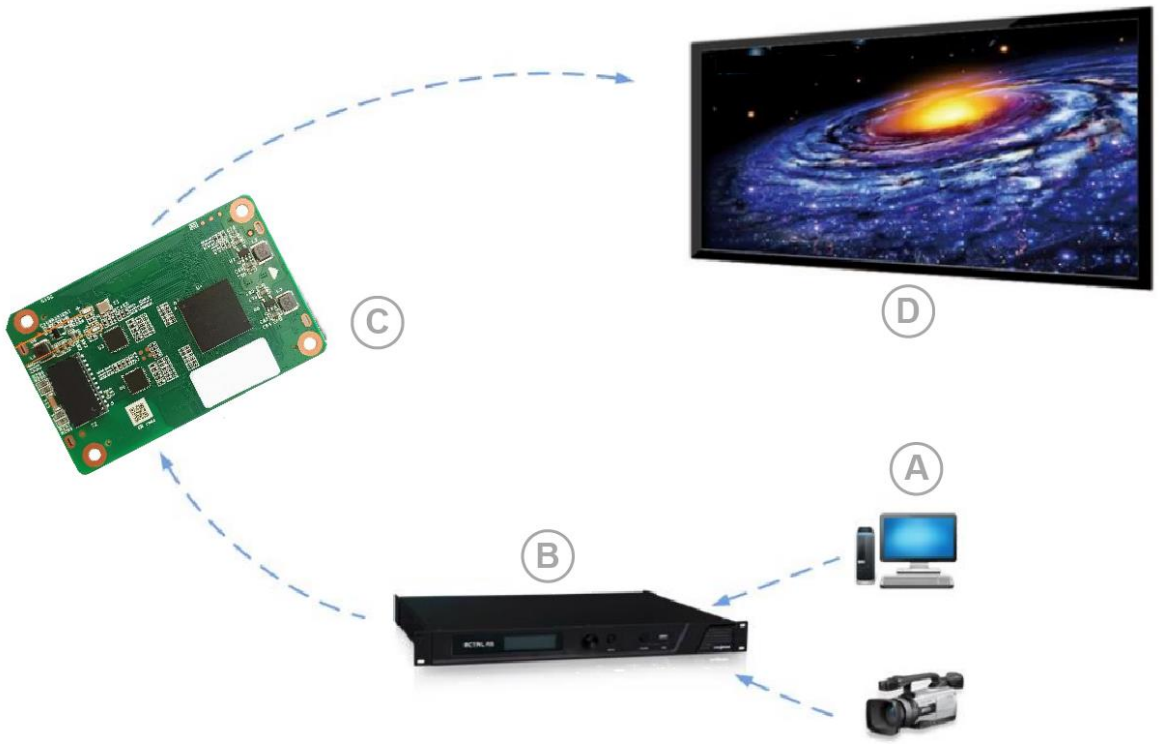
Required tools

Make sure the following tools are available during the installation.

- Rubber hammer
- Utility knife
- Allen key
- Spirit level
- Tape measure
- Anti-static glove
- Socket wrench
- Torque driver
- Torque wrench
- Philips screwdriver, with magnetic tip
- Slotted screwdriver, with magnetic tip
- LED module removal tool for Lumia II (P/N: 003-007847-XX)
- Attachment block template for Lumia II (P/N: 003-007100-XX)

Typical LED solution



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A	Media sources
B	LED display controller
C	Receiving card
D	LED display

Cable and controller layout and design

Before an array is constructed, you must plan the design layout of the tiles to make sure the controller placement and the cabling layout support the overall tile design objectives.

The LED display system offers flexibility in terms of the number of media sources displayed and the overall resolution. Color and brightness matching, as well as other functions, can be performed across an entire array.

The video source connections between the cabinets are represented by the blue line. The power connections between the cabinets are represented by the red line.

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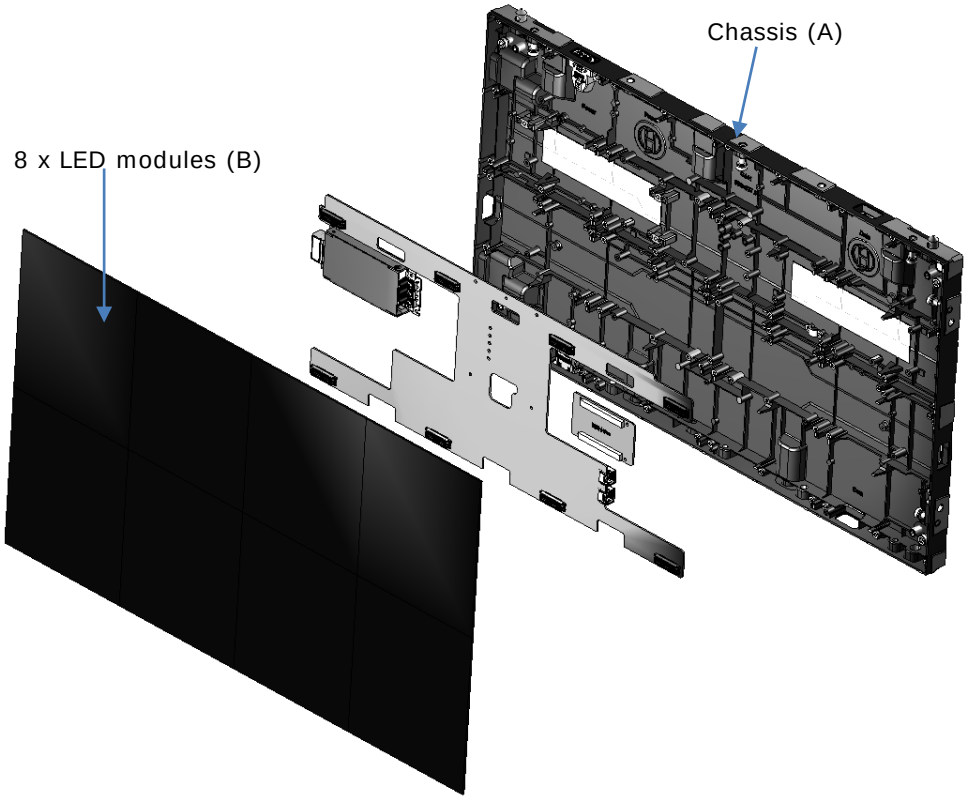
Installation and setup

The configuration of an array depends on the installation. Use the following instructions as a guideline only. Before you install an LED array, fully understand all site requirements and characteristics.



Installing an LED array from the front

Perform the following steps when you install a LED array while facing the LED modules.

1. Install the mounting poles.

   See the steps in the *Installing the mounting poles* topic on page 10.

2. Mount the tiles (A in the image above).

   See the steps in the *Mounting the tiles* topic on page 15.

3. Connect the data cables.

   See the steps in the *Connecting the data source cables* topic on page 17.

4. Connect the power cables between tiles.

   See the steps in the *Connecting the power cables* on page 17.

5. Install the LED modules (B in the image above).

   See the steps in the *Installing the LED modules* topic on page 18.

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6. Power on the array.

   See the steps in the *Powering on the array* topic on page 21.

7. Install the controller software.
8. Configure the controller.

The controller can be configured at any time. Before connecting the controller to the wall, Christie recommends updating the firmware and configuring the controller.

Installing the mounting poles

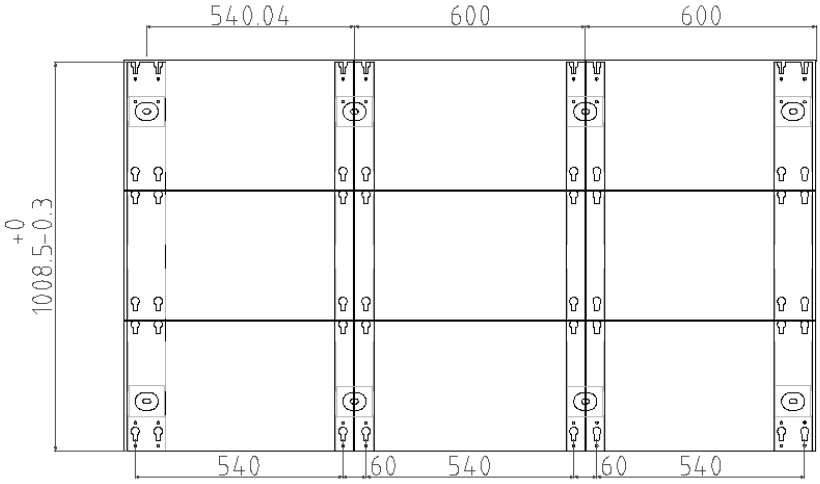
If the tiles are being installed onto a flat wall surface, determine where vertical mounting poles should be installed, and attach them to the support structure.

Warning! If not avoided, the following could result in death or serious injury.

- External support for a display wall must be designed and implemented by a Christie qualified installer and must comply with local area regulations and safety standards.
- All display walls must have permanent external supports. The amount of external support required depends on the size of the display wall.
- A minimum of two people or appropriately rated lift equipment is required to safely lift, install, or move the product.

The vertical mounting poles are available in five different configurations:

For 3x3 array



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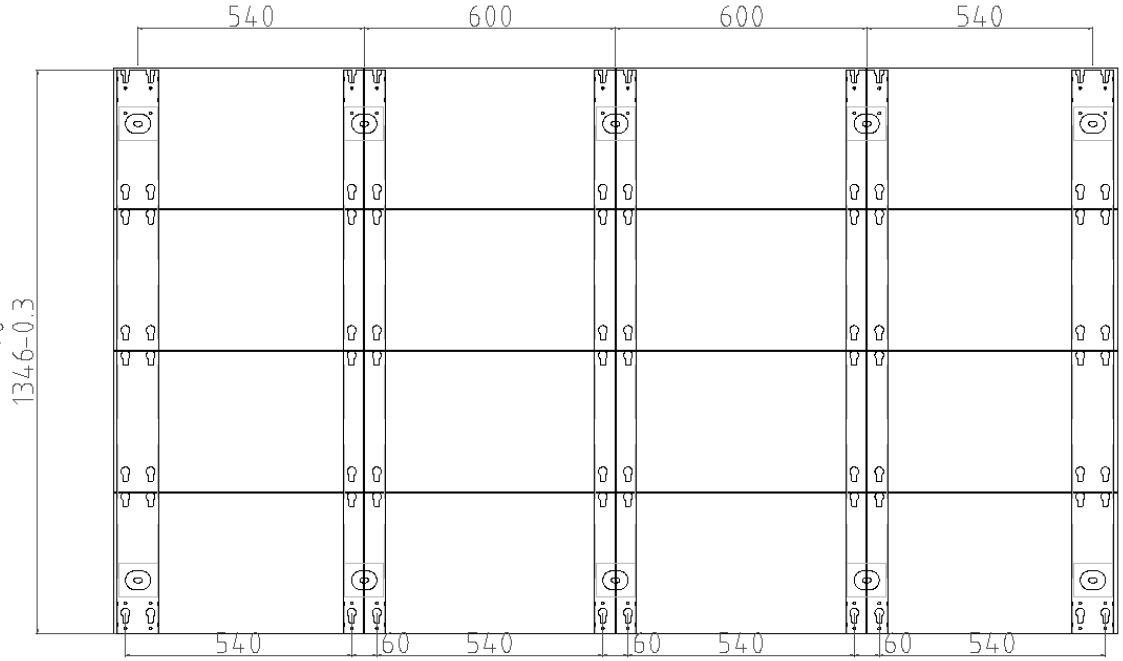
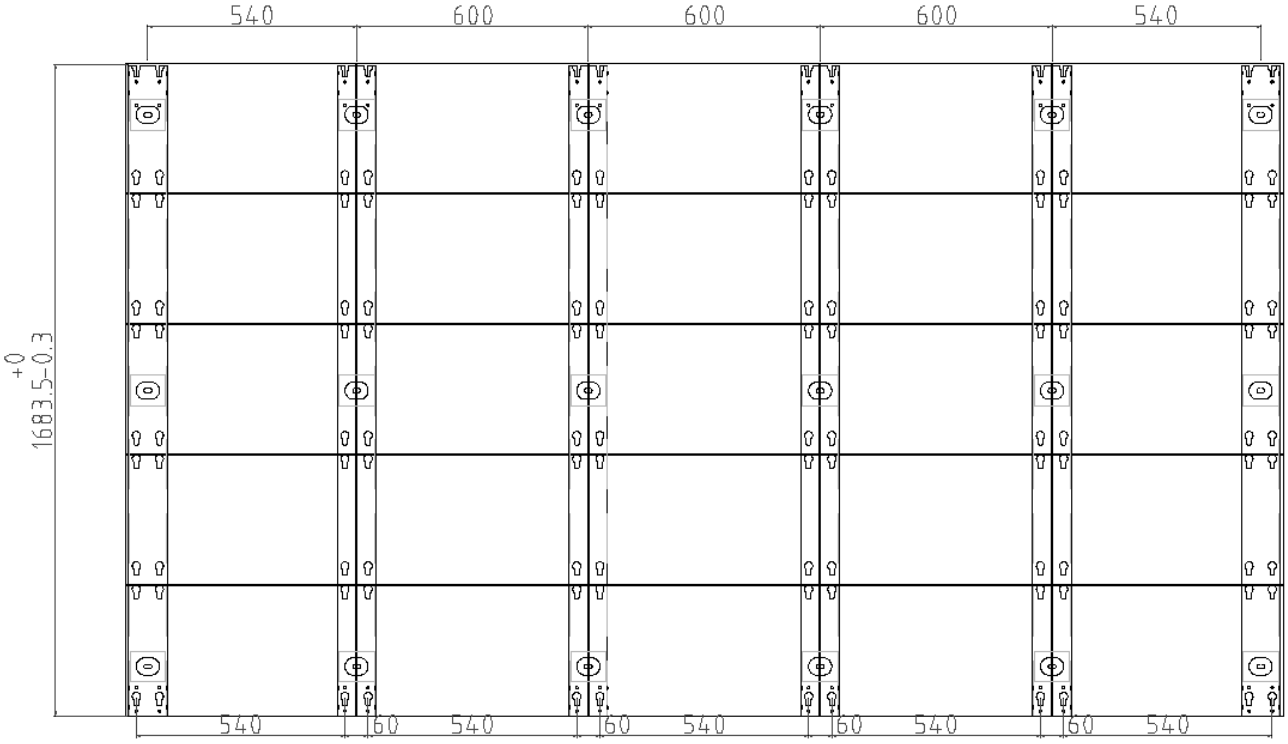
For 4x4 array



For 5x5 array



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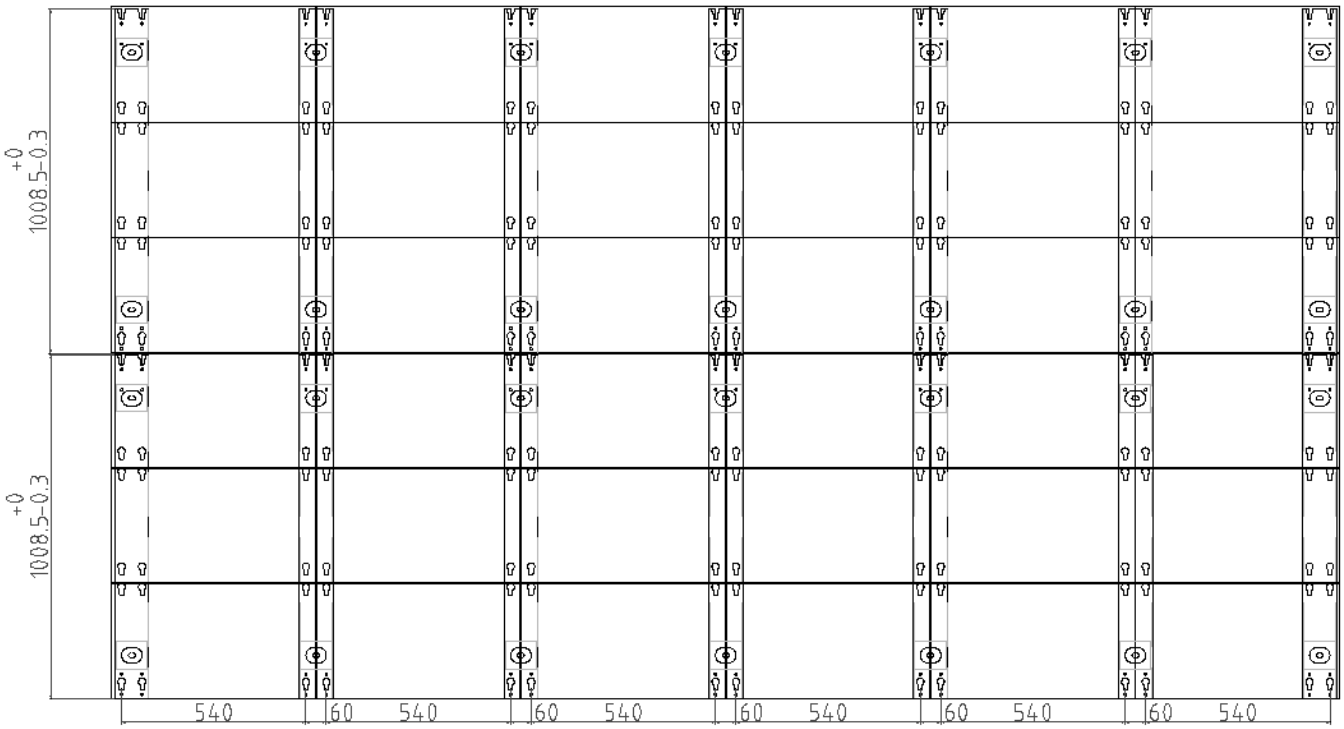
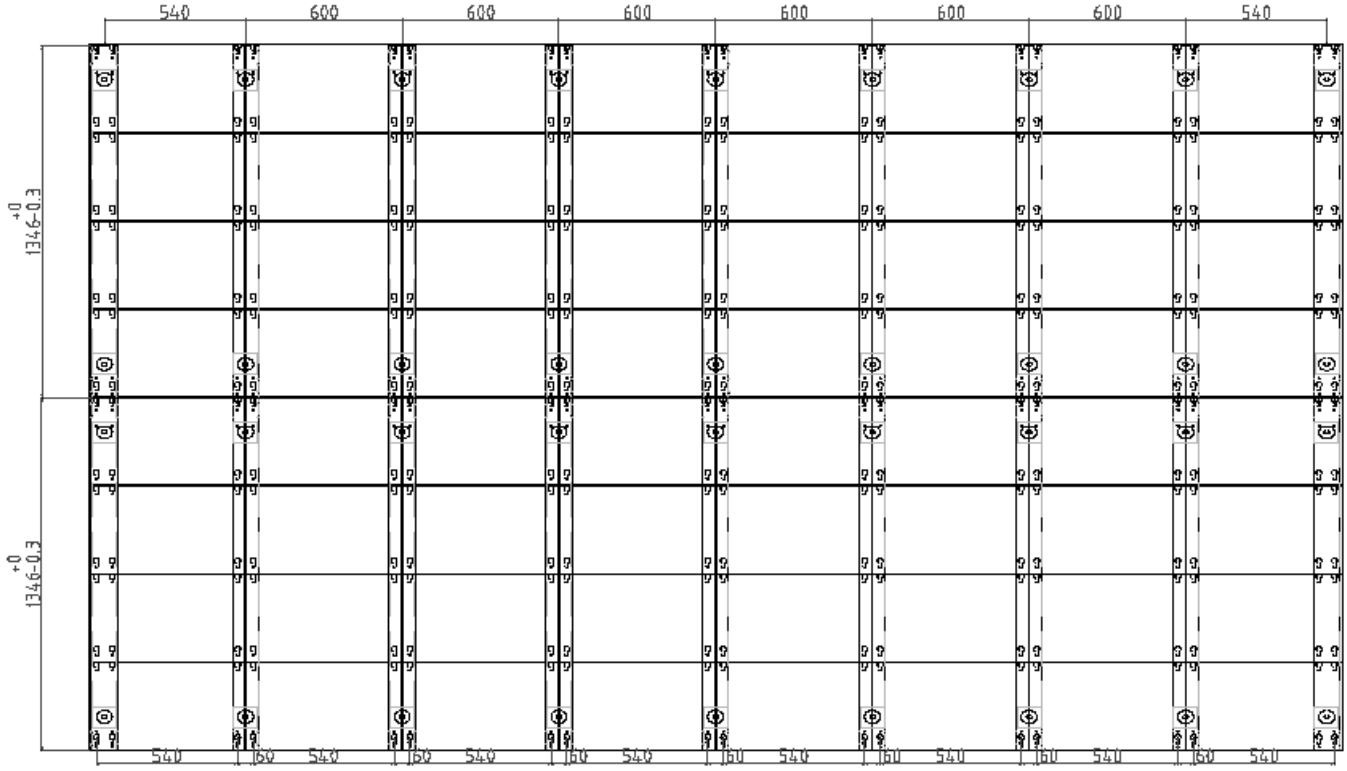
For 6x6 array



For 8x8 array



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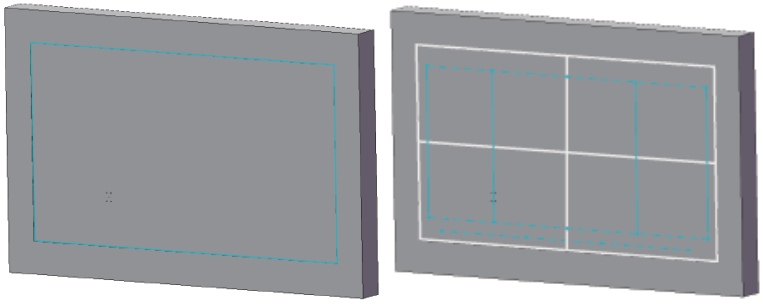
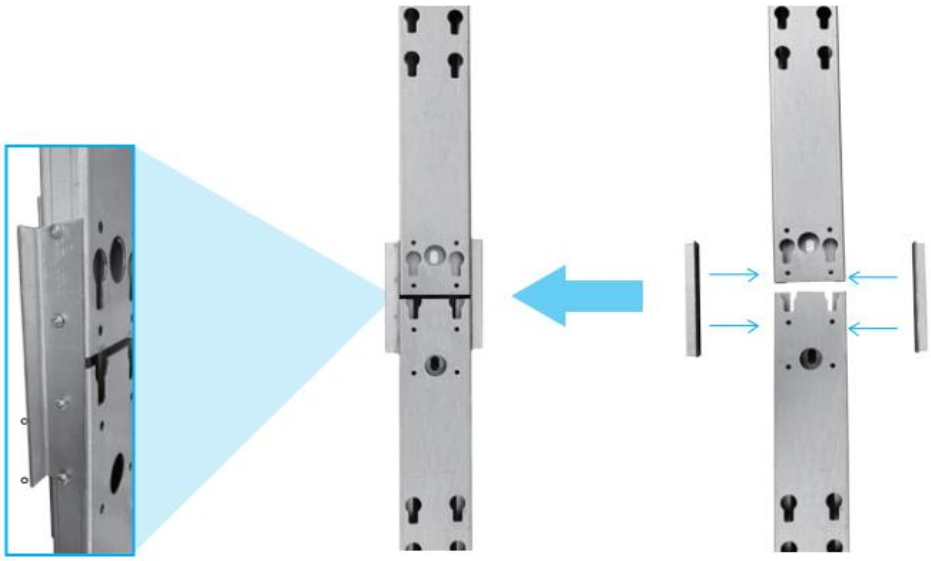
Follow the steps below to install the mounting brackets:

1. If the tiles are being mounted on an external support structure, make sure the external support structure is anchored to the wall and/or to the floor.
   The design and anchoring of the LED display structure is not the responsibility of Christie. Contact a Christie representative for structure design options.
2. To determine where the mounting blocks should be installed, find and mark the border of the display area with a tape measure.



3. Assemble each column bracket first if there are more than one row of brackets.
   a. Align the upper and lower bar brackets.
   b. Fix the upper and lower bar brackets together with two side connecting plates (each connecting plate needs four screws).



4. Fix a bar to the support structure using screws (four fasteners, two in the top slot and two in the bottom slot).

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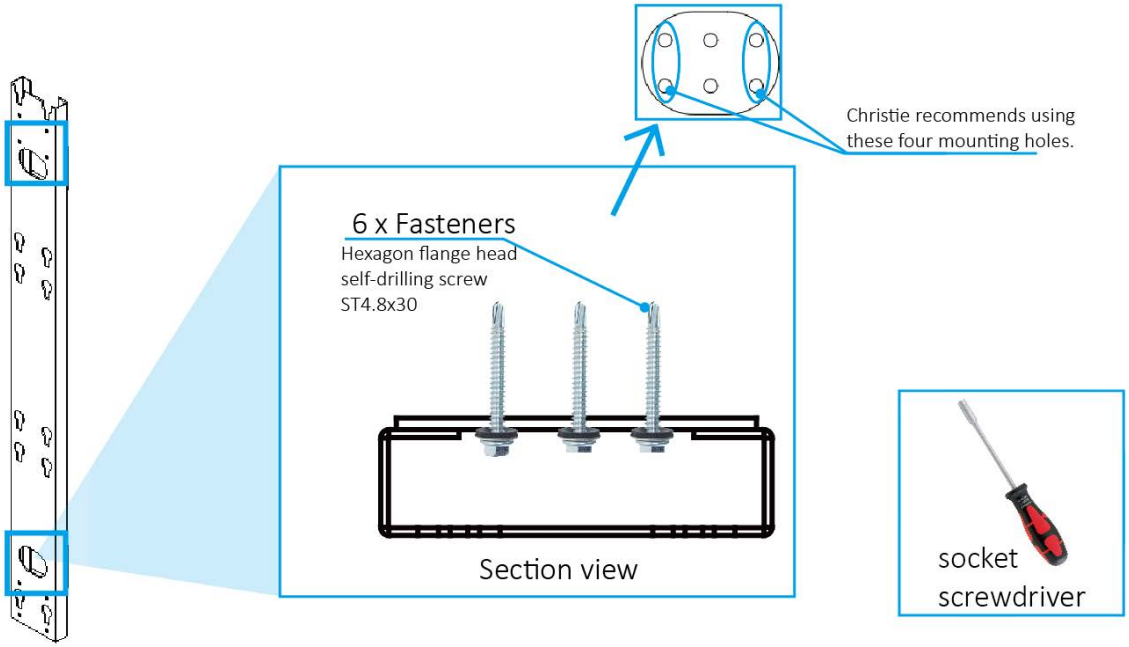
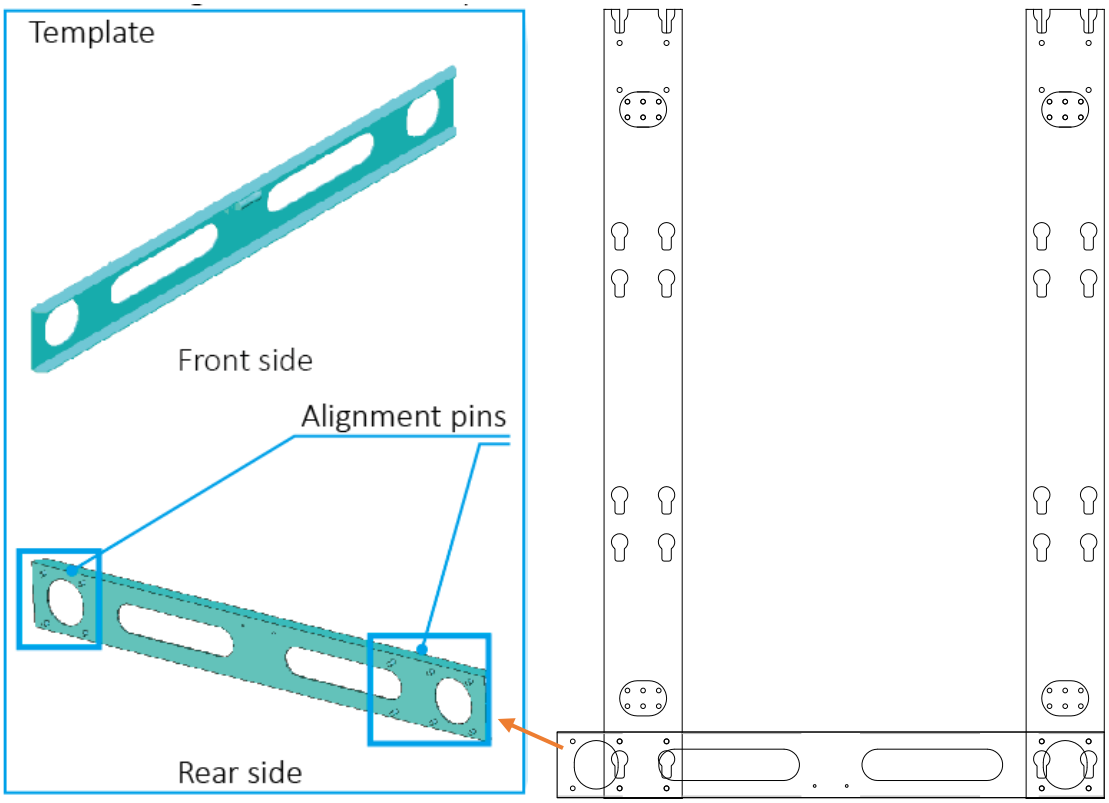


5. Use the two alignment tools when installing the bars.



6. Fix the bar to the support structure using the screws from step 4.
7. Repeat steps 5 to 6 to mount another bar.
   Note the orientation of the alignment tool in the image below.

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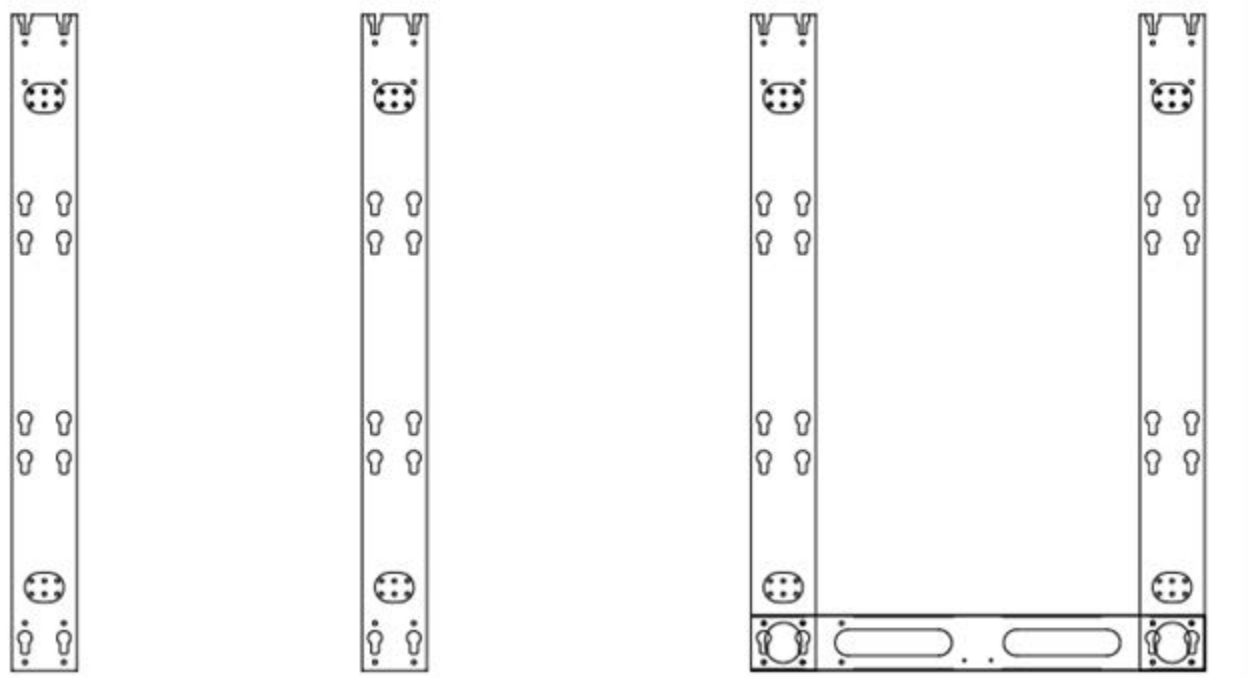

Mounting the tiles

Install the tiles in the array row by row. Do not attempt to construct the array column by column.

Warning! If not avoided, the following could result in death or serious injury.

- External support for a display wall must be designed and implemented by a Christie qualified installer and must comply with local area regulations and safety standards.
- All display walls must have permanent external supports. The amount of external support required depends on the size of the display wall.
- A minimum of two people or appropriately rated lift equipment is required to safely lift, install, or move the product.

1. If present, remove the metal plates that cover all the external pass-through holes in the tile chassis, including the plate surrounding the power and data ports.

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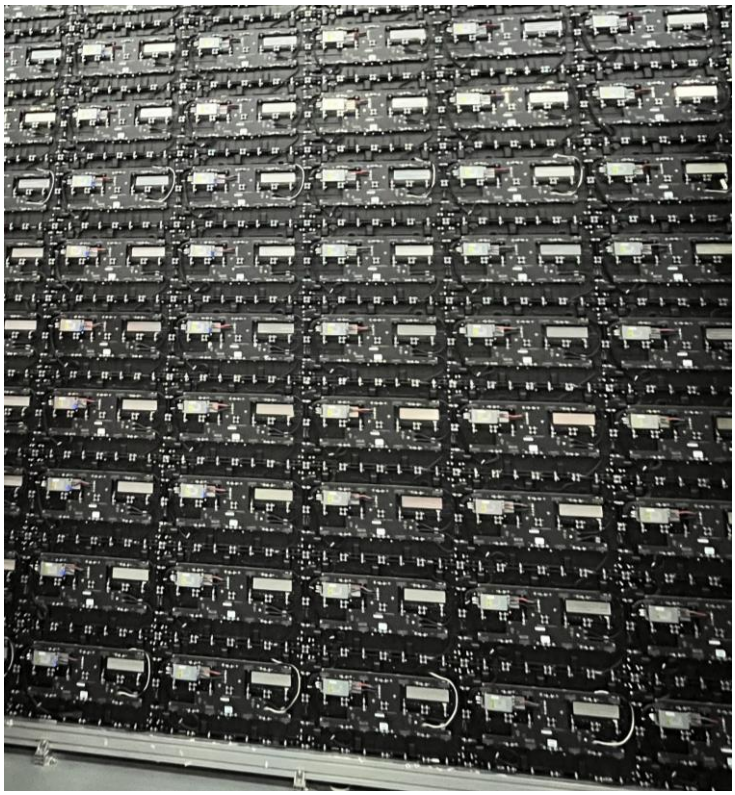
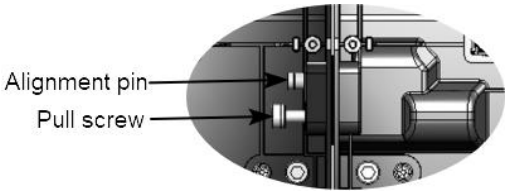
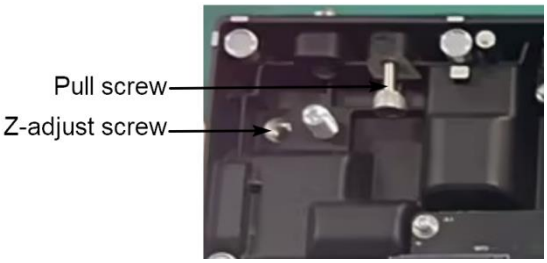


2. Attach the first tile in the center of the bottom row to the vertical mounting poles on the four mounting points. Make sure the M6 screws have at least three full thread engaged into the tile.
3. To install the second tile in the row, repeat steps 1 and 2.
4. Insert the alignment pins between the first tile chassis and the second tile chassis, then use the pull screw to bring the first and second chassis completely flush to each other.



5. Use the Z-adjust screw to align the chassis for perfect flatness.



6. To determine what adjustments are needed on the tile chassis, it may be necessary to install and remove the LED modules multiple times.
7. Repeat steps 1 to 6 for all the remaining tiles in the bottom row.
8. After the bottom row is installed and all tiles are correctly aligned, repeat steps 1 to 7 for the remaining rows.

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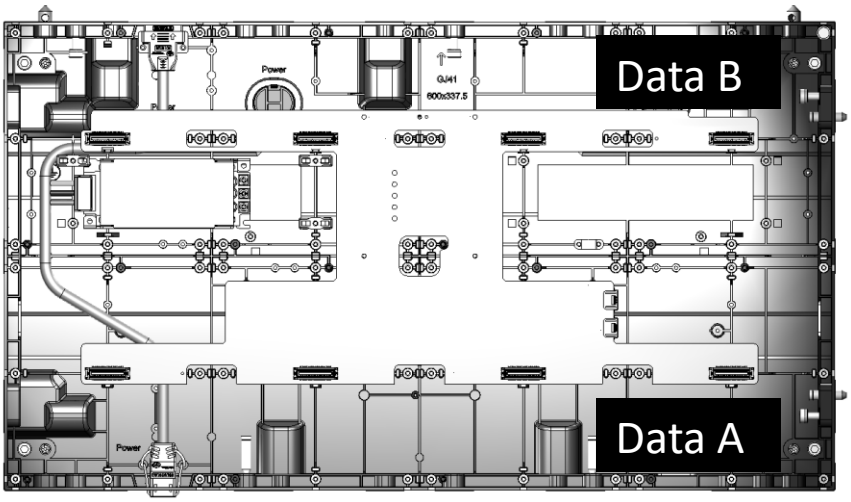
Connecting the data source cables

Connect the data cables between the tiles in the array, column-by-column.

1. Connect the Ethernet jumper-cables between the tiles in the array.

   As the Ethernet communication is bi-directional, this connection can be made from top-to-bottom in the column or tiles, or vice versa. You can also connect the data cables horizontally across the row of tiles but a longer Ethernet jumper-cable is needed.



2. Connect an Ethernet cable from each Ethernet output port on the controller to the corresponding tile according to the connection diagram provided in the design package for your project.

Connecting the power cables

Connect the power cables between the tiles in the array, column by column.

Caution! If not avoided, the following could result in minor or moderate injury.

- SHOCK HAZARD! The line cord has a maximum power carrying capability. For the maximum number of tiles that may be connected per daisy chain when connecting to the power supply, see the product specifications.

1. Connect the power cable to the next tile in the array.

   Power cables must be connected top-to-bottom and only vertical connection within a column is possible.

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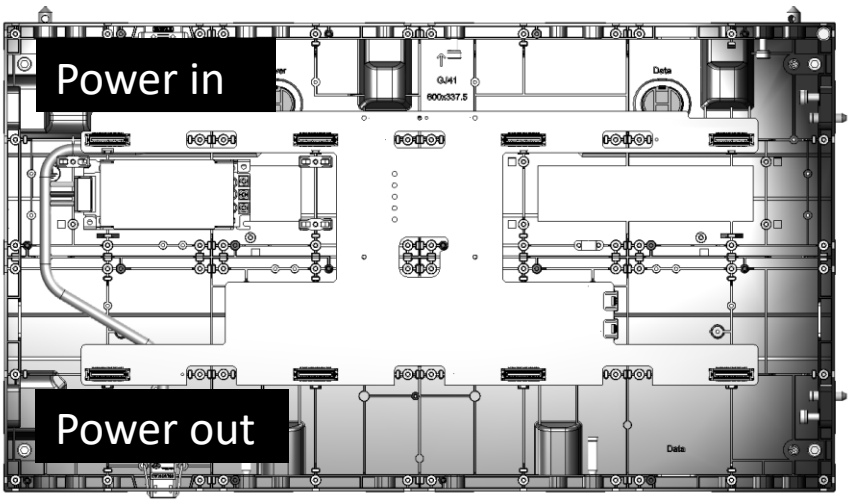

2. Connect the main power cable from the wall outlet to the top tile in each column of tiles in the array.

Installing the LED modules

The following steps use the small LED module as an example.

1. Check the sticker on each LED module to identify the corresponding cabinet number and correct position within the cabinet.
    a. Install the LED module according to the ordering chart shown below:

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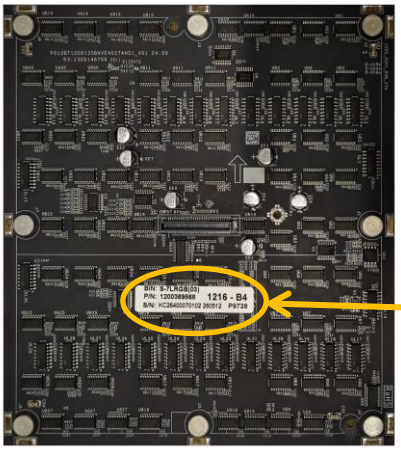

1216-A1	1216-A2	1216-A3	1216-A4
1216-B1	1216-B2	1216-B3	1216-B4

297679P00009715.db	2026/5/18 15:22	Data Base File	316 KB
297679P00009716.db	2026/5/18 15:22	Data Base File	316 KB
297679P00009717.db	2026/5/18 15:22	Data Base File	316 KB
297679P00009718.db	2026/5/18 15:22	Data Base File	316 KB
297679P00009719.db	2026/5/18 15:22	Data Base File	316 KB
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297679P00009732.db	2026/5/18 15:53	Data Base File	316 KB
297679P00009733.db	2026/5/18 15:53	Data Base File	316 KB
297679P00009734.db	2026/5/18 15:53	Data Base File	316 KB
297679P00009735.db	2026/5/18 15:53	Data Base File	316 KB
297679P00009736.db	2026/5/18 15:53	Data Base File	316 KB
297679P00009737.db	2026/5/18 15:53	Data Base File	316 KB
297679P00009738.db	2026/5/18 15:53	Data Base File	316 KB

b. The meaning of each of the items on the sticker above is shown in the table below:

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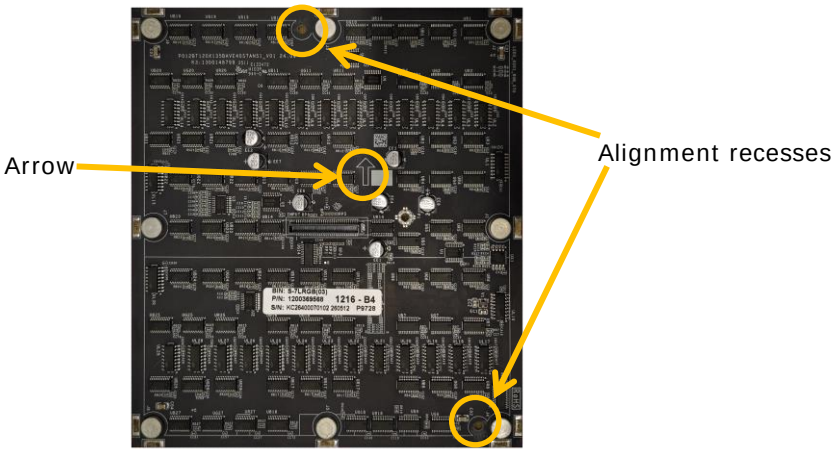
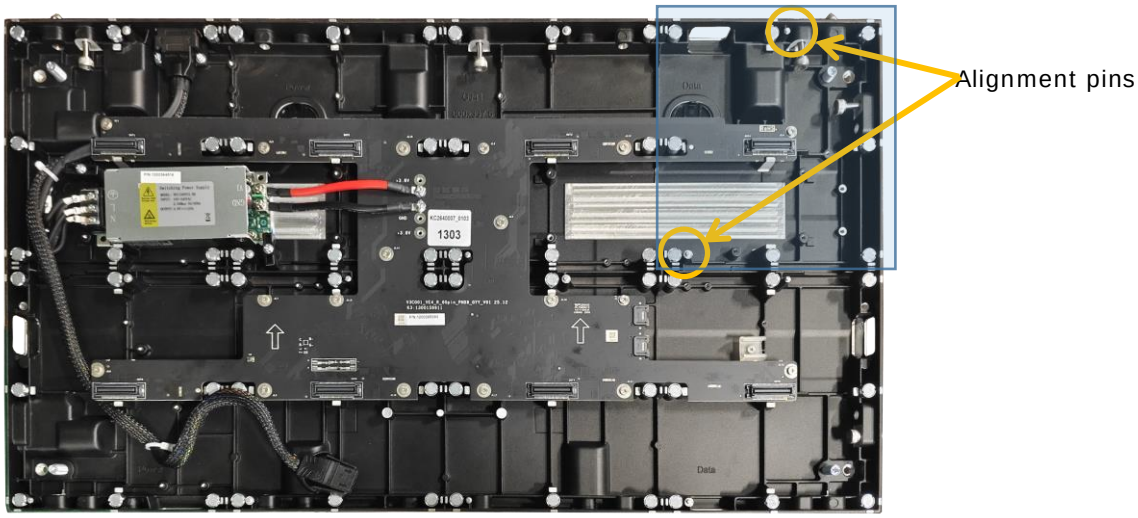
BIN: Tube type
P/N: Module material code
S/N：Order No. + Date
1216-B4：Cabinet No.-Module No.
P9728：module file serial No.
297679P00009728: .db file name (Photometry data file)：
OP No.+module file serial No.

2. Line up the LED module with the alignment pins in the alignment recesses, making sure the arrow on the back of the LED module is pointing up.



3. Set the LED module into place on the alignment recesses.
   If the LED module does not fit back into place or there is a gap between the LED modules of two tiles, adjust the spacing between the tiles.



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Powering on the array

Turn on each component in the array in the order below.

1. Start the computer that is the video source.
2. Plug the tiles into the wall.
3. Turn on the controller.
    a. On the rear of the controller, turn the power switch to **On**.
    b. On the front of the controller, select **Power**.

Powering off the array

Turn off each component in the array in the order below.

1. Turn off the controller.
    a. On the front of the controller, select **Power**.
    b. On the rear of the controller, turn the power switch to **Off**.
2. Power off the computer.

Connecting to video sources

An LED array requires a controller to display content on the tiles.

1. Connect the data cable from the first tile in the array to the controller.
2. Connect the HDMI or DVI output from the video source (computer or media player) to the appropriate input port on the controller.
3. Power on the array.

   After the controller is connected and powered up, the video content is available as long as the video source is connected.

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Regulatory

This product conforms to the latest regulations and standards related to product safety, environmental requirements, and electromagnetic compatibility (EMC).

Safety

- IS 13252(Part 1):2010/ IEC 60950-1:2005
- IEC 62368-1:2014
- EN IEC 62368-1:2014+A11:2017

Electro-magnetic compatibility

- EN 55032:2015/A11:2020
- EN 55035:2017/A11:2020
- EN IEC 61000-3-2:2019/A2:2024
- EN 61000-3-3:2013/A2:2021

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