

Installing flat panels on the ML25 wall mount

The ML25 is a full-service video wall mount that can accommodate the Ultra and Extreme Series tiled LCD panels in landscape orientation, resulting in a combined depth of 101.6 mm (4 in.)

The modular mount system features a pull-out mechanism that provides rear screen access, and the ability to adjust the X, Y, and Z axis alignment. The mount supports 34 kg (75 lbs). The maximum display sizes of 49", 55", and 65" diagonally.



Features

Use the ML25 wall mounts to hang and adjust the flat panels, and to access the rear of the panels.

- ADA compliant mounting option for USA.
- Achieve maximum combined panel and mount depth of 101.6 mm (4 in.)
- Modular mount for large video wall display configurations.
- Adjustments of panels for optimal gaps.
- Spring-loaded mechanisms secure displays.

Safety warnings and cautions

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.

- Concrete wall must be at least 8" (203 mm) thick with a minimum of 2000 psi density. Lighter density concrete may not hold the concrete anchor.
- Cinder block wall must meet ASTM C-90 specifications and have a minimum nominal width of 8 in (203 mm).
- Wood studs covered with plywood must be a minimum of 2 in x 4 in nominal size and the plywood a minimum ½ in (13 mm) thick. Plywood may be covered by drywall up to 5/8 in (15.875 mm) thick.
- The supporting structure must safely support the combined load of the product, all attached hardware, and components following all local safety standards and regulations.
- A minimum of two people or appropriately rated lift equipment is required to safely lift, install, or move the product.
- Always handle the display panel from the sides or handles.
- Christie products must be installed and serviced by Christie qualified technicians.
- Before drilling holes locate electrical, gas, and water lines.
- Only install the product on recommended surfaces.



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

- PINCH HAZARD! Keep fingers away when operating the mount.
- Do not over-tighten hardware.
- This product is intended for indoor use only.
- Do not exceed the maximum load capacity of the product.
- Always provide proper ventilation for the product to prevent overheating.
- Before installation, inspect all components for cracks, deformations, corrosion, and missing or damaged parts that could reduce their installation strength.

Handling and mounting guidelines

Follow these best practices when handling and mounting panels.



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

- When moving the panel, always use the handles. Do not carry the panel by the frame.
- Do not twist, bend, or tilt the panel.
- Do not apply excessive force to the sides of the bezel when mounting the panel or pushing into its locked position.
- Always handle the display panel from the sides or handles.

Follow the following guidelines before removing the panel from the packaging.

- Always use the handles to pick up and carry the panel.
- Leave the panel in the box until the mount is on the wall and you are ready to install the panel.

- To avoid putting undue stress on the panel when mounted, make sure the mount is square, flat, and level.
- Do not rest panels on top of a lower panel.
- When inserting the panel into the wall, pay close attention to adjacent panels.
- Make sure there is a minimum of 0.5 mm between mounted panels to allow for thermal expansion.

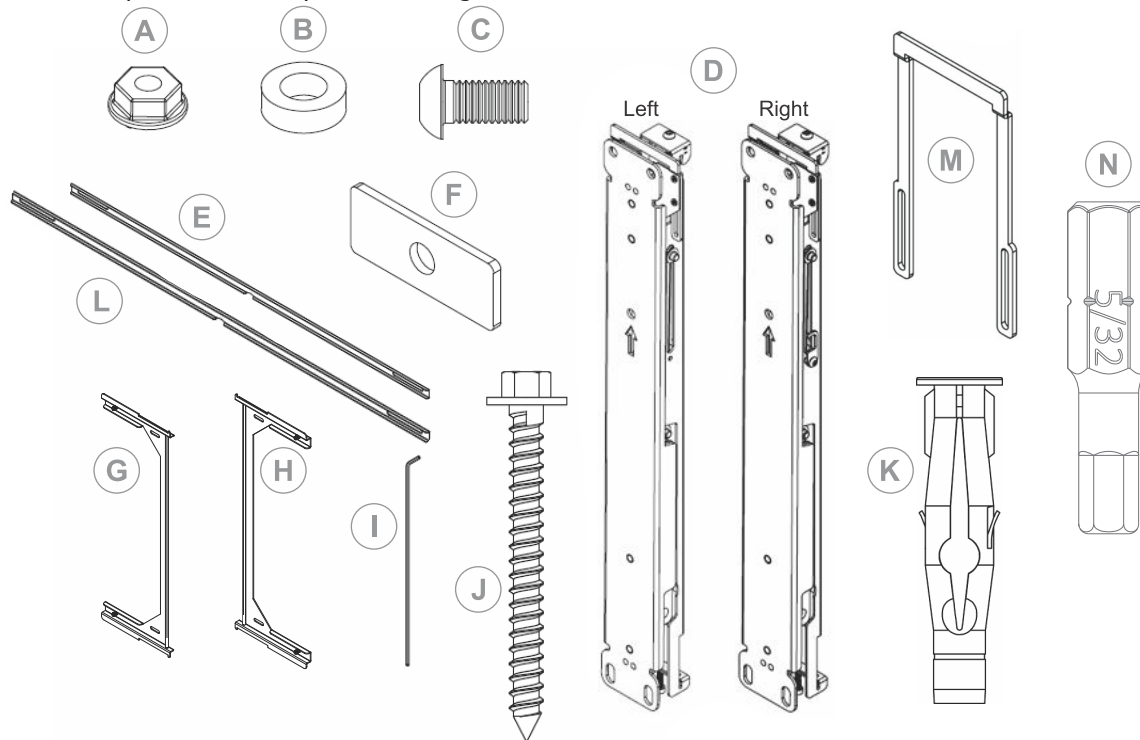
Types of installations

Learn the supported surfaces for installing the wall mounts.

Wall construction	Hardware required
Plywood	Included
Solid Concrete	Included
Cinder Block	Included

Required parts

Learn the parts necessary for installing the wall mounts.



A	Nut (Qty. 4)	H	Left vertical
B	Spacer (Qty. 8)	I	4mm pin hex wrench (Qty. 1)
C	M8 x 16 mm Philips head screw (Qty. 8)	J	#14 x 2.5" wood screw (Qty. 5)

D	Adapter bracket (Qty. 2—1 left scissor arm and 1 right scissor arm)	K	Concrete anchors (Qty. 5)
E	Cross bars for 49" and 55" panels (Qty. 2)	L	Cross bars for 65" panels (Qty. 2)
F	Washer (Qty. 4)	M	Pull handle for 65" panels
G	Right vertical	N	4 mm security bit

Required tools

Ensure the appropriate tools are available during the installation.

- 4mm pin hex wrench
- Pencil
- Drill
- Phillips screwdriver (2PT)
- #1 and #3 Philips drill bit
- 9/32" socket and socket wrench
- 5/16" (8 mm) bit for concrete and cinder block walls
- 5/32" (4 mm) bit for wood stud walls
- Level
- Tape measure
- Hammer

Ventilation requirements

For adequate ventilation, ensure the array does not exceed the maximum number of rows, as described in the table below.

The recommendation is based on the ambient temperature of the installation and an 8mm gap between the wall and the LCD display panels.



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

- Always provide proper ventilation for the product to prevent overheating.

The following ventilation requirements are available for FHD493-XE, FHD553-XE, FHD553-X, FHD553-XE-R, FHD553-XE-H, FHD553-XE-HR.

Ambient temperature	Maximum number of rows
25 °C (77 °F)	3
30 °C (86 °F)	2
35 °C (95 °F)	2

The following ventilation requirements are available for UHD654-X-HR, FDH554-XZ-H, FDH554-XZ.

Ambient temperature	Maximum number of rows
25 °C (77 °F)	4

Ambient temperature	Maximum number of rows
30 °C (86 °F)	4
35 °C (95 °F)	3
40 °C (104 °F)	2

The following ventilation requirements are available for FDH554-XZ-HR and FDH554-XZ-R.

Ambient temperature	Maximum number of rows
25 °C (77 °F)	4
30 °C (86 °F)	4
35 °C (95 °F)	3
40 °C (104 °F)	3

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: <https://bit.ly/2RifL6T> or <https://www.christiedigital.com/products/lcd-video-walls/>
 - 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 the LCD panels is available in the following documents.

- *FHD553-XE and FHD553-XE-H User Manual (P/N: 020-001183-XX)*
- *FHD553-XE-R and FHD553-XE-HR User Manual (P/N: 020-001198-XX)*
- *FHD493-XE User Manual (P/N: 020-001381-XX)*
- *FHD554-XZ-H(FHD554-XZ) and FDH554-XZ-HR(FDH554-XZ-R) User Manual (P/N:020-001725-XX)*
- *UHD654-X-HR User Manual (P/N: 020-001675-XX)*

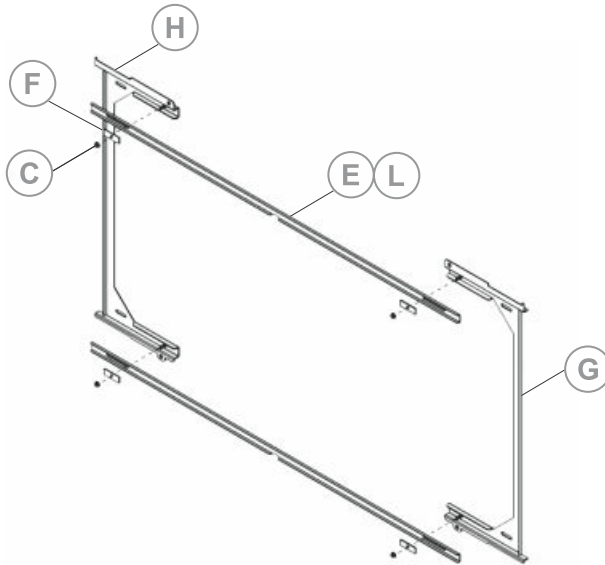
Assembling the wall mount

Combine the vertical supports and the cross bars to create the wall mount.

1. Select the appropriate size cross bars for the display panel.
For the 49" and 55" cross bars, adjust to the appropriate length depending on the size of the display panel.

Model of LCD panel	Cross bar size
FHD493-XE	49"
FHD553-XE, FHD553-X, FHD553-XE-R, FHD553-XE-H, FHD554-XZ-H, FHD553-XE-HR, FHD554-XZ-HR, FHD554-XZ, FHD554-XZ-R	55"
UHD654-X-HR	65"

2. Align the top cross bar (E or L) with the right and left vertical support (C and G).



3. Secure each end of the top cross bar and vertical supports with a nut and rectangular washer.
4. Before tightening the washer and nut, adjust the width of the wall mount to the size of the LCD panel.
For the 49" panel, the wall mount must be fully collapsed. For the 55" panel, the wall mount must be fully expanded.
5. Tighten the washer and nuts.
6. Repeat steps 2 to 5 for the bottom cross bar.

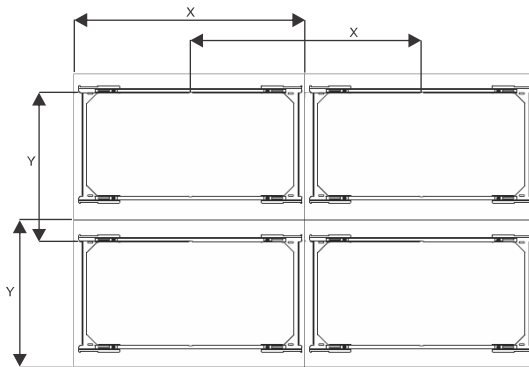
Installing the wall mount

Learn how to install the wall mounts onto different surfaces.

The maximum load capacity of the wall mount is 34 kg (75 lbs).

When installing the wall mounts, ensure there is proper spacing between the mounts to accommodate the panels. Always start with the bottom center display panel in the array.

1. Measure the width and height of the display panel.
2. Locate the center of the bottom center display panel in the array.
3. To measure the width of the display panel from the center notch of the wall mount of the first display to the center notch of the wall mount for the second display (X).
To allow for display panel adjustments, include additional space in the measurement.
4. Install all wall mounts in the bottom row according to the instruction for the mounting surface.
Install all rows starting with the center display panel and work outwards to the edges of the array.
5. Install the next row of display panels.
 - a) Measure the height of a display panel.
To allow for display panel adjustments, include additional space in the measurement.
 - b) From the notch in the wall mount of the center display panel in the bottom row, measure upwards the height of the display panel and mark the location (Y).
This is the notch location for the first wall mount of the second row.
 - c) Install the wall mounts for all display panels in the next row of display panels.
After installing the wall mount, to make sure wall mounts are aligned in the horizontal position, Christie recommends using a laser level.



Installing the mount to plywood

Learn how to install the wall mounts onto plywood.

The hardware provided is for attaching the mount through standard thickness drywall into plywood.

When installing the wall mounts on a wood stud wall covered with plywood, verify that the wood studs are a minimum of 2" x 4" nominal size and the plywood is a minimum Grade BC 1/2" (13 mm) thickness. Plywood may be covered by drywall up to 5/8" thick.

In areas where the mounting screws do not encounter a wood stud, the screws must be mounted onto plywood.

1. Drill a 5/32" (4 mm) diameter hole 2.5" (64 mm) deep and install a #14 x 2.5" wood screw, leaving a 6mm (1/4") gap from the plywood.
2. Hang the wall mount on the center screw.
3. Drill four 5/32" (4 mm) diameter holes 2.5" (64 mm) deep.

4. Tighten the four #14 x 2.5" wood screws so that the wall plate is firmly attached, but do not over-tighten.
Never tighten in excess of 80 in-lbs (9Nm).

Installing the mount to solid concrete or cinder block

Learn how to install the wall mounts onto solid concrete or cinder block walls.



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

- Concrete wall must be at least 8" (203 mm) thick with a minimum of 2000 psi density. Lighter density concrete may not hold the concrete anchor.
- The supporting structure must safely support the combined load of the product, all attached hardware, and components following all local safety standards and regulations.

When installing wall mounts onto cinder blocks, verify that you have a minimum of 1-3/8" (35 mm) of actual concrete thickness in the hole to be used for the concrete anchors. The cinder block must meet ASTM C-90 specifications and a minimum nominal width of 8".

1. Use a standard electric drill on a slow setting to drill a 5/16" (8 mm) diameter hole to a minimum depth of 2.5" (64 mm).
2. Insert an anchor into the hole flush with the wall.
3. Install a #14 x 2.5" wood screw, leaving a 6mm (1/4") gap from the concrete.
4. Hang the wall mount on the center screw.
5. Level the wall mount and mark the center of the four mounting holes. Remove the mount from the wall.
6. Use a standard electric drill on a slow setting to drill four 5/16" (8 mm) diameter holes to a minimum depth of 2.5" (64 mm).
To avoid breaking out the back of the hole when entering a void or cavity, do not use a hammer drill. On cinder block walls, mount in a solid part of the block, generally 1" (25 mm) minimum from the side of the block. Do not drill into mortar joints.
7. Insert anchors into the holes flush with the wall.
Never attach concrete expansion anchors to concrete or cinder block covered with plaster, drywall, or other finishing material.
8. Place the pull out mount assembly over the anchors and secure it with four #14 x 2.5" screws. Make sure the concrete anchors do not pull away from the concrete when tightening the screws.
9. Tighten the four #14 x 2.5" wood screws so that the wall plate is firmly attached, but do not over-tighten.
Never tighten in excess of 80 in-lbs (9Nm).

Attaching the adapter brackets to the display panel

The display panel must have the adapter brackets installed before it can be attached to the wall mount.

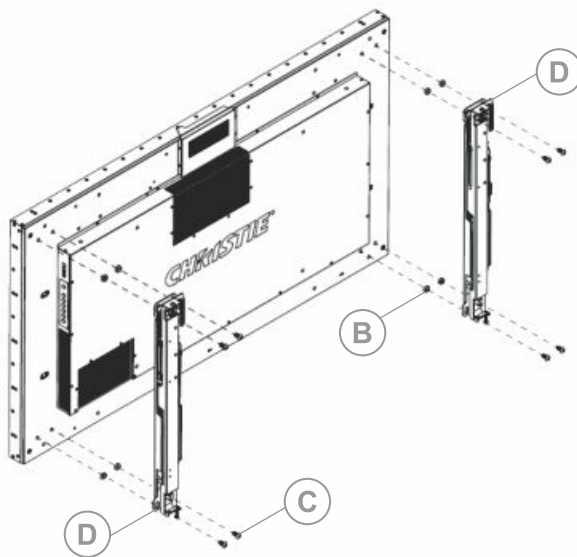


Notice. If not avoided, the following could result in property damage. Do not use a power drill or equipment to attach brackets to the panel.

1. When installing the brackets on the UHD654-X-HR display panel, remove the pull handle from the top of the bracket, and replace it with the longer pull handle (M).
Ensure the arrow direction of brackets is same with the arrow direction of panel.
2. Attach the adapter brackets to the back of the display panel using eight M8 x 16 mm Philips head screws.

For 49" display panels, the spacers can be used but the installed display panel will be more than 4" from the wall.

For 55" and 65" display panels, insert the spacer between the adapter brackets and the display panel before attaching the brackets with the M8 x 16 mm Philips head screws.



Attaching the panels to the wall mount for a video wall installation

Install the panel with the brackets onto the wall mount.

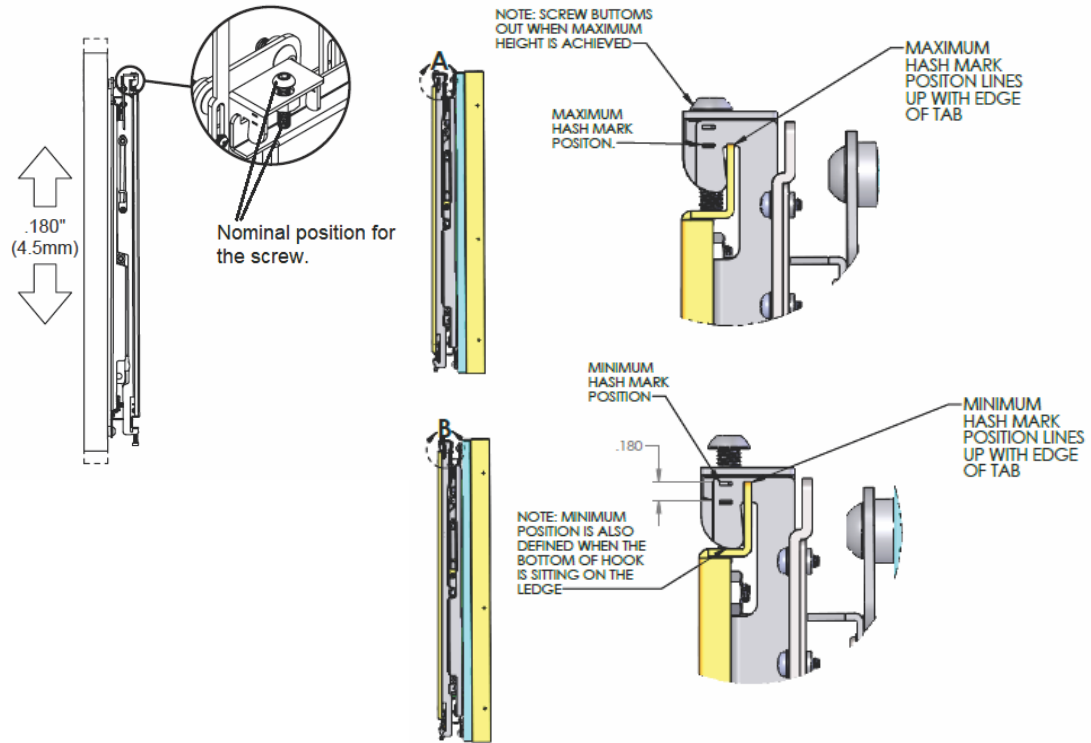
For Video wall installations, install the panels starting from the center position of the bottom row, and proceed to install adjacent panels in the same row before moving to the next row above.



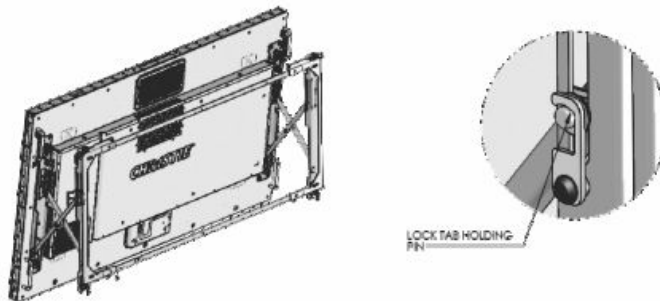
Notice. If not avoided, the following could result in property damage. Check for wire pinching repeatedly throughout this process.

1. Adjust the Y axis mechanism to the nominal position, where the screw is in the middle position.

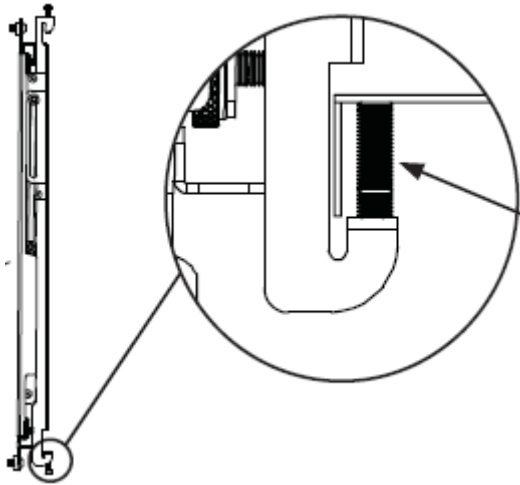
The screw can be adjusted up or down by approximately 2.25 mm.



2. To keep the scissor mechanism extended, lock the pin before attaching it to the wall brackets.



3. Loosen the security screw on the mount and ensure the top head of security screw is not higher than the top surface of the screw hole.



4. To hang the adapter brackets onto the wall mount, attach the top hooks of the brackets to the top cross bar on the wall. Align the bottom hooks with the bottom cross bar and gently slide it into position.

Maintain an upright position of the panel when installing on the wall mount. Tilting the panel greater than 10 degrees may result in damage.

5. Adjust the x-axis location of the panel by sliding the panel along the top cross bar to achieve desired location and then lock adjustment.
6. Adjust the y-axis location of the panel by turning the adjustment wheels to achieve the desired location and then lock adjustment.
7. Adjust the z-axis location of the panel by adjustment screw to achieve the desired location.
8. Loosely fasten the panel in place using the security screw.
9. Install the AC or DC power cables and the signal loop through cables.
10. Route the cables along the top and bottom of the mount to use the holes for cable tie attachments.
Cable routing channels are also available on the LCD panel.
11. Repeat steps 1 to 10 for each panel in the video wall.
12. To achieve the required location, keep the scissor mechanism fully collapsed and adjust the z-axis location of the panel with the adjustment screw.
13. Before installing the row above, use a 4mm pin hex wrench to tighten the security screws on the bottom of each mount to lock the panels in place.

Based on different scaling requirements, Christie recommends using a spacer (P/N: 003-006724-XX)—0.5 mm, 1.0 mm, 1.5 mm—to adjust the gap.

Moving the display panel left and right

Slide the panel to the left or right to align it with the panel to the side.

1. Using a 4mm pin hex wrench, loosen the security screws holding the panel adapter brackets onto the wall mount.
2. Slide the panel to the left or right as necessary.

3. Tighten the security screws.

Moving the display panel up and down

Use the height adjustment screw to move the display panel up and down.

1. To raise a side, turn the height adjustment screw clockwise.
2. To lower a side, turn the height adjustment screw counter-clockwise.
3. Tighten the security screws on the mount.

When sliding or moving the bezel to the left or right, up or down, to avoid damaging the panels use a 0.5mm, 1.0 mm, 1.5 mm spacer tool between the panels before moving them (P/N: 003-006724-XX).

Adjusting the distance between the display panel and the wall mount

Use the adjustment wheel to move the display panel further from or closer to the wall.

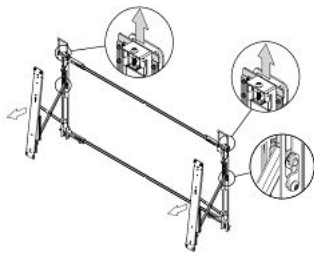
1. To move the corner out from the wall mount, turn the adjustment wheel clockwise.
2. To move the corner towards the wall mount, turn the adjustment wheel counter-clockwise.

Accessing the rear of the panel

To extend the adapter brackets, pull the panel away from the wall mount and fully extend the brackets. Directly after servicing the panel, close the brackets and return the panel to the original position.

To avoid damaging the panel during servicing, *follow the handling and mounting guidelines* (on page 2).

1. To pull the LCD panel away from the wall mount, lift up on the handles.
The pull handles are located on the top side of each of the left and right brackets of the mount.
To access the locking tabs for a mount, it may be necessary to extend the adapter brackets of the LCD panels above it.
To avoid damaging the LCD panel always release both locking tabs at the same time and move the panel forwards evenly.



2. Pull the panel away from the wall mount.

To pull the panel away from the wall mount, it may be necessary to extend the adapter brackets of adjacent panels.

Technical support

Technical support for Christie 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: +65 6877-8737 or *Support.APAC@christiedigital.com*
- Christie Professional Services: +1-800-550-3061 or *NOC@christiedigital.com*