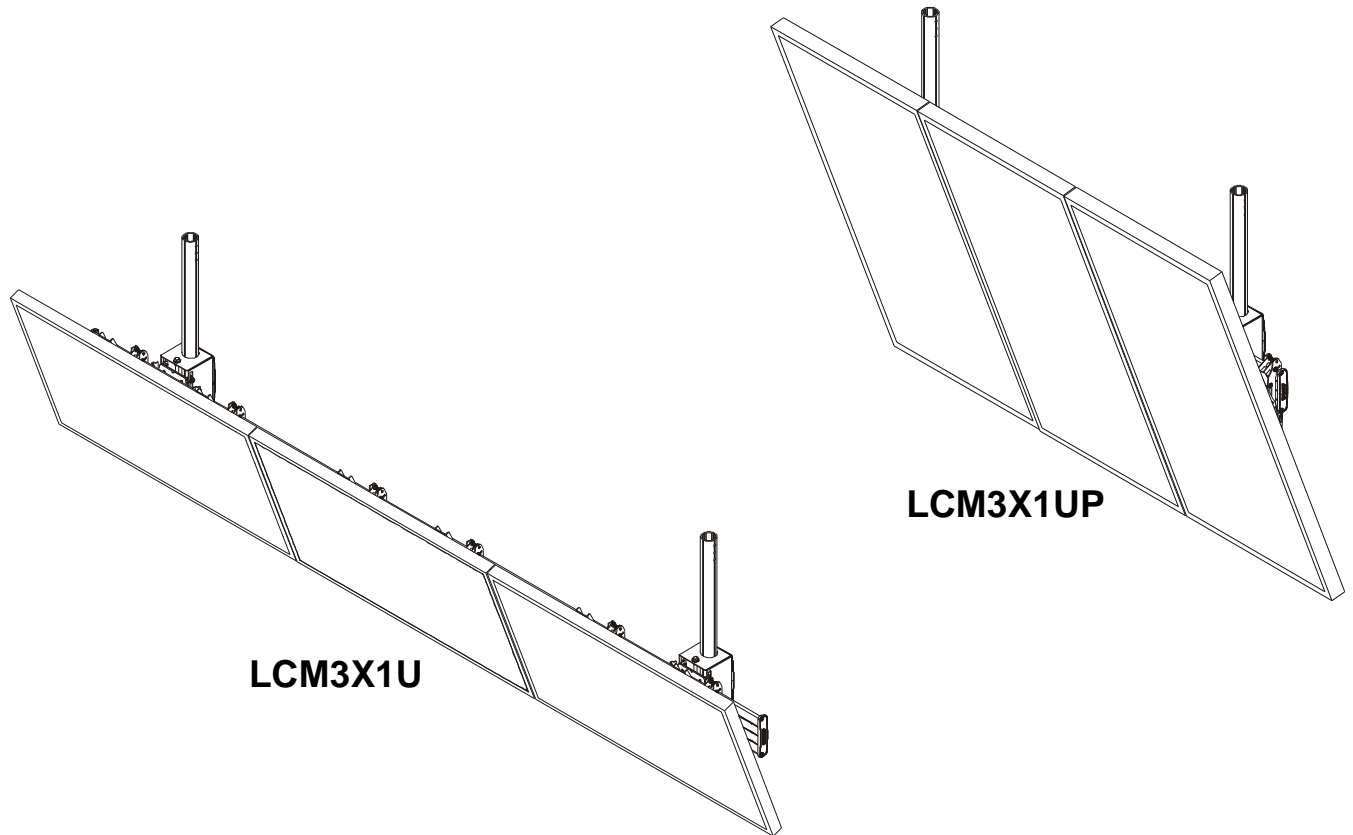


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# INSTALLATION INSTRUCTIONS

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## Ceiling-Mounted Menu Boards


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**DISCLAIMER**


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 **IMPORTANT SAFETY INSTRUCTIONS**

 **WARNING:** A WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.

 **CAUTION:** A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.

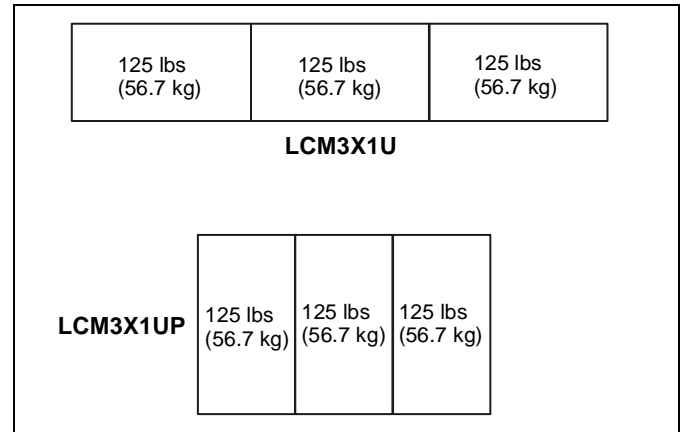
 **WARNING:** Failure to read, thoroughly understand, and follow all instructions can result in serious personal injury, damage to equipment, or voiding of factory warranty! It is the installer's responsibility to make sure all components are properly assembled and installed using the instructions provided.


 **WARNING:** Failure to provide adequate structural strength for this component can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this component is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the component.


 **WARNING:** Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components located within the mounting system of the LCM3X1U/LCM3X1UP models does not exceed maximum weights listed in Table 1.

**Table 1: Weight Capacity**

MODEL	Max Weight Allowed for EACH Display	Max Weight Capacity of Mounting System
LCM3X1U	125 lbs (56.7 kg)	375 lbs (170.1 kg)
LCM3X1UP	125 lbs (56.7 kg)	375 lbs (170.1 kg)



 **WARNING:** Never operate this mounting system if it is damaged. Return the mounting system to a service center for examination and repair.

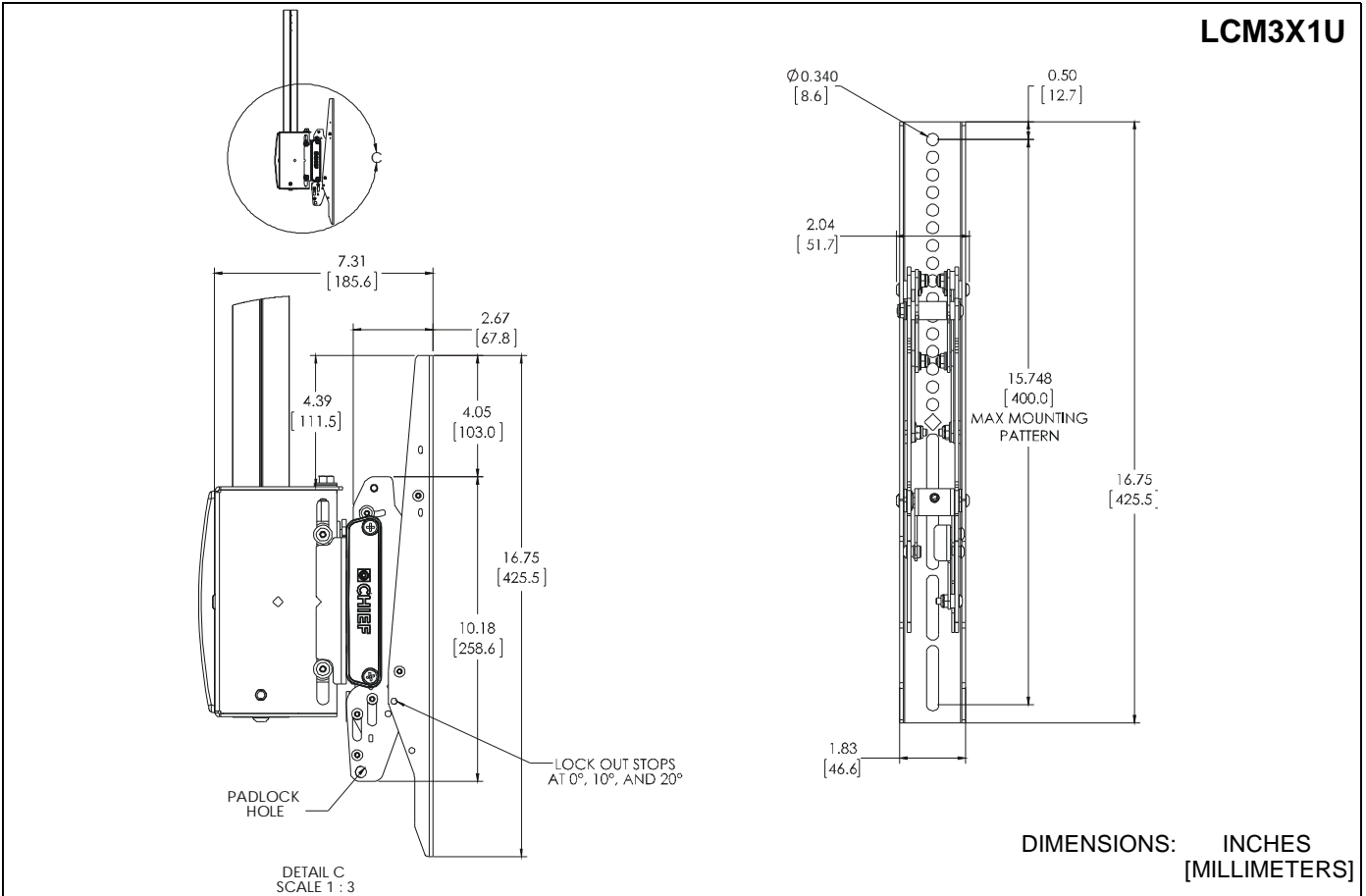
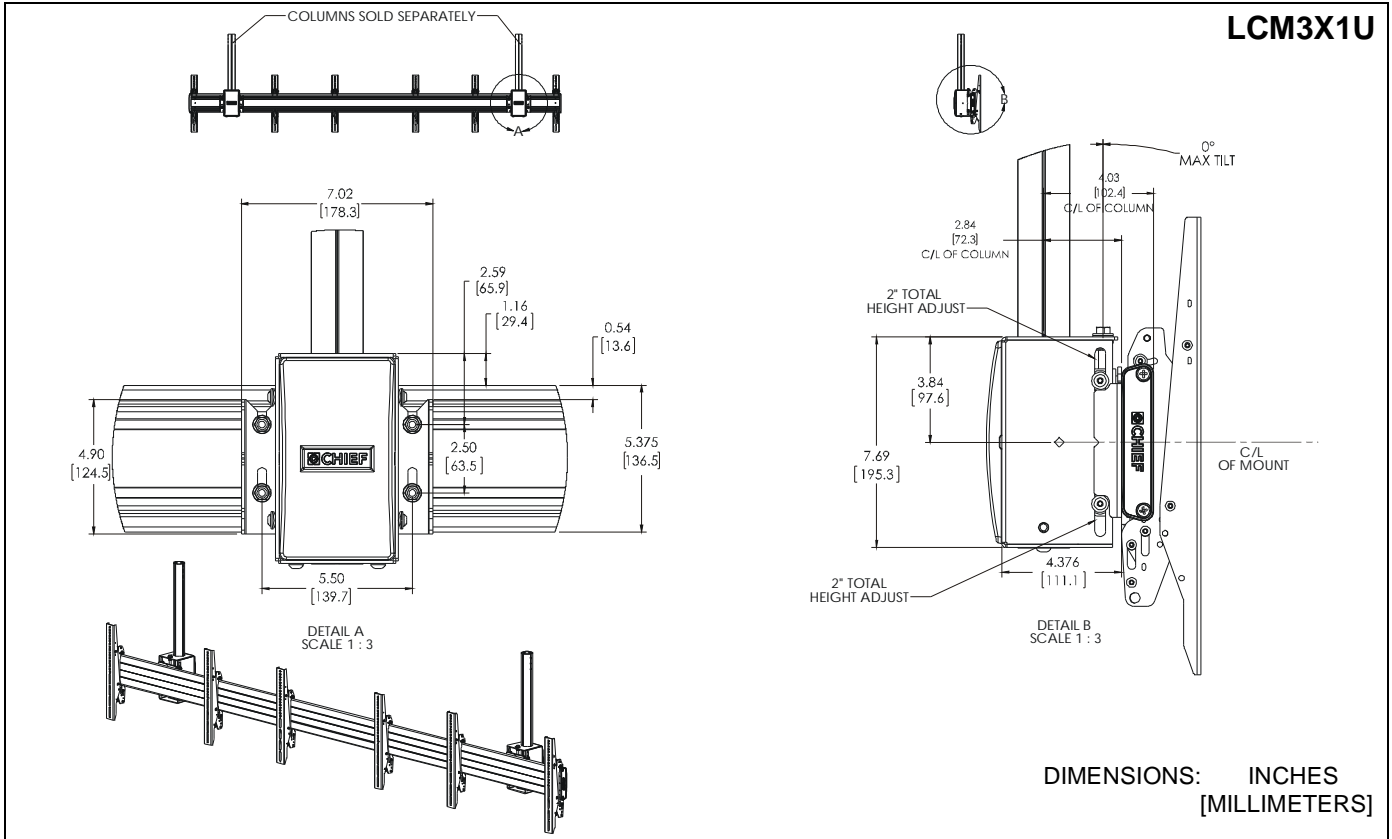
 **WARNING:** Do not use this product outdoors.

**NOTE:** The LCM3X1U and LCM3X1UP ceiling mounted menu boards are intended to be used with the UL Listed CPA Ceiling Plates (not included): CPA330, CPA365, CPA395.

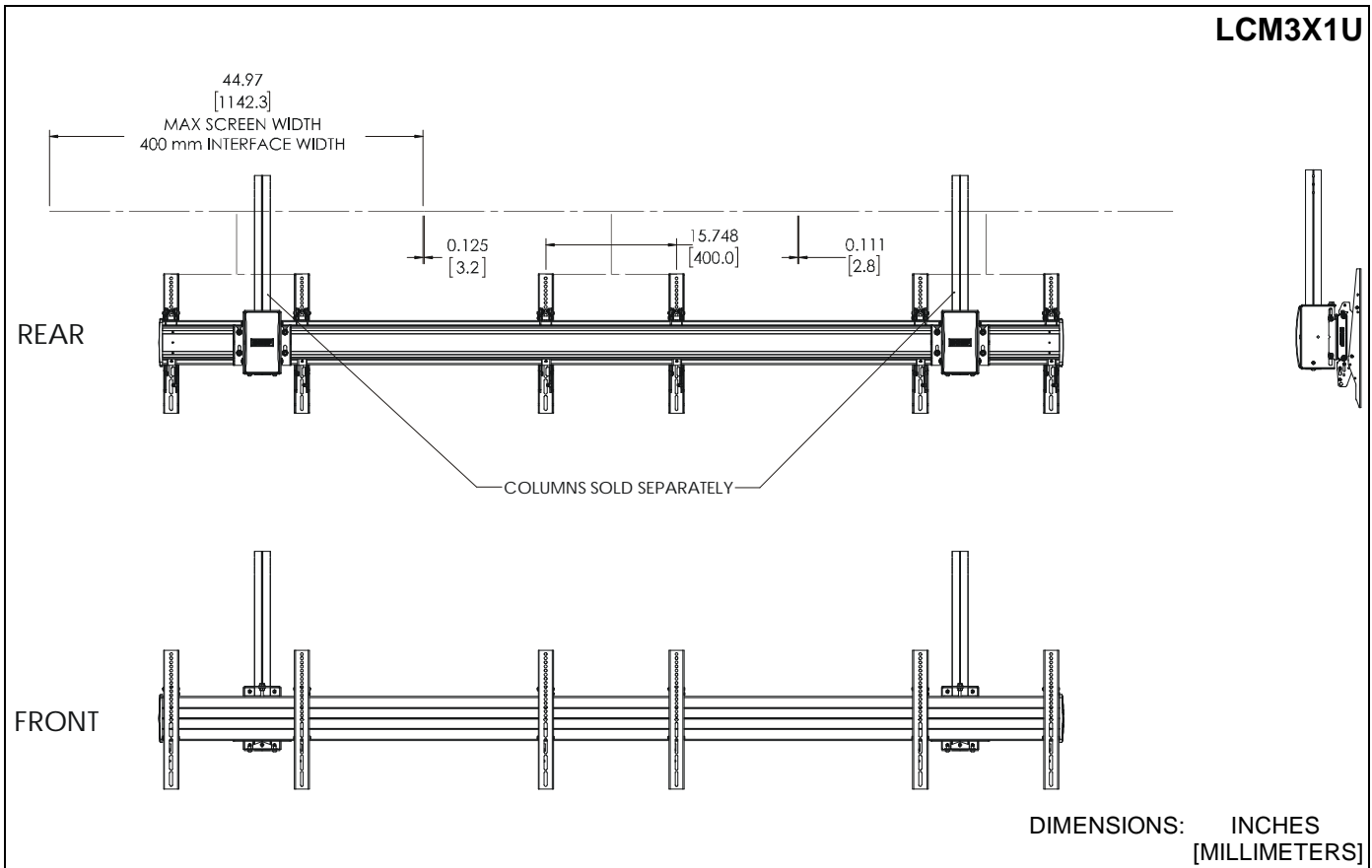
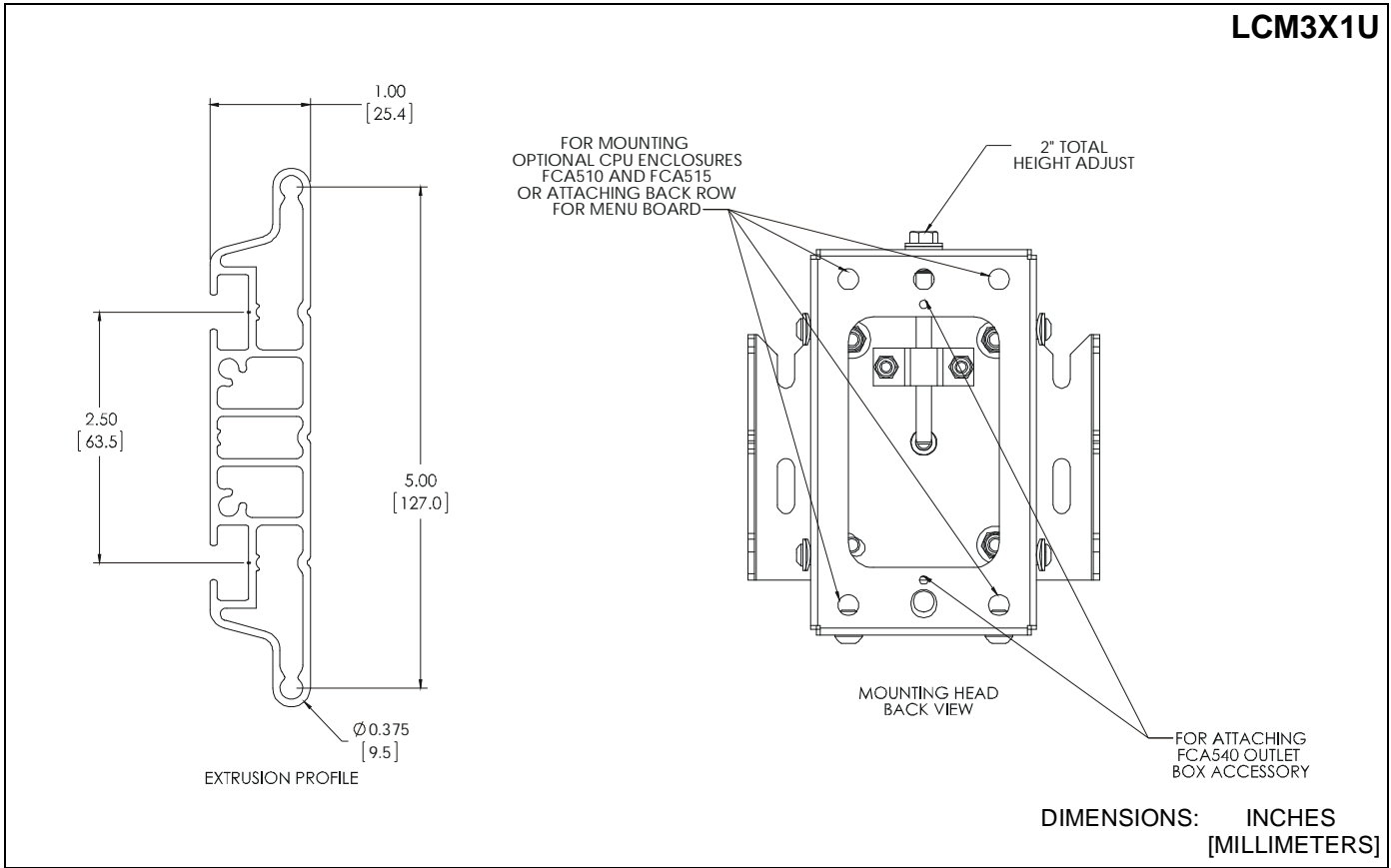
The following UL Listed Chief ceiling plates WITHOUT swaged collars (not included) may also be used: CMA330, CMA345, CMA395.

**--SAVE THESE INSTRUCTIONS--**

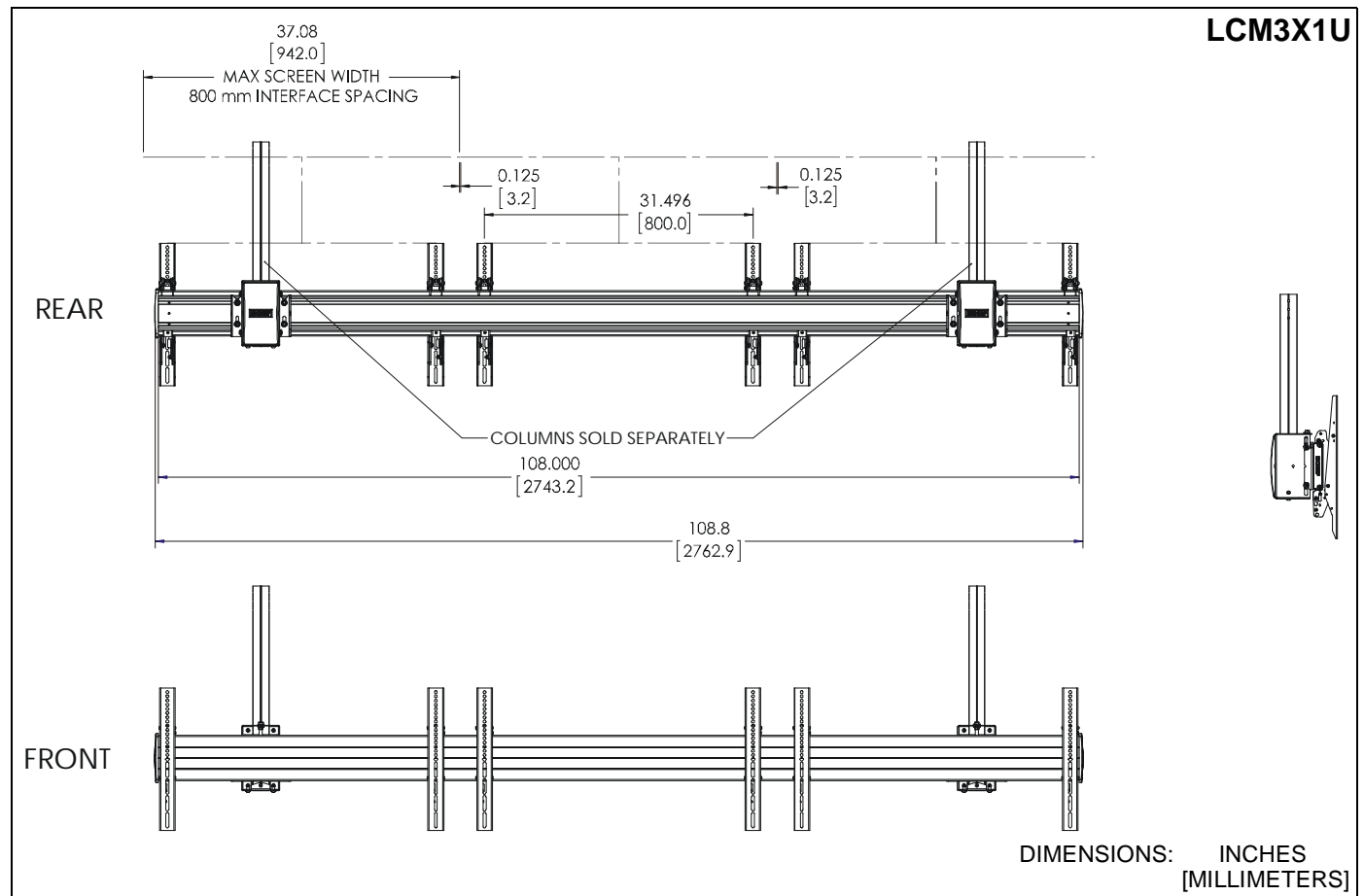
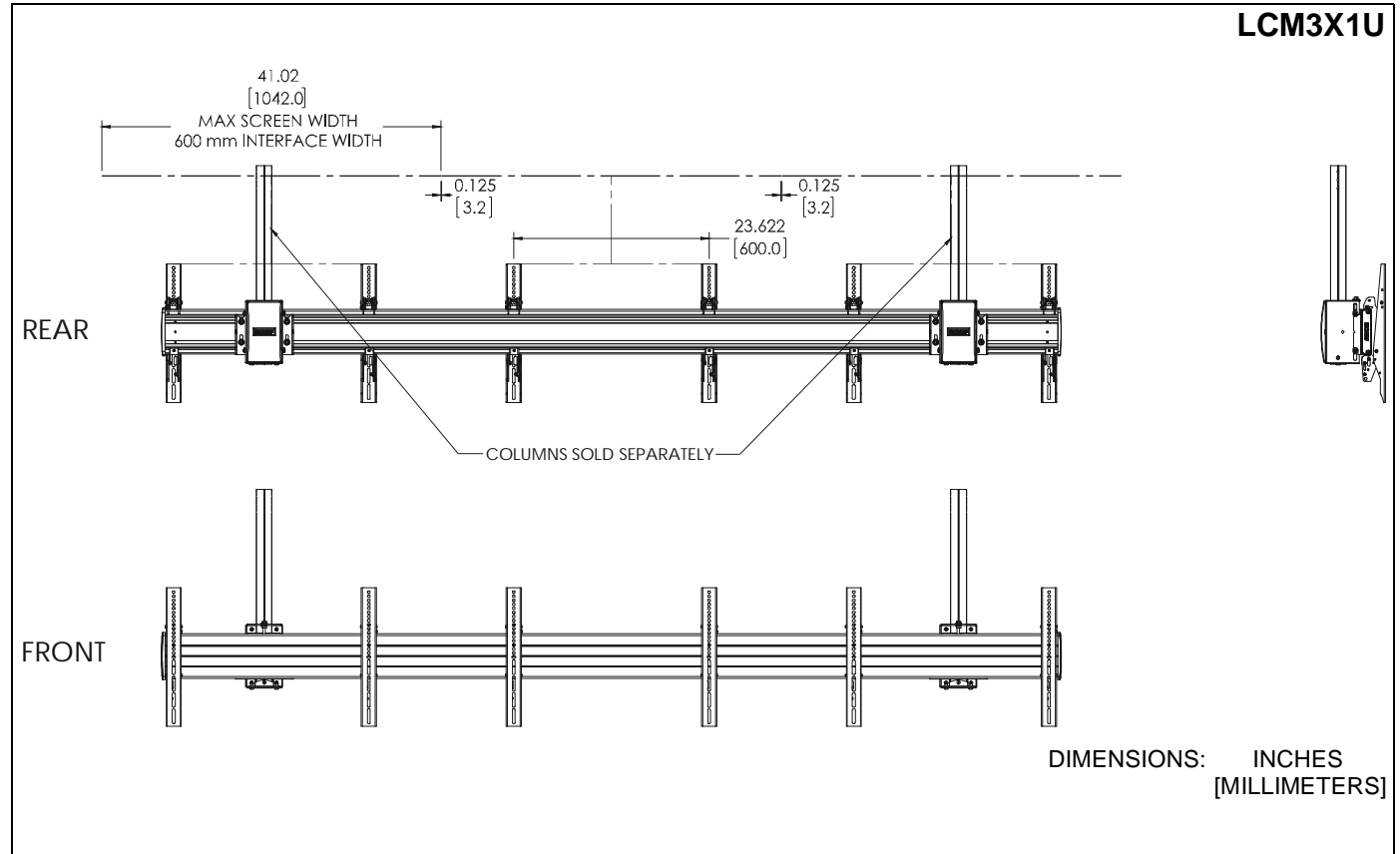
**DIMENSIONS**



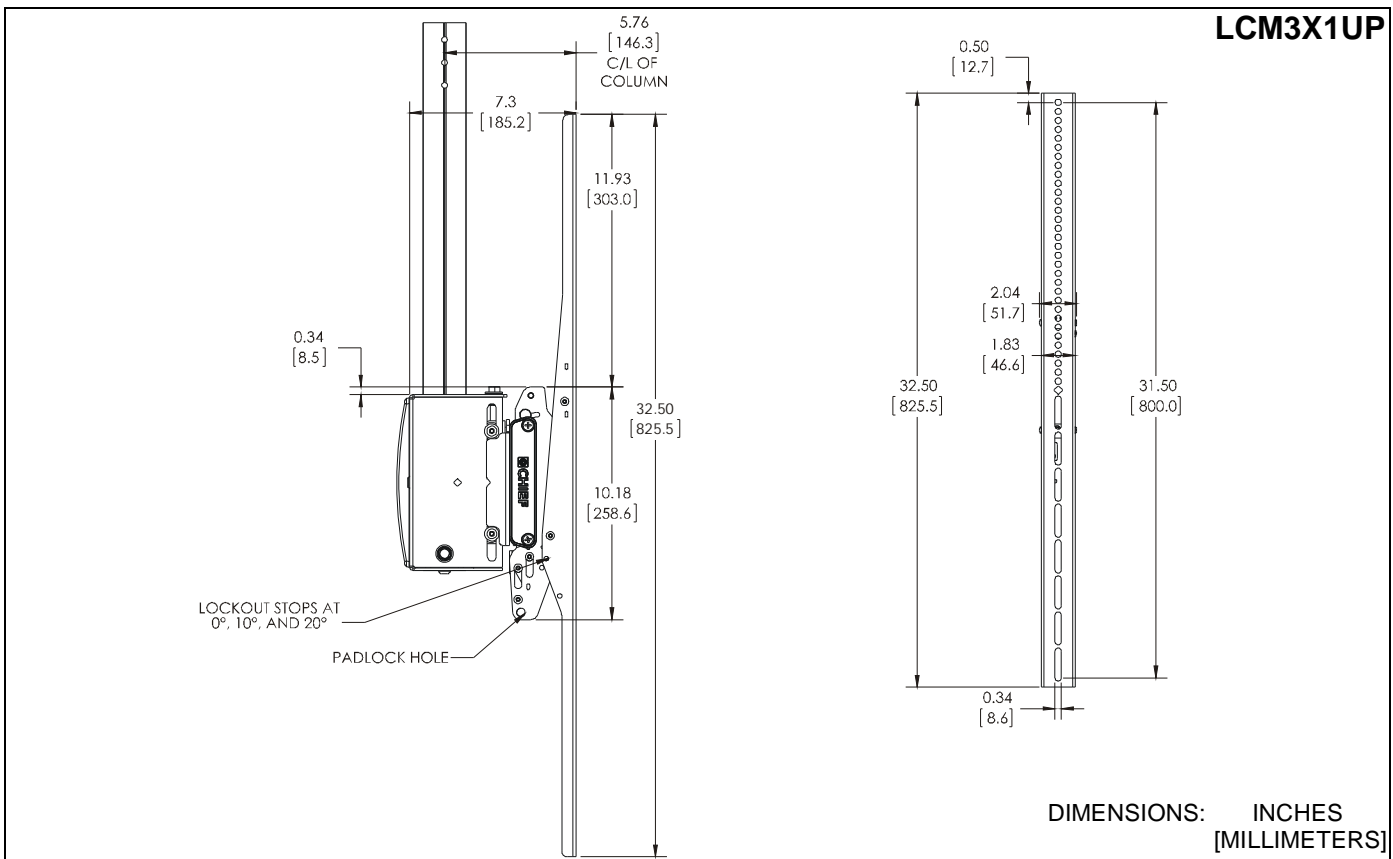
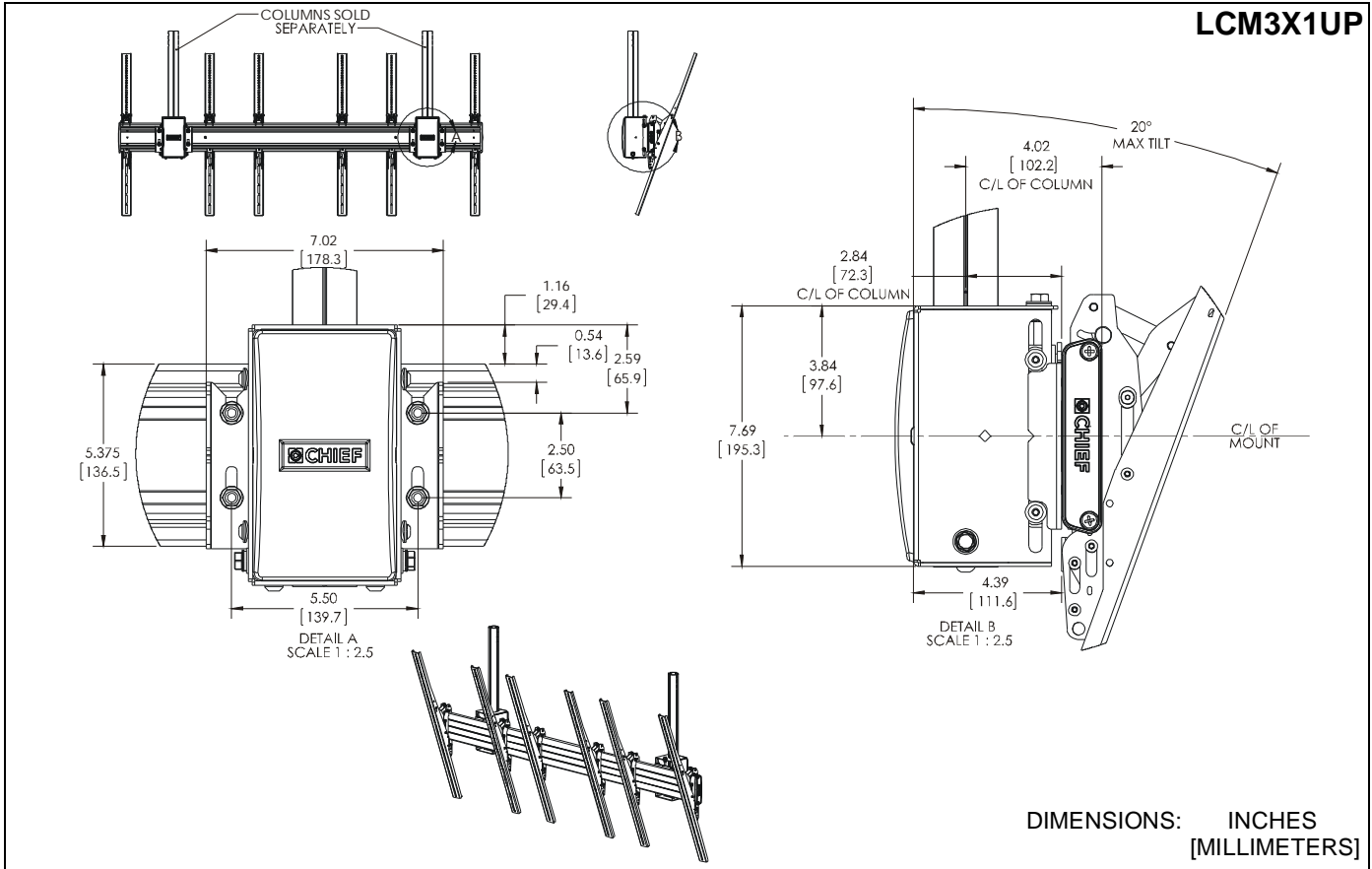
**DIMENSIONS - cont'd.**



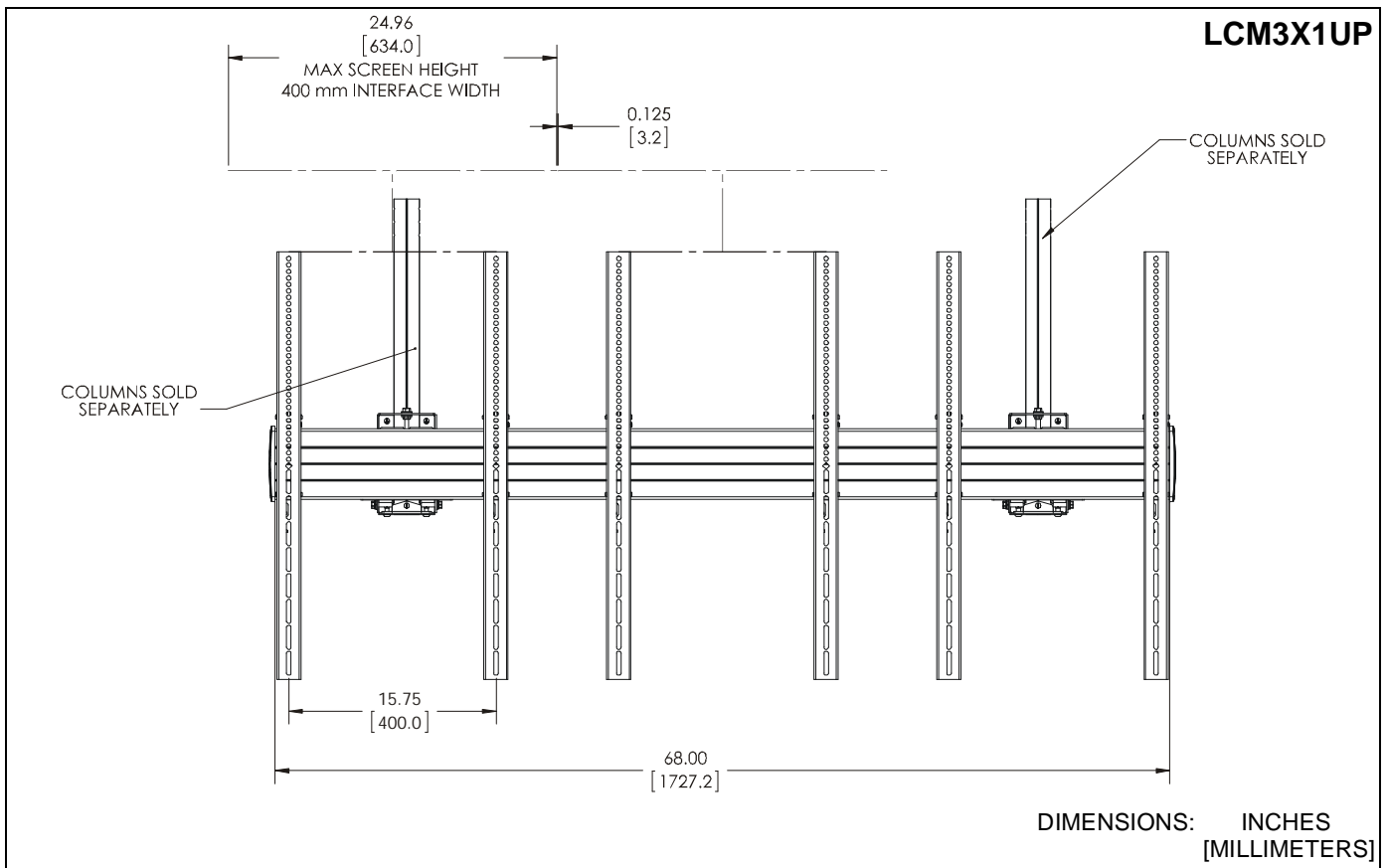
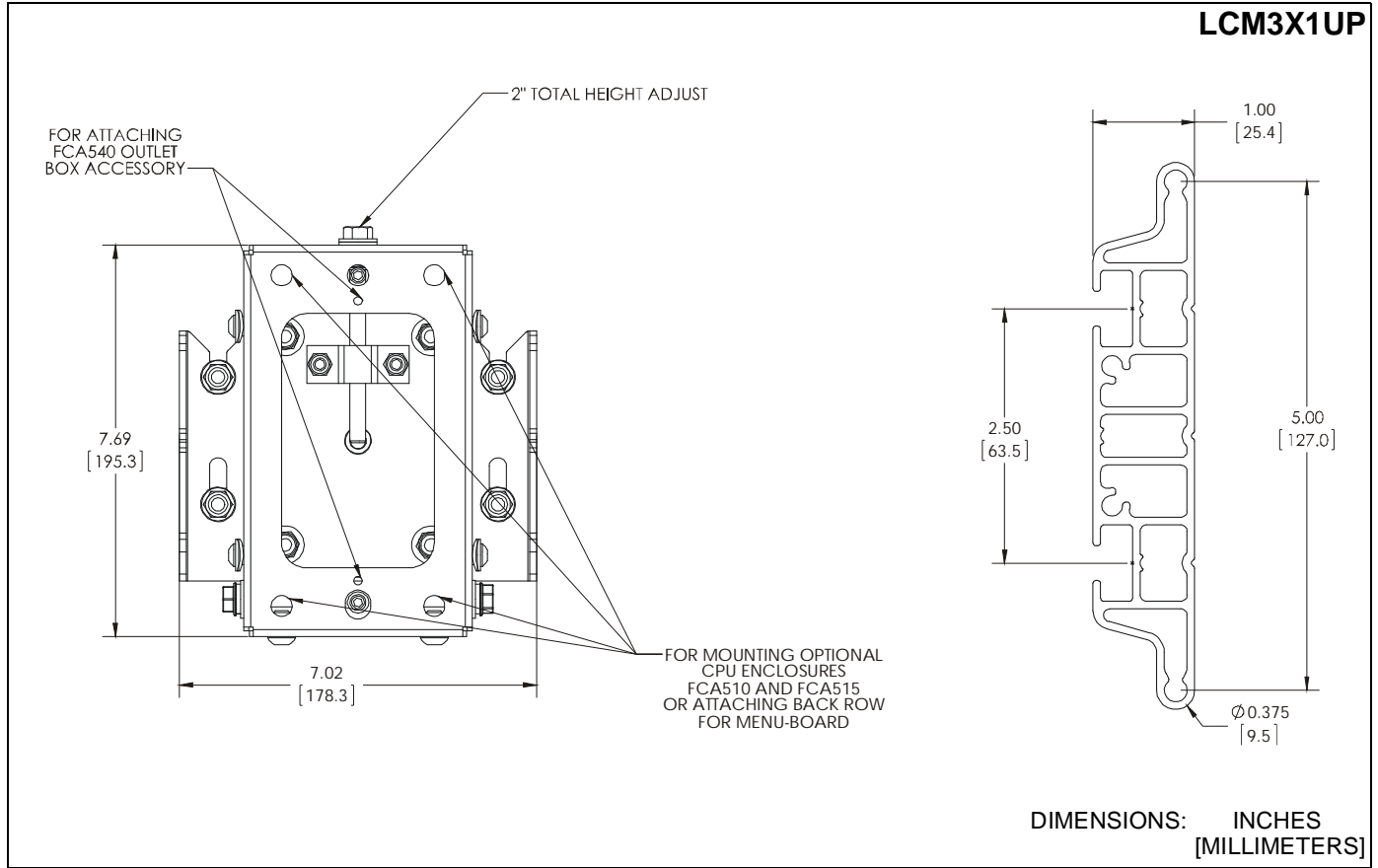
**DIMENSIONS - cont'd.**





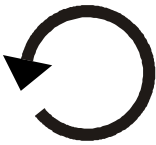









**DIMENSIONS - cont'd.**



**DIMENSIONS - cont'd.**

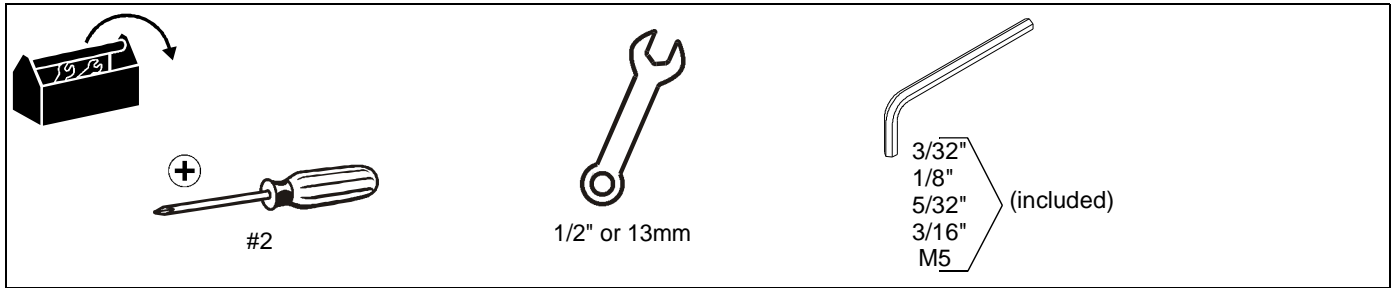


**LEGEND**

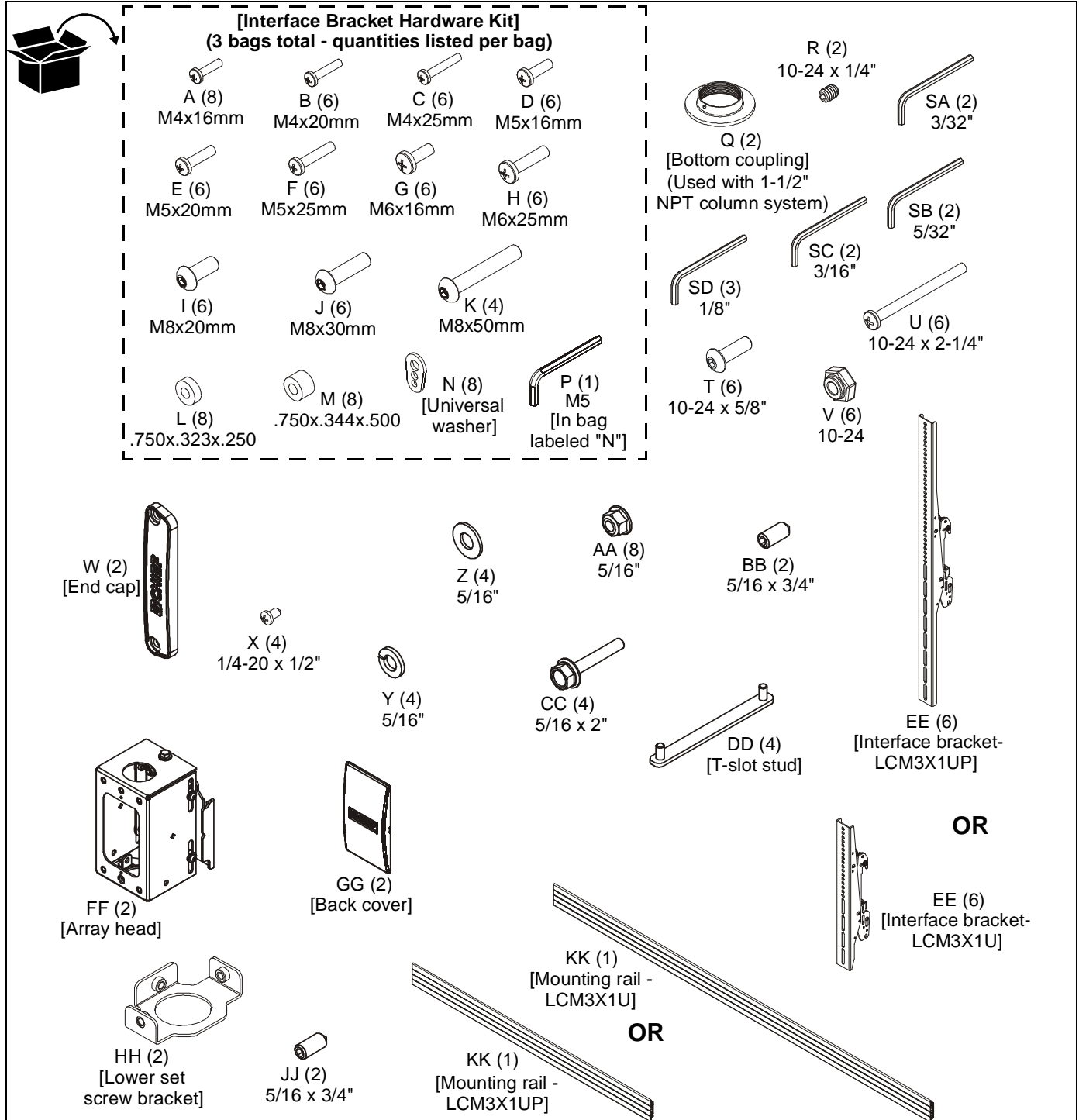
	<p><b>Tighten Fastener</b>                      Apretar elemento de fijación                      Befestigungsteil festziehen                      Apertar fixador                      Serrare il fissaggio                      Bevestiging vastdraaien                      Serrez les fixations</p>		<p><b>Pencil Mark</b>                      Marcar con lápiz                      Stiftmarkierung                      Marcar com lápis                      Segno a matita                      Potloodmerkteken                      Marquage au crayon</p>
	<p><b>Loosen Fastener</b>                      Aflojar elemento de fijación                      Befestigungsteil lösen                      Desapertar fixador                      Allentare il fissaggio                      Bevestiging losdraaien                      Desserrez les fixations</p>		<p><b>Drill Hole</b>                      Perforar                      Bohrloch                      Fazer furo                      Praticare un foro                      Gat boren                      Percez un trou</p>
	<p><b>Phillips Screwdriver</b>                      Destornillador Phillips                      Kreuzschlitzschraubendreher                      Chave de fendas Phillips                      Cacciavite a stella                      Kruiskopschroevendraaier                      Tournevis à pointe cruciforme</p>		<p><b>Adjust</b>                      Ajustar                      Einstellen                      Ajustar                      Regolare                      Afstellen                      Ajuster</p>
	<p><b>Open-Ended Wrench</b>                      Llave de boca                      Gabelschlüssel                      Chave de bocas                      Chiave a punte aperte                      Steeksleutel                      Clé à fourche</p>		<p><b>Remove</b>                      Quitar                      Entfernen                      Remover                      Rimuovere                      Verwijderen                      Retirez</p>
	<p><b>By Hand</b>                      A mano                      Von Hand                      Com a mão                      A mano                      Met de hand                      À la main</p>		<p><b>Optional</b>                      Opcional                      Optional                      Opcional                      Opzionale                      Optie                      En option</p>
	<p><b>Hex-Head Wrench</b>                      Llave de cabeza hexagonal                      Sechskantschlüssel                      Chave de cabeça sextavada                      Chiave esagonale                      Zeskantsleutel                      Clé à tête hexagonale</p>		<p><b>Security Wrench</b>                      Llave de seguridad                      Sicherheitsschlüssel                      Chave de segurança                      Chiave di sicurezza                      Veiligheidssleutel                      Clé de sécurité</p>



**TOOLS REQUIRED FOR INSTALLATION**



**PARTS**



**INSTALLATION**

**NOTE:** The following procedure assumes that 2 UL Listed CPA or CMA ceiling plates (not included) and 2 extension columns (not included) have been properly installed following instructions provided with ceiling plates and extension columns.

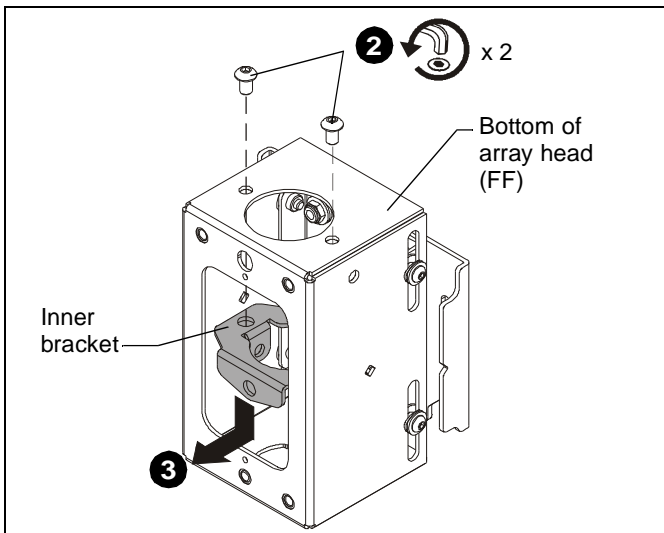
- The ceiling plates and columns should be installed approximately spaced at center of outside screens. (See **Dimensions** drawings.)

**IMPORTANT ! :** The weight of the system should be evenly distributed across two ceiling plates.

**NOTE:** Proceed to **Attaching Mount to NPT Column** section or **Attaching Mount to CPA Extension Column** section, as appropriate.

**Attaching Mount to 1-1/2" NPT Column**

1. Turn the array head (FF) upside down. (See Figure 1)
2. Remove **AND SAVE** two buttonhead screws from array head. (See Figure 1)
3. Remove and discard inner bracket from array head. (See Figure 1)

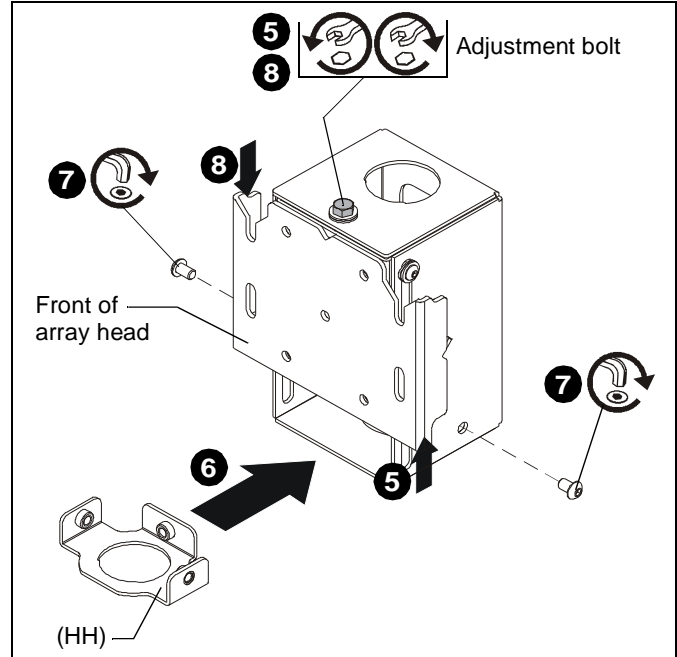


**Figure 1**



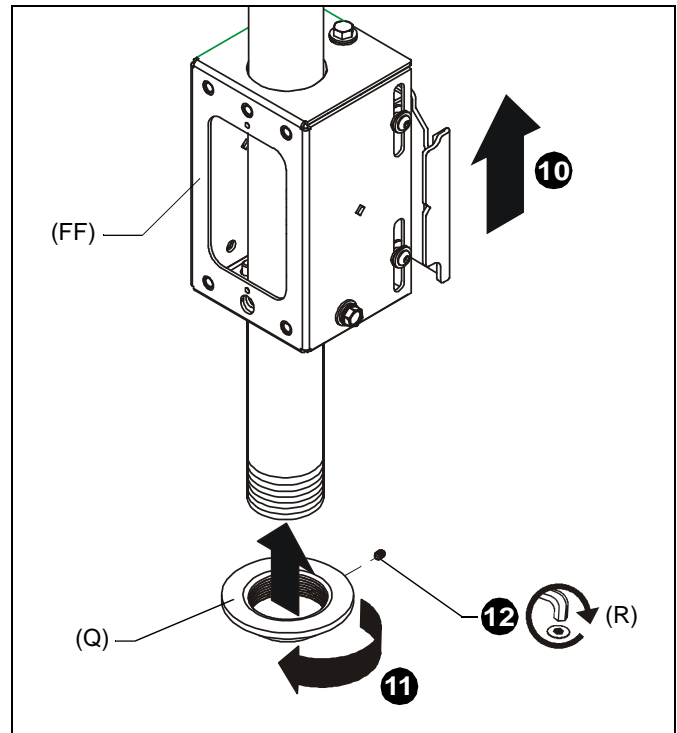
**CAUTION:** WATCH FOR PINCH POINTS! Do not place fingers between moveable parts.

4. Turn array head upright. (See Figure 2)
5. Turn adjustment bolt on top of array head to slide plate up and enlarge opening on front of array head. (See Figure 2)
6. Insert lower set screw bracket (HH) into array head (FF) with three tabs towards sides and back. (See Figure 2)
7. Fasten bracket (HH) into place in bottom of array head using buttonhead screws (removed in Step 2) through sides of array head and into side tabs of bracket (HH). (See Figure 2)
8. Slide plate (raised in Step 5) back into position by turning adjustment bolt on top of array head. (See Figure 2)
9. Repeat Steps 1 through 8 for remaining array head (FF).



**Figure 2**

10. Slide array head (FF) up from below onto installed column (not included). (See Figure 3)
11. Thread bottom coupling (Q) onto installed column until tight, with a minimum of four threads engaged. (See Figure 3)
12. Install and tighten one 10-24 x 1/4" set screw (R) into bottom coupling (Q). (See Figure 3)



**Figure 3**

13. Tighten two 5/16" x 3/4" set screws (BB) against column. (See Figure 4)

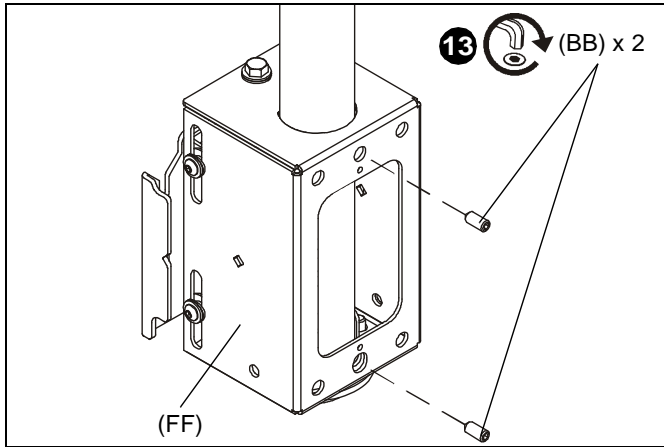


Figure 4

14. Repeat Steps 10 through 13 for remaining array head (FF), assuring that second array head is level with first installed array head.

**Attaching Mount to CPA Extension Column**



**CAUTION:** WATCH FOR PINCH POINTS! Do not place fingers between moveable parts.

1. Slide array head (FF) up from below onto installed column (not included). (See Figure 5)
2. Line up holes in sides of array head (FF) with holes in column.

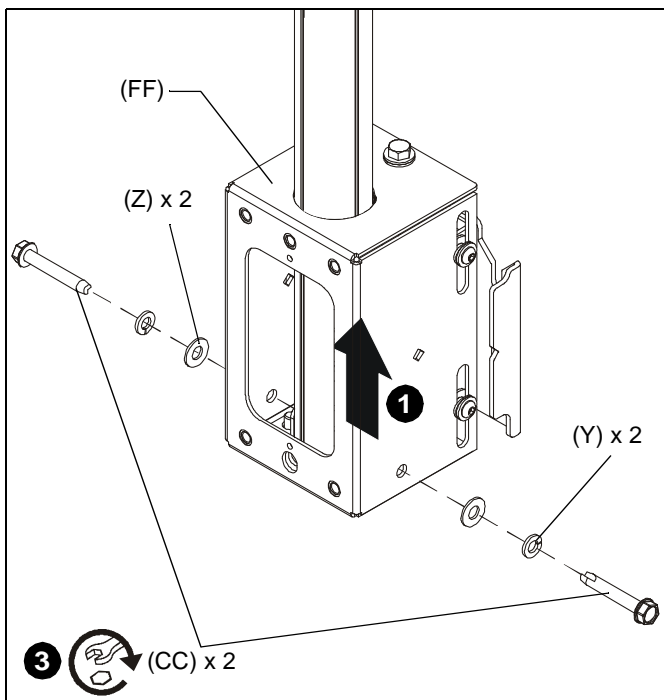


Figure 5

3. Install two 5/16" x 2" self-tapping screws (CC) through two 5/16" split washers (Y), two 5/16" flat washers (Z), sides of array head (FF), and into installed column. (See Figure 5)
4. Install and tighten two 5/16" set screws (BB) against column. (See Figure 6)

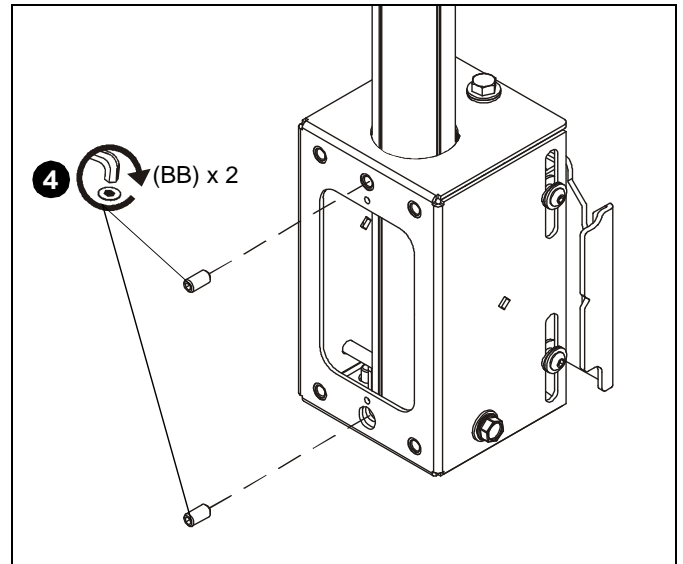


Figure 6

5. Repeat Steps 1 through 4 for remaining array head (FF), assuring that second array head is level with first installed array head.

**Adding Mounting Rail**

1. Slide four T-slot studs (DD - two in top mounting rail slot and two in bottom) into end of mounting rail (KK). (See Figure 7)

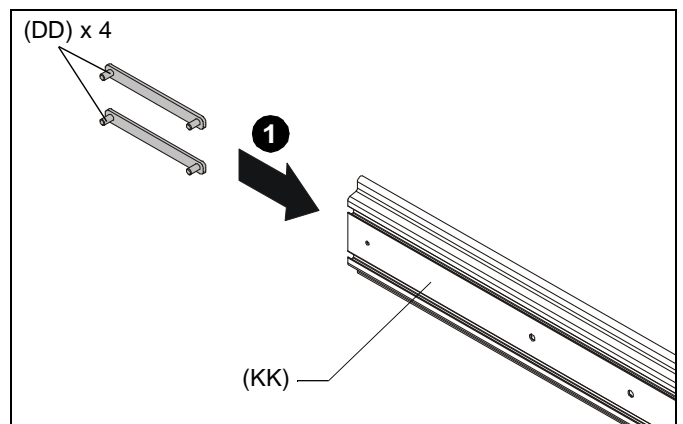


Figure 7

2. Partially fasten one 5/16" lock nut (AA) to each stud on upper T-slot studs.

3. Slide top T-slot studs (DD) with attached lock nuts (AA) down into top openings on array heads (FF). (See Figure 8)
4. Slide studs on lower T-slot studs (DD) into lower slots on array head (FF) while bringing mounting rail against array head.
5. Tighten array head to mounting rail by tightening lock nuts on upper T-slot studs and adding two 5/16" lock nuts (AA) to lower T-slot studs. (See Figure 8)

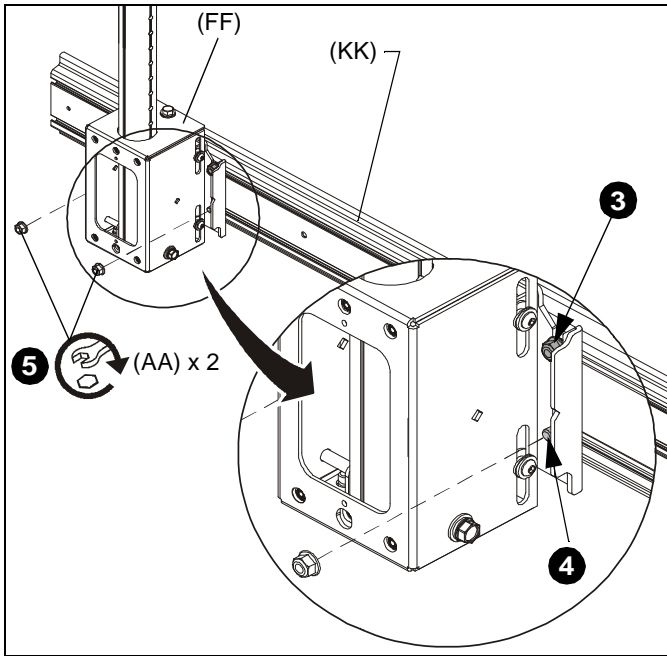


Figure 8

6. Repeat for remaining array head (FF).
7. Add one end cap (W) to each end of mounting rail, and fasten in place using two 1/4-20 x 1/2" Phillips self-tapping screws (X) for each end cap. (See Figure 9)

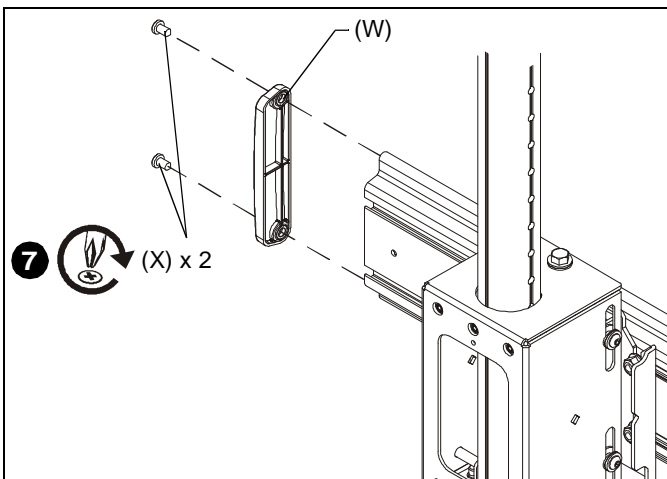


Figure 9

**Attaching Interface Brackets to Displays**

1. Lower the latch mechanism on each interface bracket (EE). (See Figure 10)

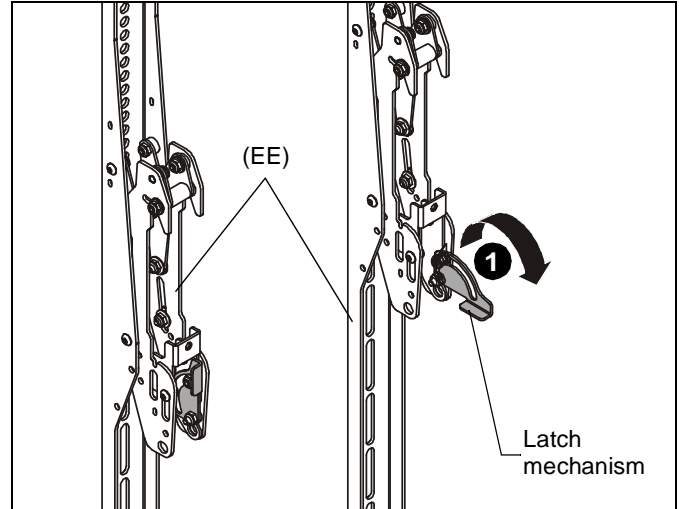


Figure 10

2. Align the center of the interface bracket (EE) with center of screen. (See Figure 11)

**NOTE:** The diamond-shape hole in the bracket corresponds to the center of the mount.

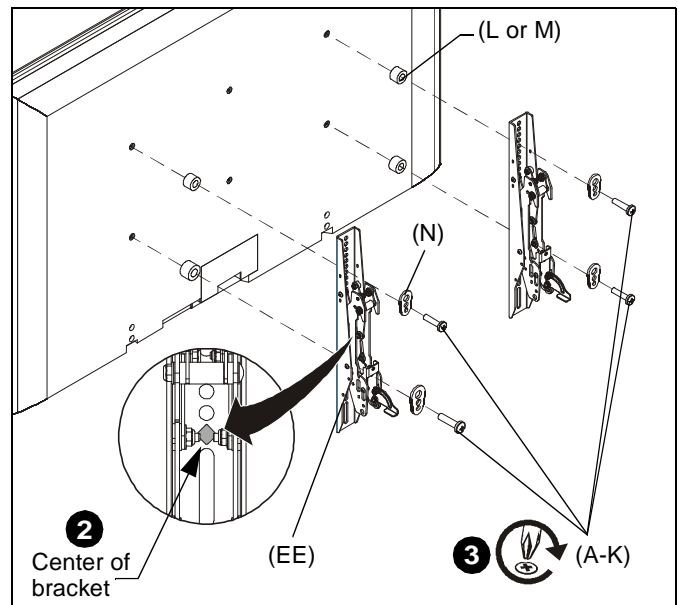


Figure 11



**WARNING:** IMPROPER INSTALLATION CAN LEAD TO DISPLAY FALLING CAUSING SERIOUS PERSONAL INJURY OR DAMAGE TO EQUIPMENT! Using screws of improper size may damage your display. Properly sized screws will easily and completely thread into display mounting holes. If spacers are required, be sure to use longer screws of the same diameter.

3. Select correct screws, spacers (if necessary) and universal washers from the hardware bag (A-N) and attach brackets (EE) to back of screen. (See Figure 11)

### Attaching Displays to Mounting Rail



**WARNING:** Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components located within the mounting system of the LCM3X1 Series model does not exceed maximum weights listed in table below.

MODEL	Max Weight Allowed for <u>EACH</u> Display	Max Weight Capacity of Mounting System
LCM3X1U	125 lbs (56.7 kg)	375 lbs (170.1 kg)
LCM3X1UP	125 lbs (56.7 kg)	375 lbs (170.1 kg)



**WARNING:** IMPROPER DISPLAY INSTALLATION CAN RESULT IN SERIOUS PERSONAL INJURY OR DAMAGE TO EQUIPMENT! Do NOT mount all of the displays on one end of mounting rail:

- The center display **MUST** be installed first and centered between two columns (See Figure 12)
- Mount remaining displays an equal distance from center display on each end of the mounting rail.

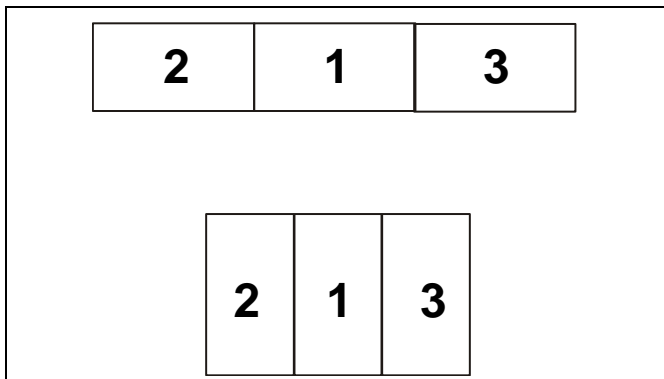


Figure 12



**CAUTION:** BEFORE adding displays to the mounting rail, ensure end caps are in place at BOTH ends of mounting rail!

**IMPORTANT ! :** The interface bracket tilt may be adjusted either before or after adding displays to mounting rail. See **Adjustments** section.

1. Ensure that the latch mechanisms on interface brackets (EE) are already lowered. (See Figure 10)
2. While supporting both sides of display, lower display onto center of ceiling mount, hooking top of interface brackets onto front of ceiling mount. (See Figure 13)
3. Raise the latch mechanism on both interface brackets to lock bracket in place. (See Figure 13)

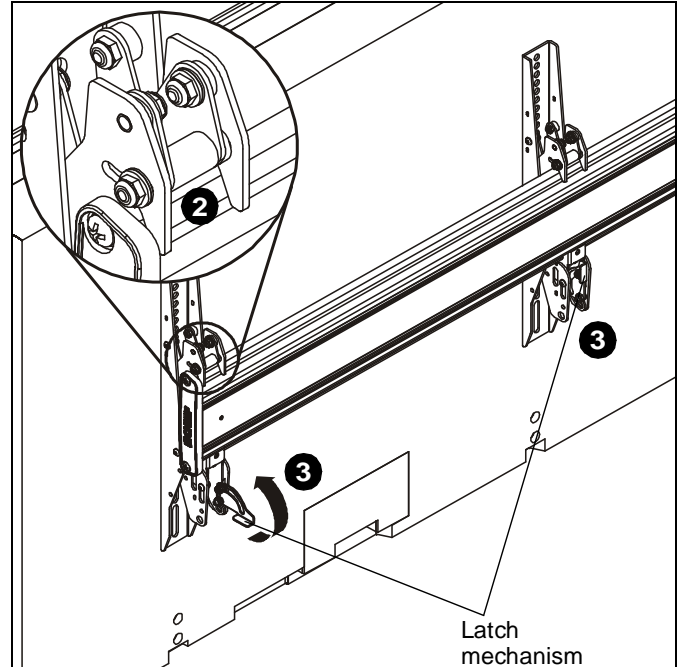


Figure 13

4. Fasten bracket against mounting rail using one 10-24 x 5/8" button head cap screw (T). (See Figure 14)
5. Repeat for other interface bracket.

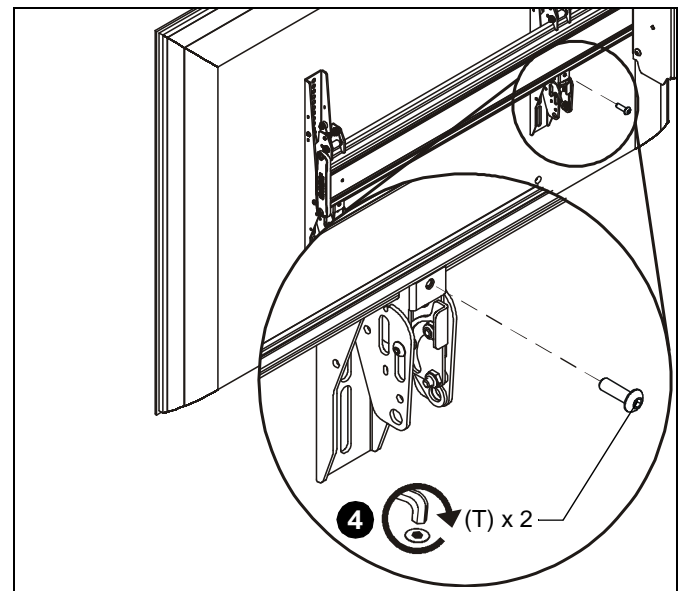


Figure 14

6. While supporting both sides of second display, lower second display onto one end of mounting rail, hooking top of interface brackets onto front of mounting rail. (See Figure 13)
7. Repeat Steps 3 through 5 for second display.
8. While supporting both sides of third display, lower third display onto opposite end of mounting rail, hooking top of interface brackets onto front of mounting rail. (See Figure 13)
9. Repeat Steps 3 through 5 for third display.

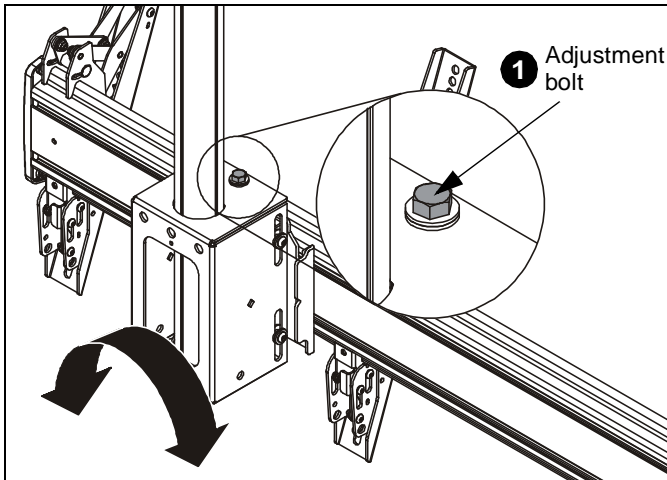
**Adjustments**

**CAUTION:** Watch for pinch points! Do not place fingers between moveable parts.

**Height Adjustment and Leveling**

The ceiling mounts allow up to 2 inches total adjustment.

1. Turn the adjustment bolt in the direction necessary to level or adjust height. (See Figure 15)
2. Stop adjusting when the desired setting is reached.

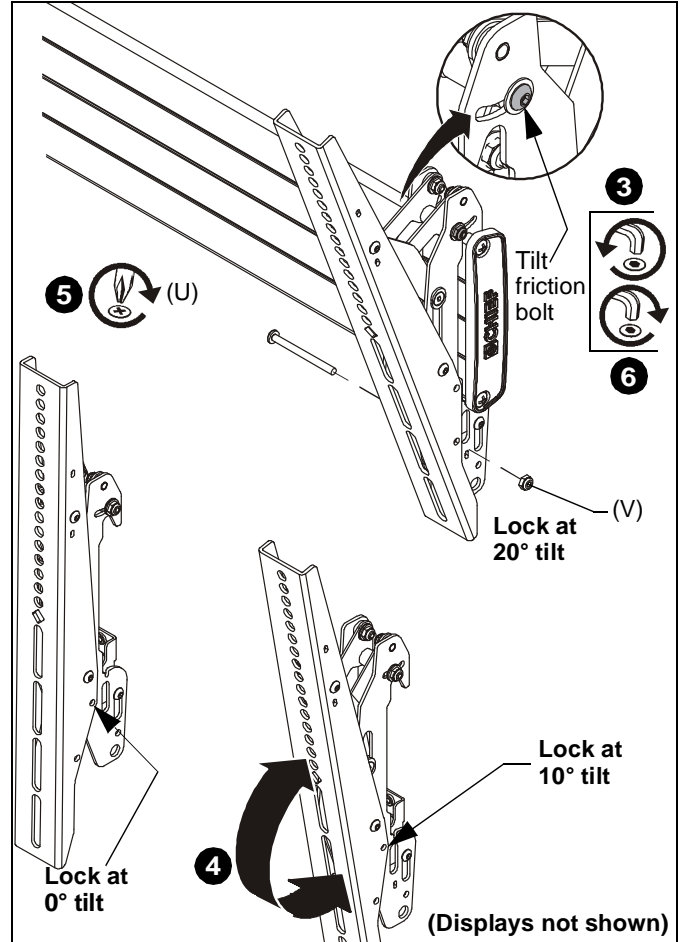


**Figure 15**

**Tilt**

The interface brackets allow -5° to 20° tilt, and can be locked at 0°, 10° and 20° tilt.

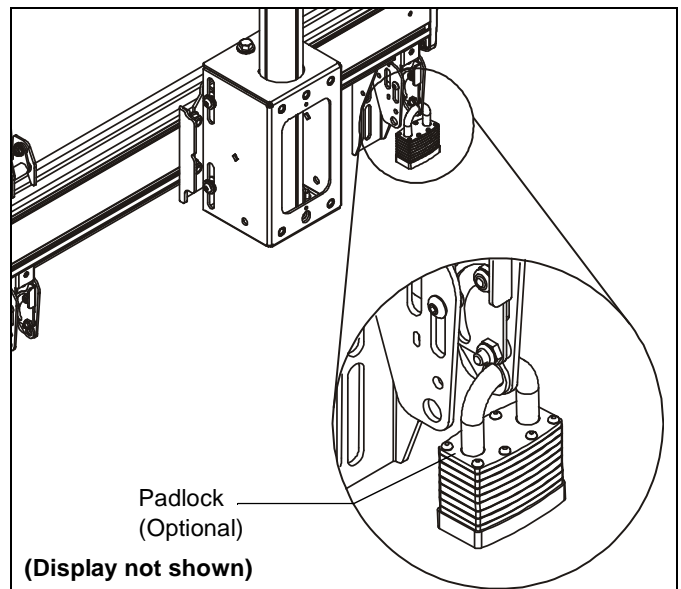
3. If necessary, loosen buttonhead tilt friction bolt (located on side of interface bracket). (See Figure 16)
4. Adjust tilt as required. (See Figure 16)
5. The tilt may be locked at 0°, 10° and 20° using one 10-24 x 2-1/4" Phillips head screw (U) and one 10-24 lock nut (V) per interface bracket. (See Figure 16)
6. Tighten tilt friction bolt as necessary.



**Figure 16**

**OPTIONAL: Security**

1. **OPTIONAL:** Add padlock (not included) to each interface bracket to lock display to ceiling mount. (See Figure 17)



**Figure 17**

2. Install back cover (GG) into four holes on back of both array heads (FF). (See Figure 18)

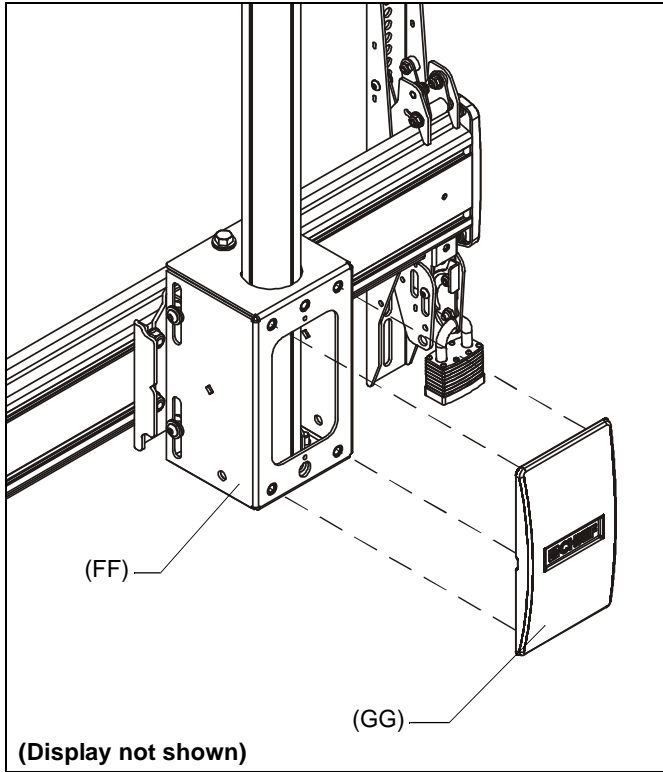


Figure 18



Our Mounts. **Your Vision.**

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