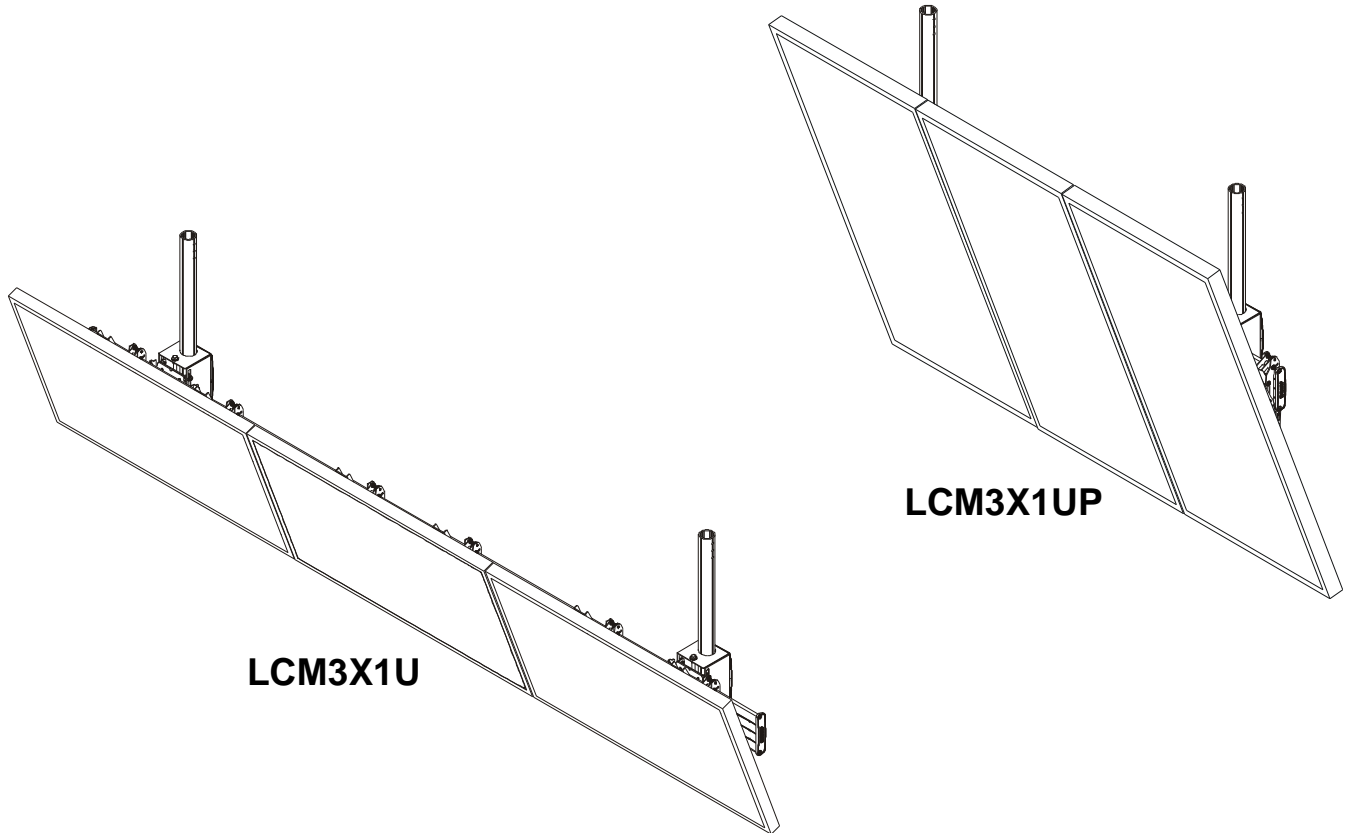

INSTALLATION INSTRUCTIONS



Ceiling-Mounted Menu Boards

DISCLAIMER

Milestone AV Technologies and its affiliated corporations and subsidiaries (collectively "Milestone"), intend to make this manual accurate and complete. However, Milestone makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without notice or obligation of any kind. Milestone makes no representation of warranty, expressed or implied, regarding the information contained herein. Milestone assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.


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DEFINITIONS

MOUNTING SYSTEM: A MOUNTING SYSTEM is the primary Chief product to which an accessory and/or component is attached.


ACCESSORY: AN ACCESSORY is the secondary Chief product which is attached to a primary Chief product, and may have a component attached or setting on it.


COMPONENT: A COMPONENT is an audiovisual item designed to be attached or resting on an accessory or mounting system such as a video camera, CPU, screen, display, projector, etc.

 **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.

 **IMPORTANT SAFETY 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 mounting systems are properly assembled and installed using the instructions provided.

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


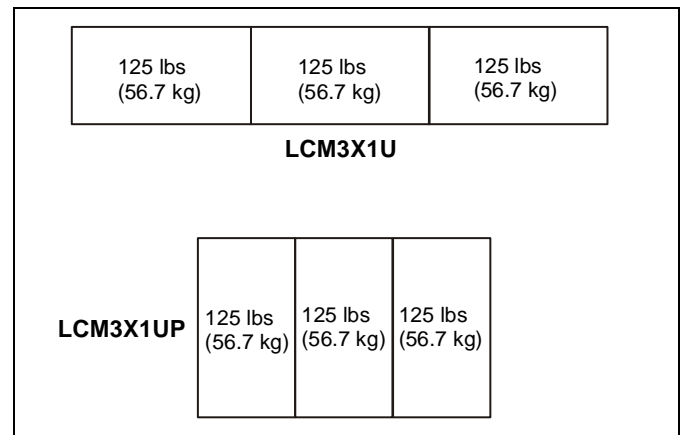


 **WARNING:** Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components located within the mounting system of the LCM3X1U/LCM3X1UP models does not exceed maximum weights listed in 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:** Use this mounting system only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.

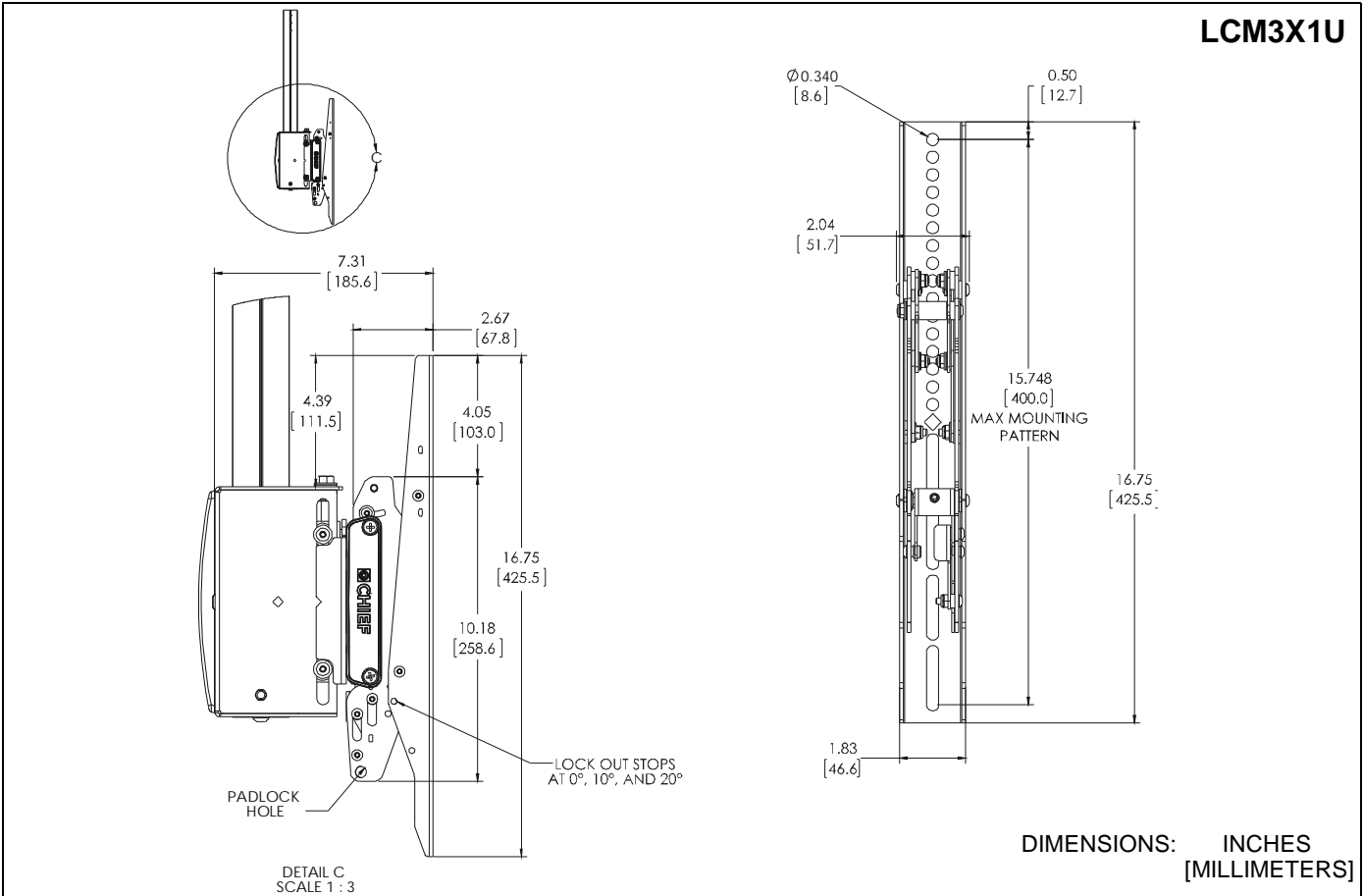
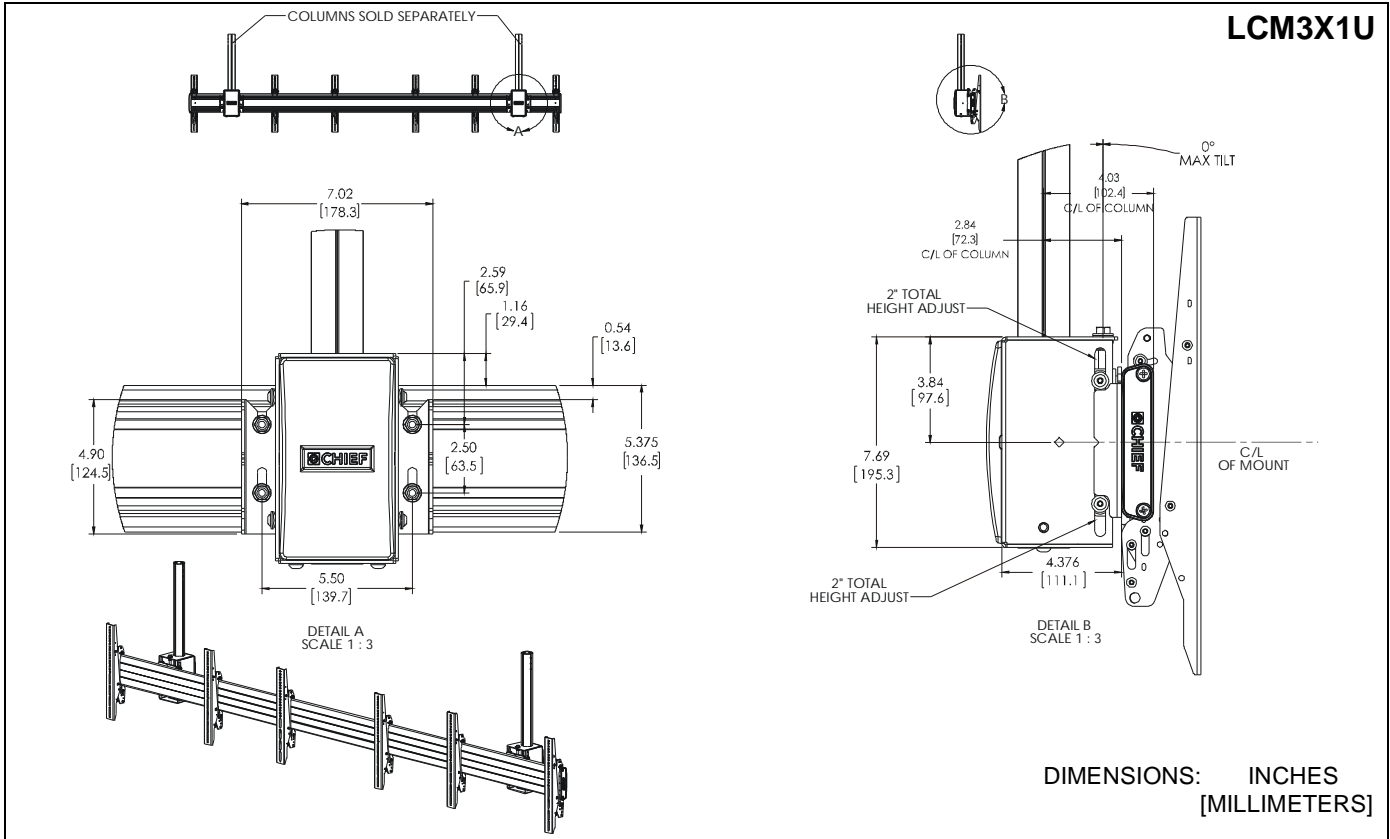
 **WARNING:** Do not use this product outdoors.

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.

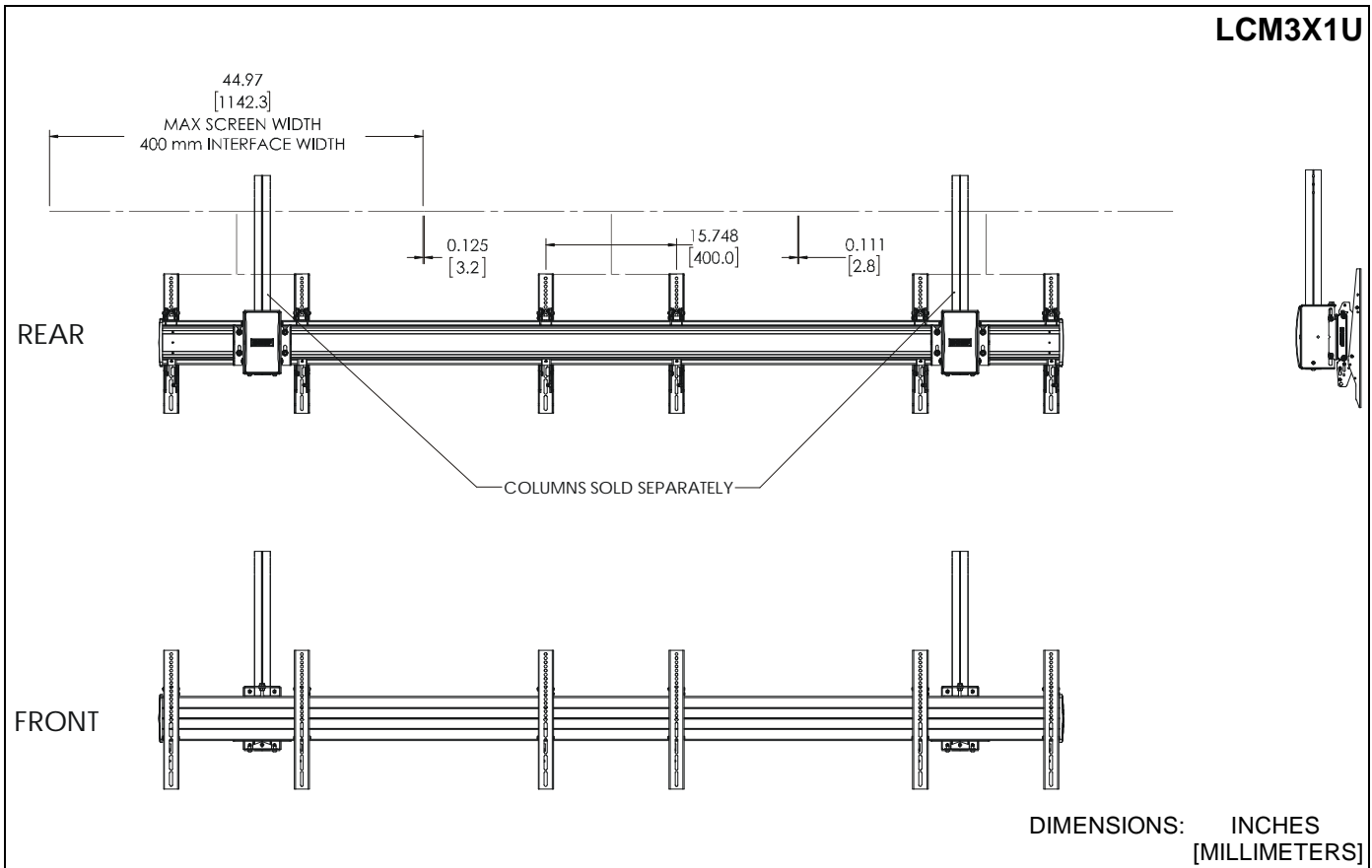
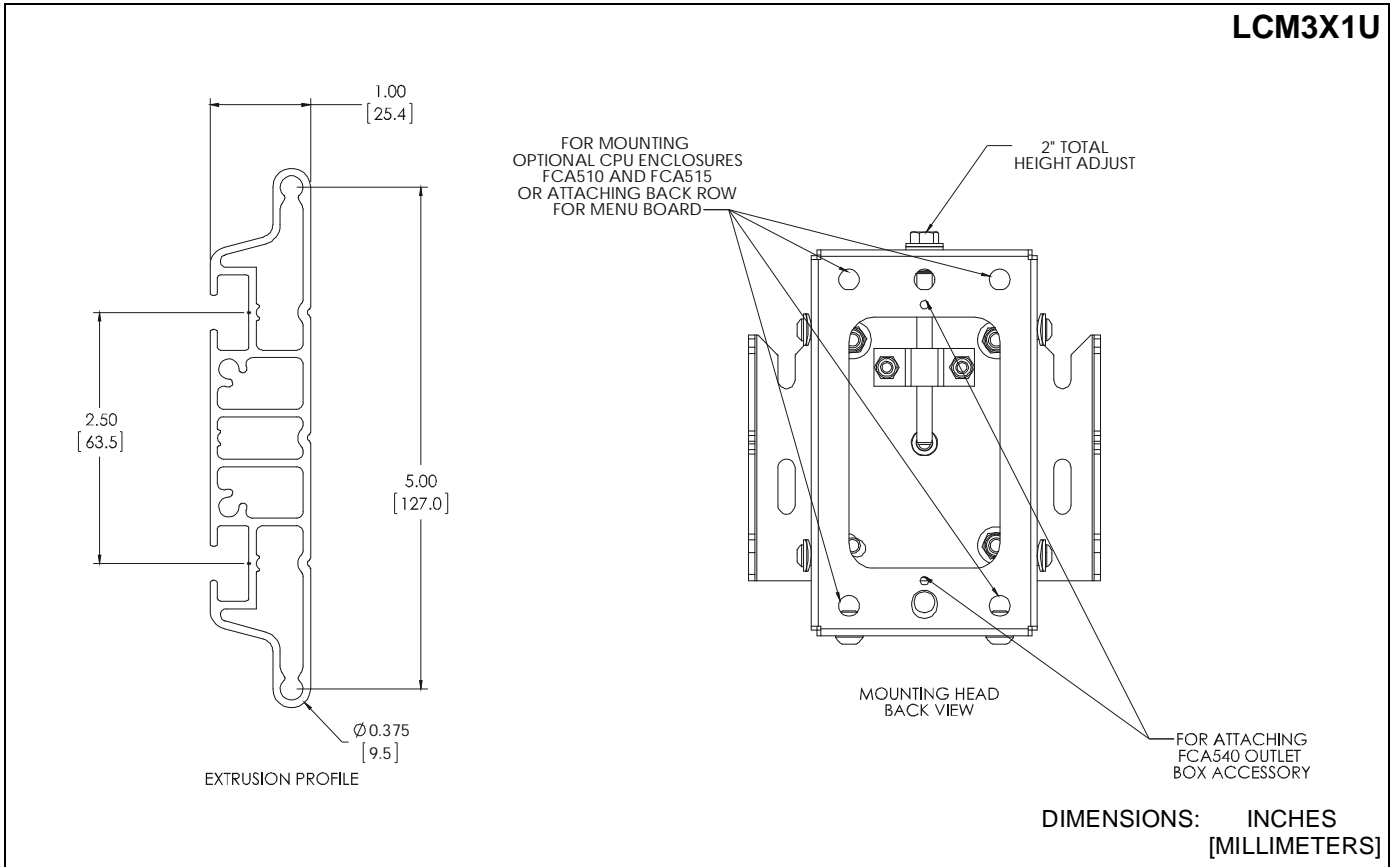
The following UL Listed Chief ceiling plates WITHOUT swaged collars (not included) may also be used: CMA330, CMA345, CMA395.

--SAVE THESE INSTRUCTIONS--

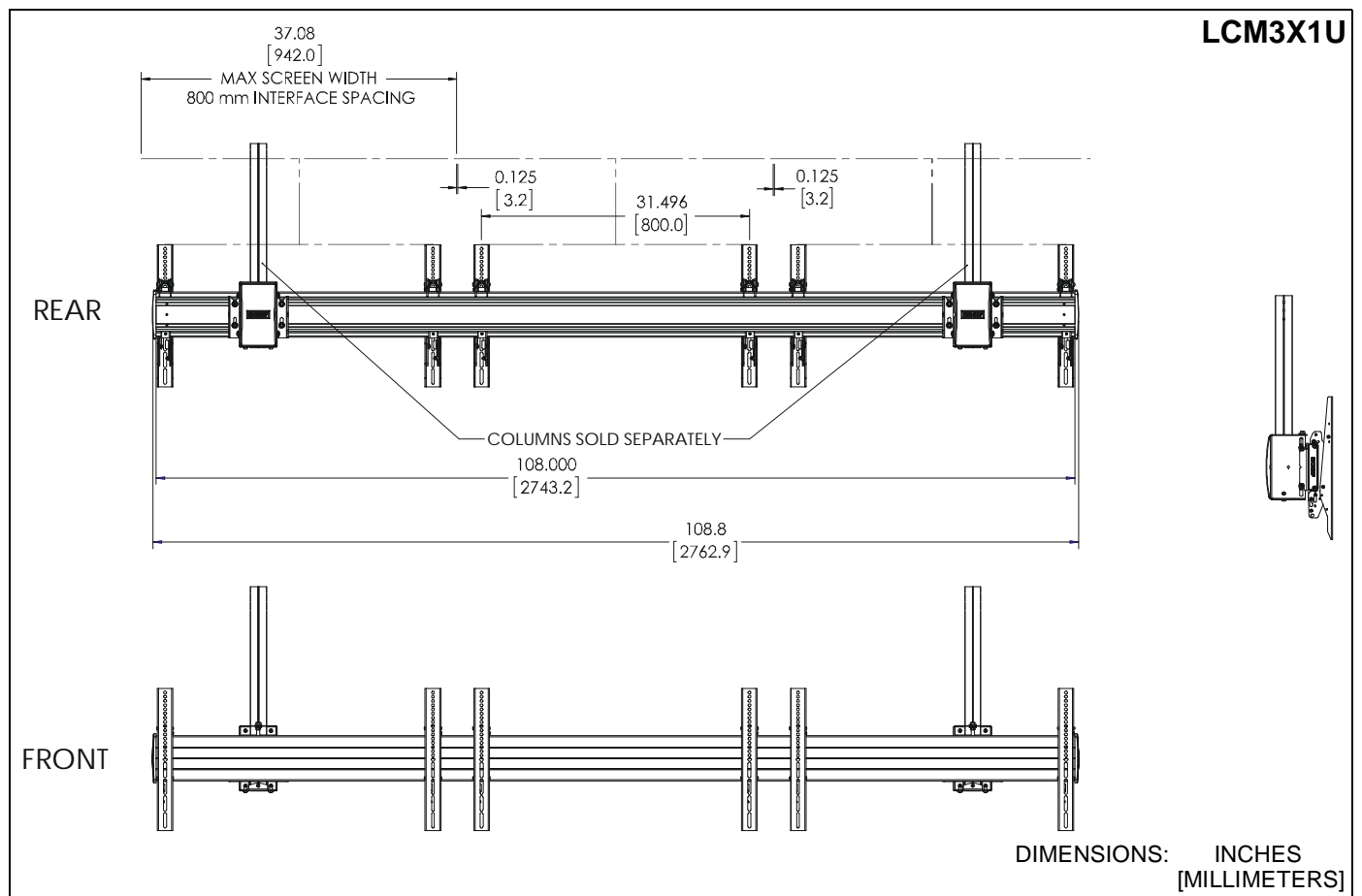
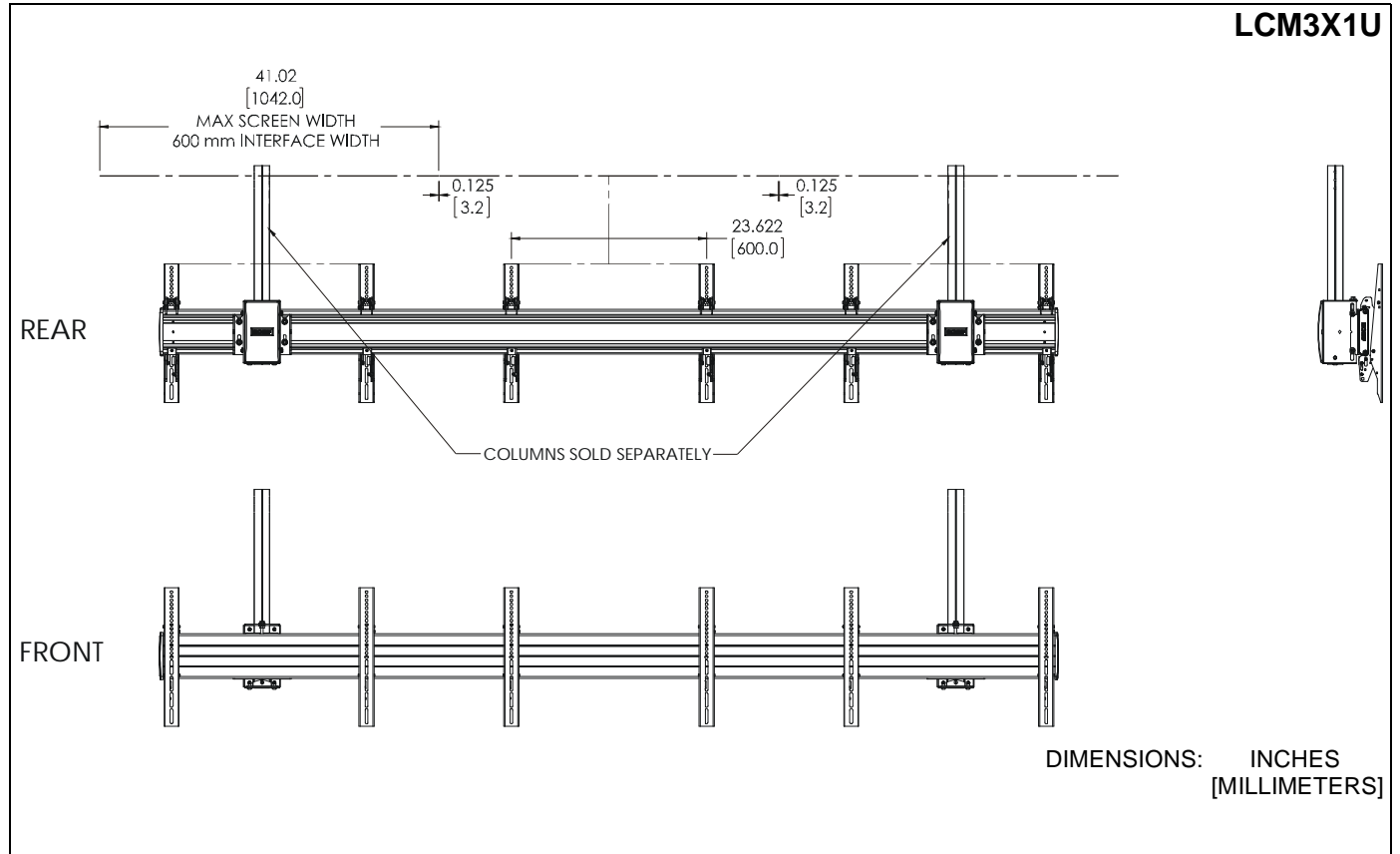
DIMENSIONS



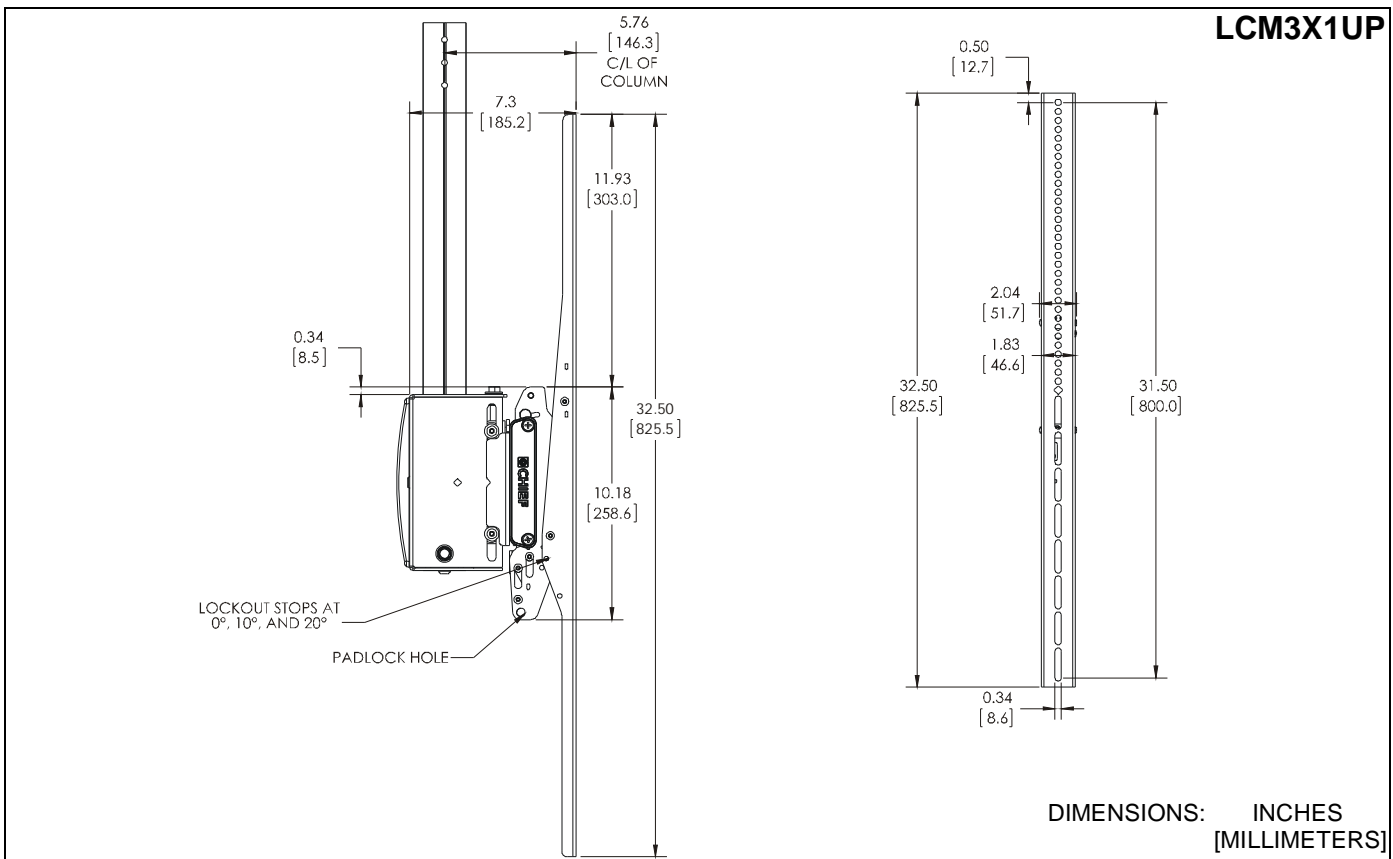
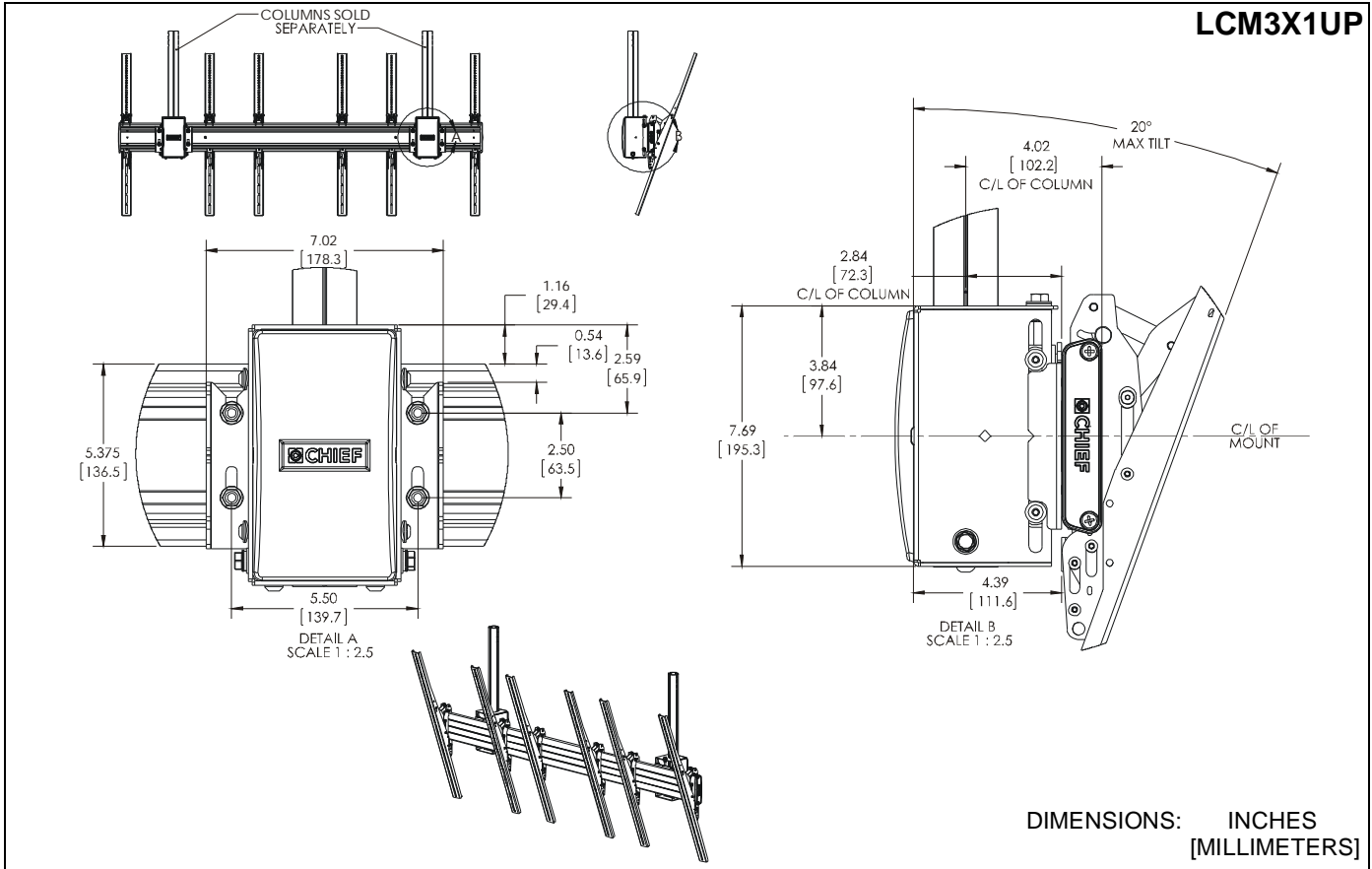
DIMENSIONS - cont'd.



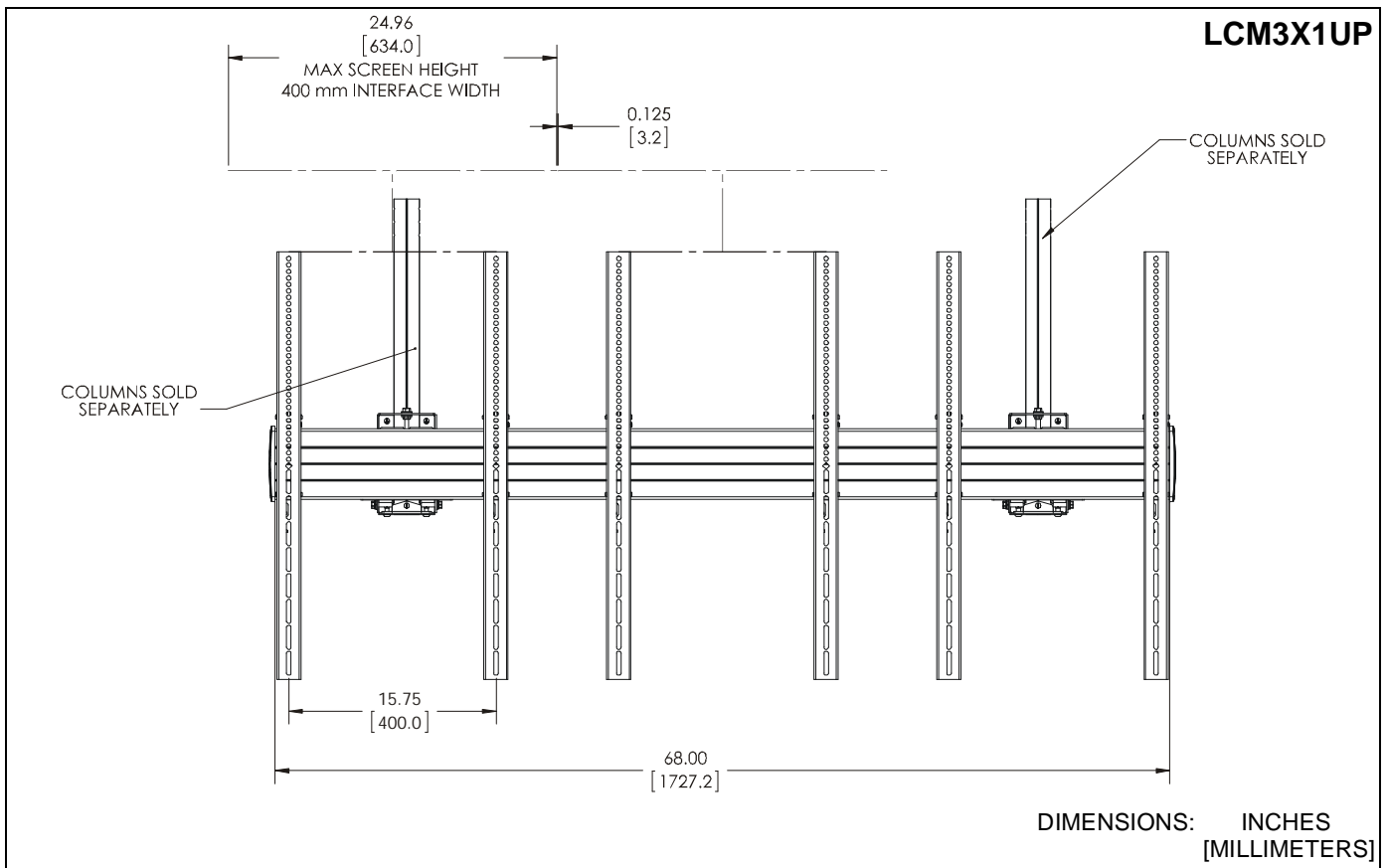
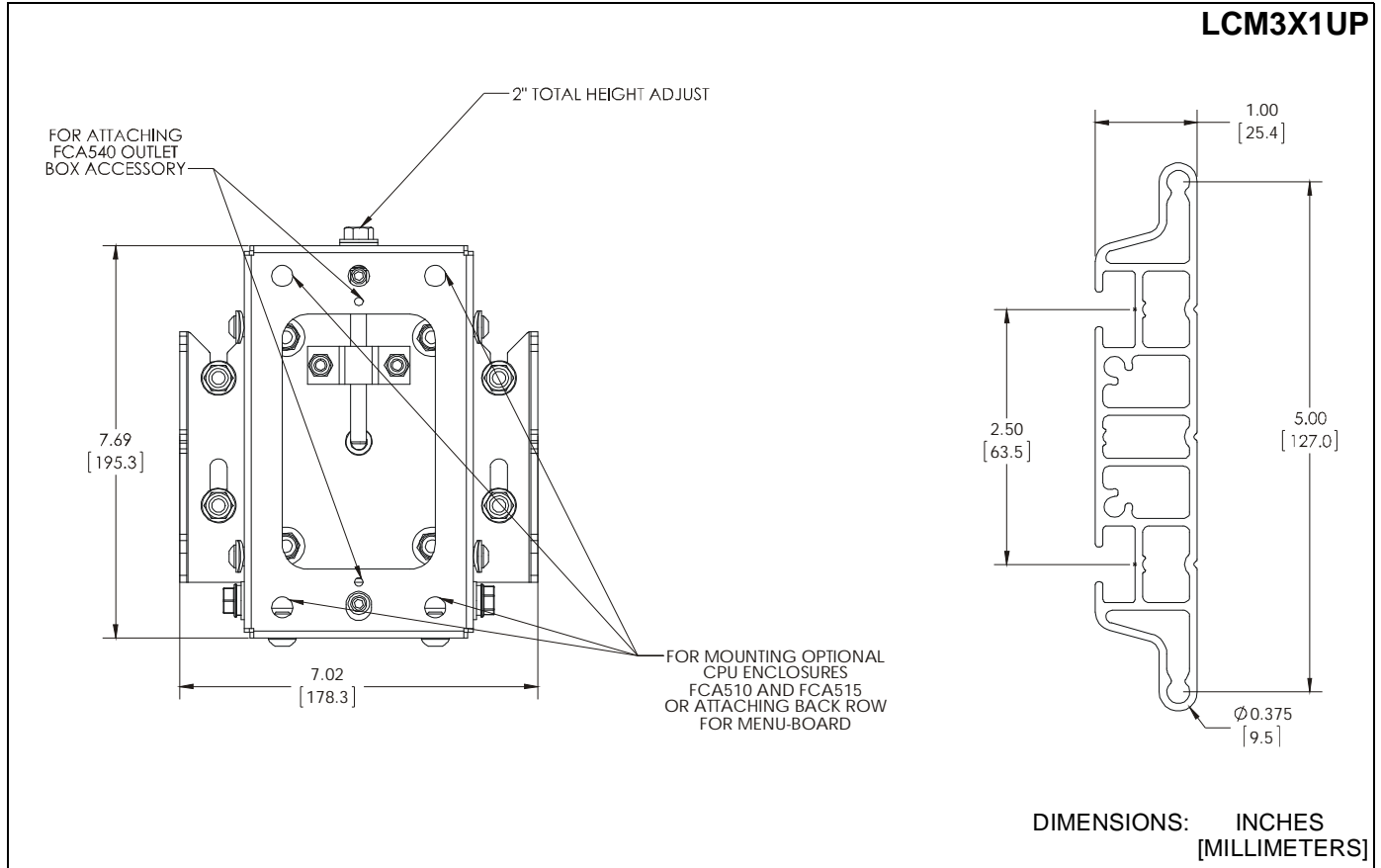
DIMENSIONS - cont'd.





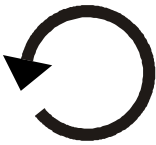









DIMENSIONS - cont'd.



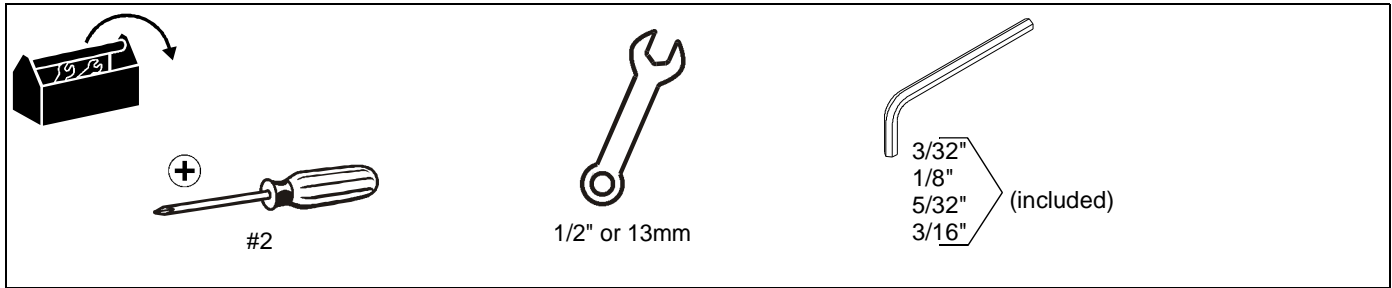
DIMENSIONS - cont'd.



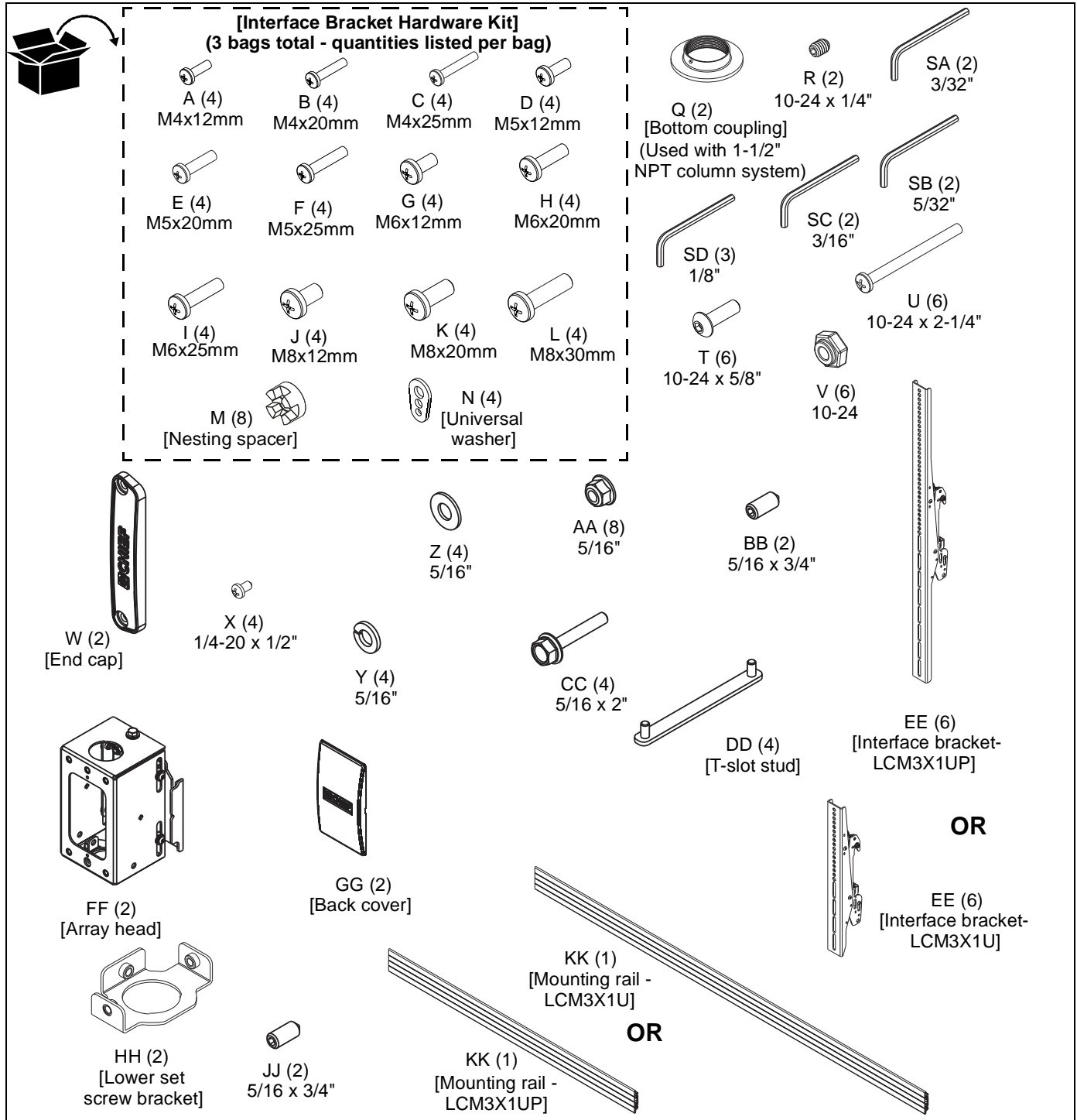
LEGEND

	<p>Tighten Fastener</p> <p>Apretar elemento de fijación</p> <p>Befestigungsteil festziehen</p> <p>Apertar fixador</p> <p>Serrare il fissaggio</p> <p>Bevestiging vastdraaien</p> <p>Serrez les fixations</p>		<p>Pencil Mark</p> <p>Marcar con lápiz</p> <p>Stiftmarkierung</p> <p>Marcar com lápis</p> <p>Segno a matita</p> <p>Potloodmerkteken</p> <p>Marquage au crayon</p>
	<p>Loosen Fastener</p> <p>Aflojar elemento de fijación</p> <p>Befestigungsteil lösen</p> <p>Desapertar fixador</p> <p>Allentare il fissaggio</p> <p>Bevestiging losdraaien</p> <p>Desserrez les fixations</p>		<p>Drill Hole</p> <p>Perforar</p> <p>Bohrloch</p> <p>Fazer furo</p> <p>Praticare un foro</p> <p>Gat boren</p> <p>Percez un trou</p>
	<p>Phillips Screwdriver</p> <p>Destornillador Phillips</p> <p>Kreuzschlitzschraubendreher</p> <p>Chave de fendas Phillips</p> <p>Cacciavite a stella</p> <p>Kruiskopschroevendraaier</p> <p>Tournevis à pointe cruciforme</p>		<p>Adjust</p> <p>Ajustar</p> <p>Einstellen</p> <p>Ajustar</p> <p>Regolare</p> <p>Afstellen</p> <p>Ajuster</p>
	<p>Open-Ended Wrench</p> <p>Llave de boca</p> <p>Gabelschlüssel</p> <p>Chave de bocas</p> <p>Chiave a punte aperte</p> <p>Steeksleutel</p> <p>Clé à fourche</p>		<p>Remove</p> <p>Quitar</p> <p>Entfernen</p> <p>Remover</p> <p>Rimuovere</p> <p>Verwijderen</p> <p>Retirez</p>
	<p>By Hand</p> <p>A mano</p> <p>Von Hand</p> <p>Com a mão</p> <p>A mano</p> <p>Met de hand</p> <p>À la main</p>		<p>Optional</p> <p>Opcional</p> <p>Optional</p> <p>Opcional</p> <p>Opzionale</p> <p>Optie</p> <p>En option</p>
	<p>Hex-Head Wrench</p> <p>Llave de cabeza hexagonal</p> <p>Sechskantschlüssel</p> <p>Chave de cabeça sextavada</p> <p>Chiave esagonale</p> <p>Zeskantsleutel</p> <p>Clé à tête hexagonale</p>		<p>Security Wrench</p> <p>Llave de seguridad</p> <p>Sicherheitsschlüssel</p> <p>Chave de segurança</p> <p>Chiave di sicurezza</p> <p>Veiligheidsleutel</p> <p>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 button head screws from array head. (See Figure 1)
3. Remove and discard inner bracket from array head. (See Figure 1)

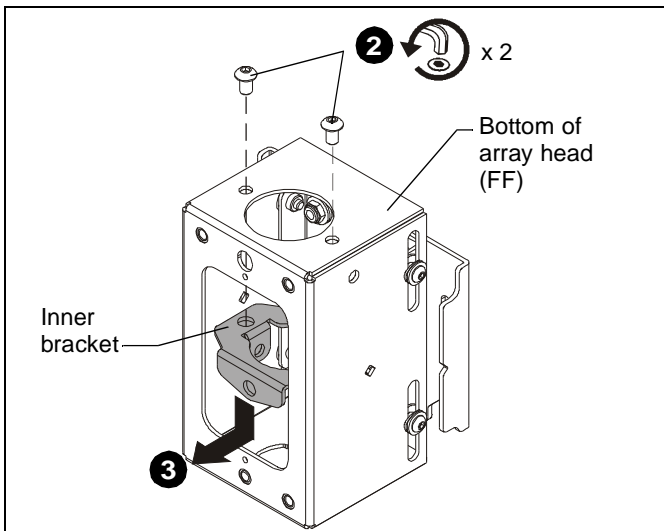


Figure 1



CAUTION: WATCH FOR PINCH POINTS! Do not place fingers between movable 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).

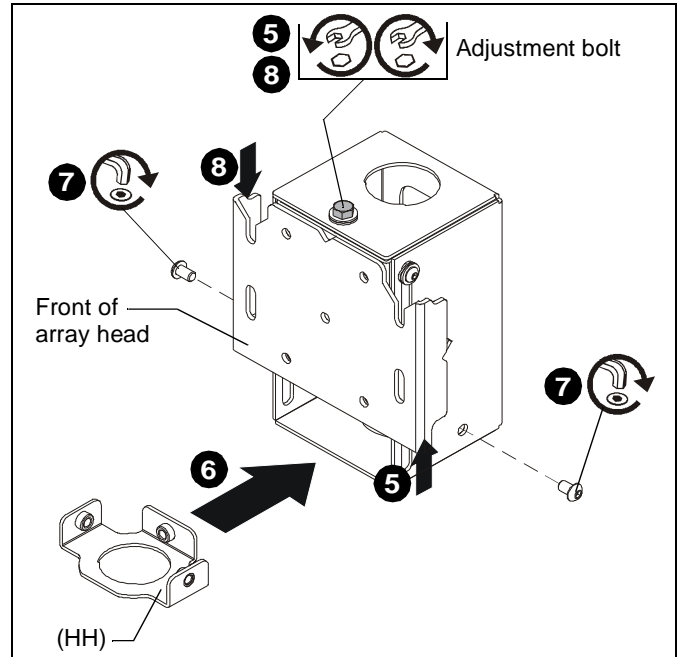


Figure 2

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)

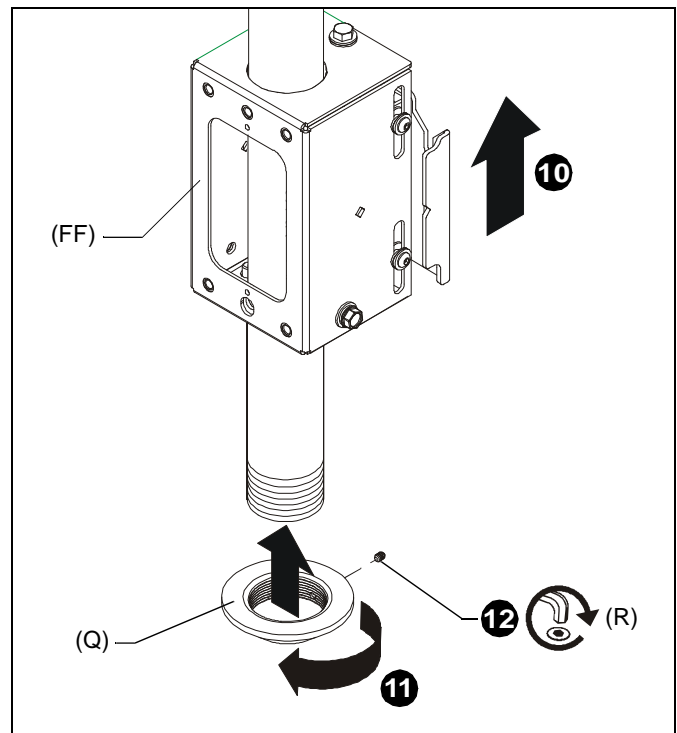


Figure 3

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

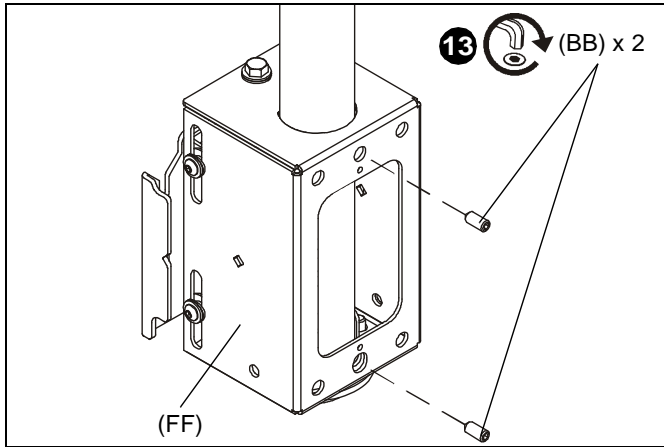


Figure 4

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.

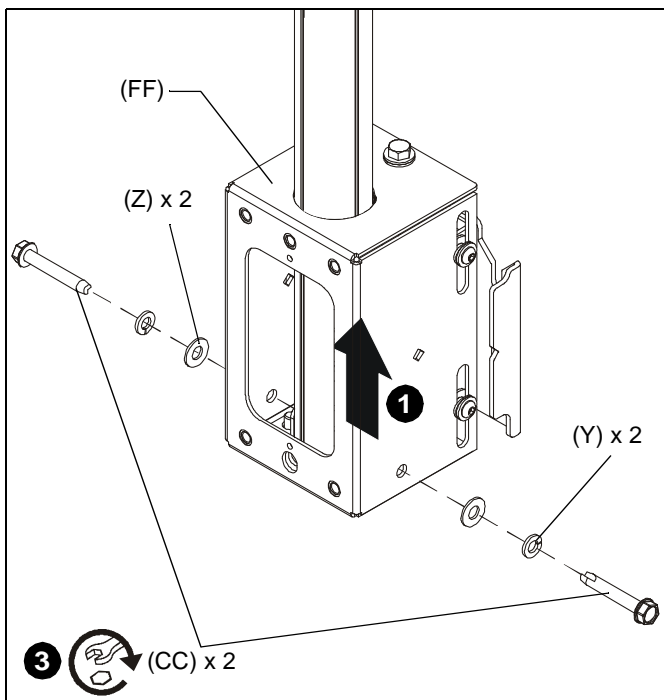


Figure 5

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)

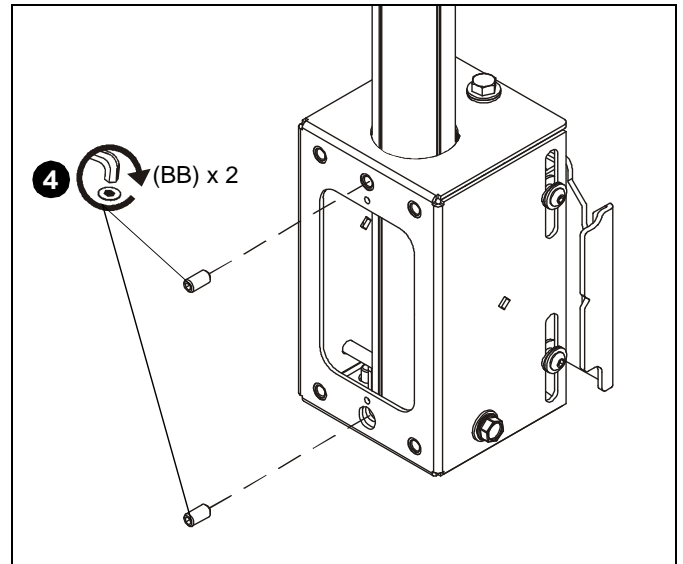


Figure 6

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)

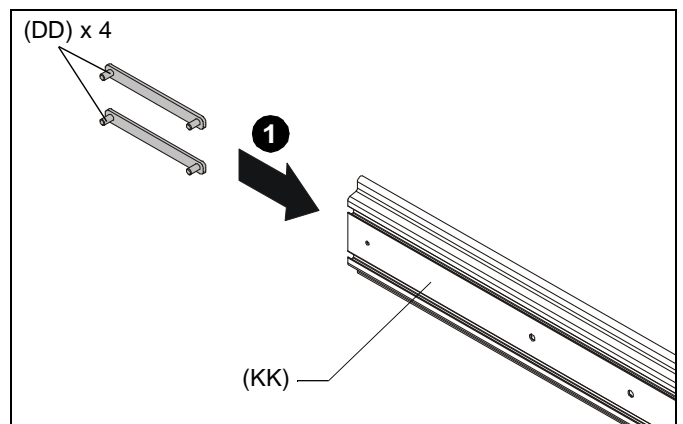


Figure 7

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)

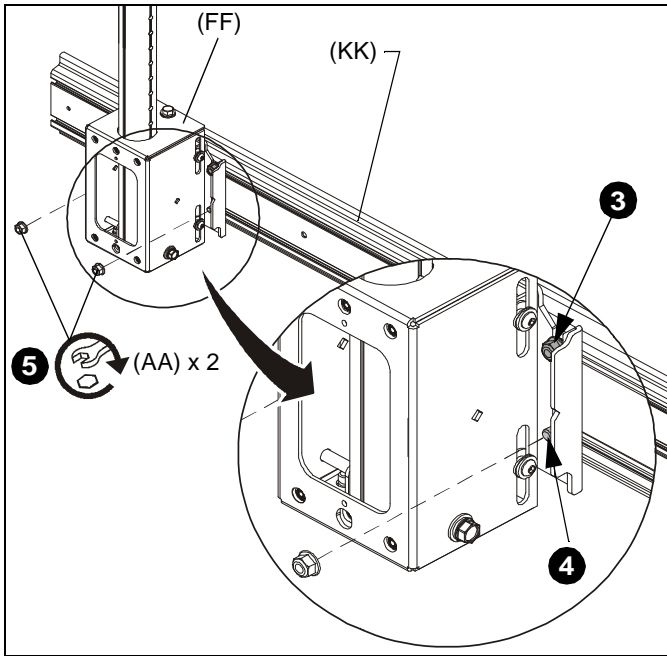


Figure 8

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)

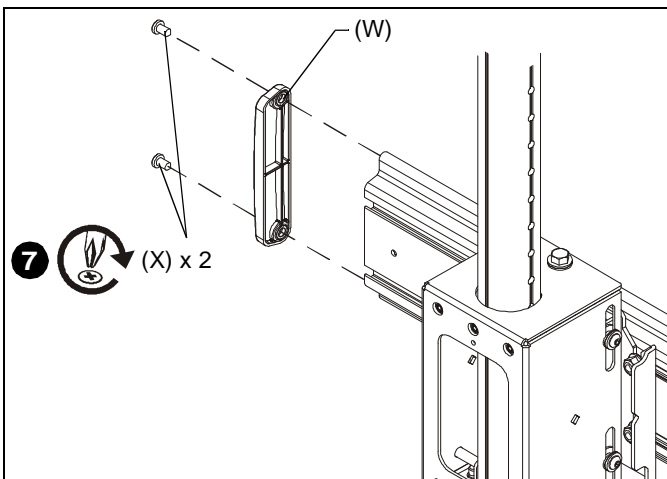


Figure 9

Attaching Interface Brackets to Displays

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

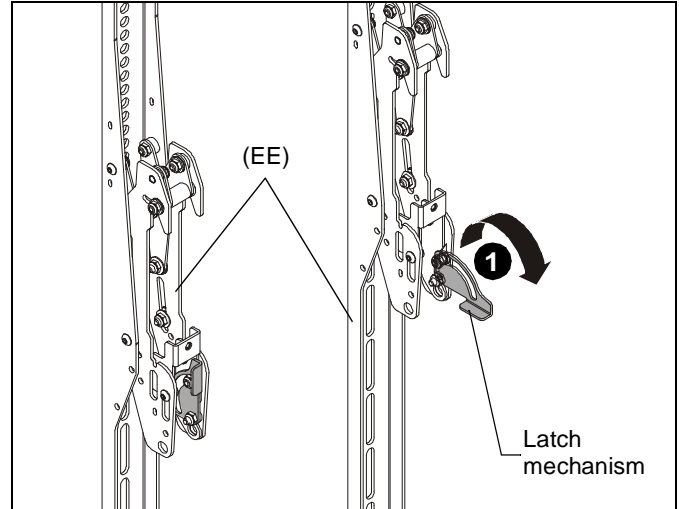


Figure 10

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.

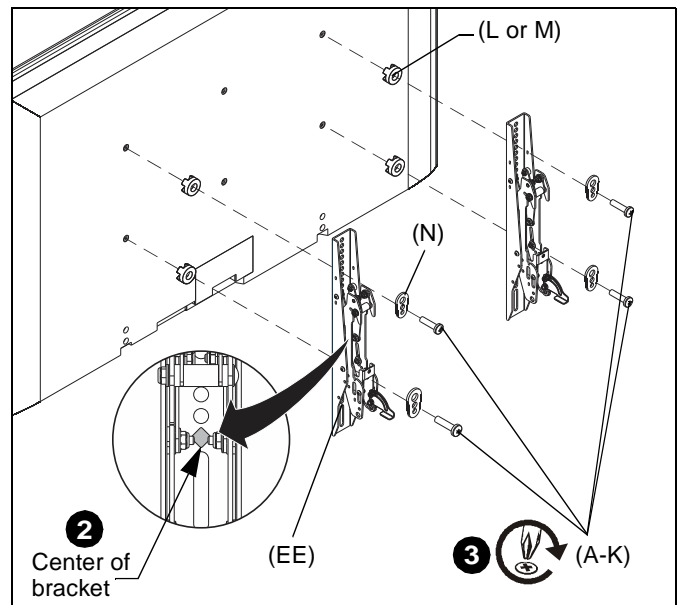


Figure 11



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)

IMPORTANT ! : The M8 screws do **NOT** require a washer. Use the universal washer (N) only with M4, M5 and M6 screws.

NOTE: The nesting spacers (M) may be used separately, or put two together in different configurations to create different size spacers. (See Figure 12)

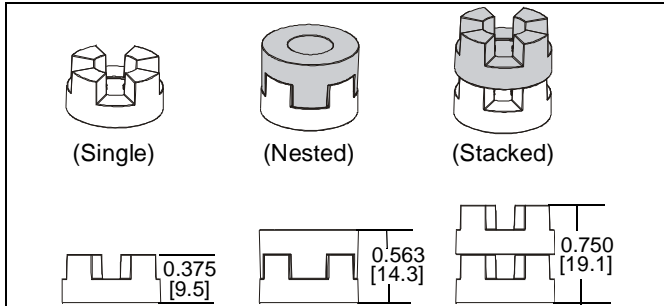


Figure 12

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 13)
- Mount remaining displays an equal distance from center display on each end of the mounting rail.

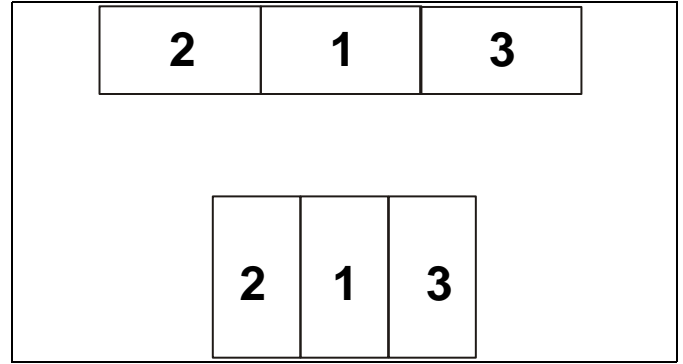


Figure 13

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 14)
3. Raise the latch mechanism on both interface brackets to lock bracket in place. (See Figure 14)

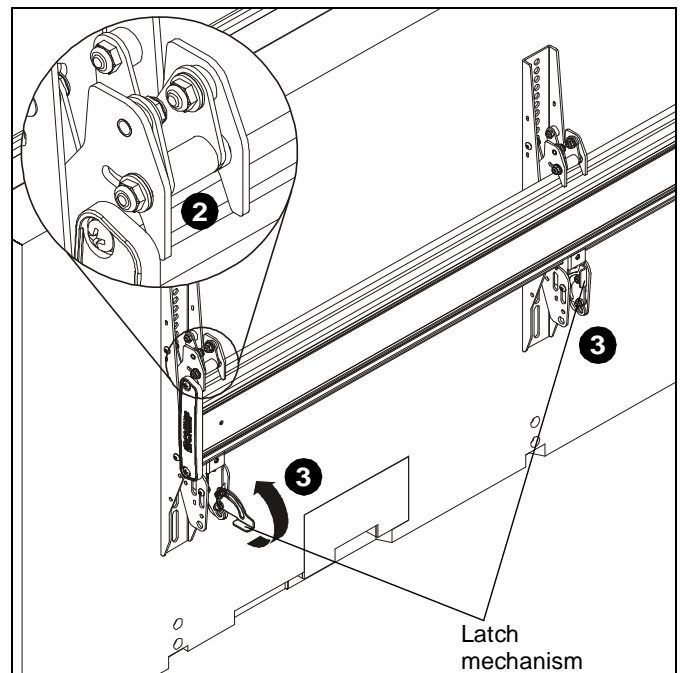


Figure 14

4. Fasten bracket against mounting rail using one 10-24 x 5/8" button head cap screw (T). (See Figure 15)
5. Repeat for other interface bracket.

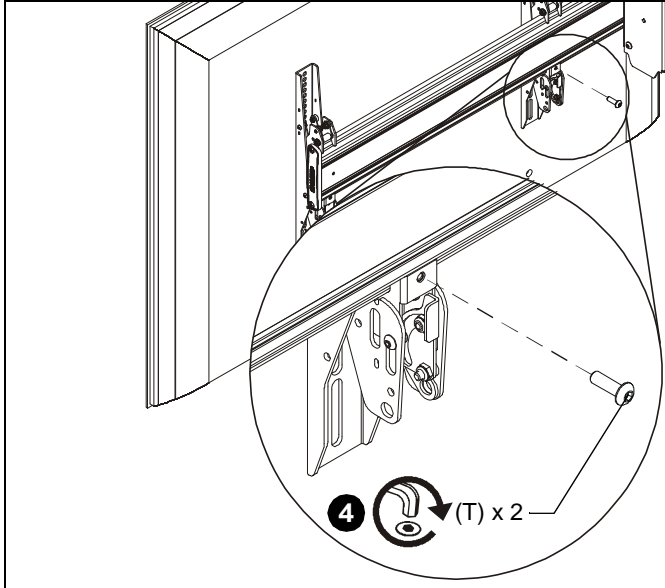


Figure 15

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 14)
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 14)
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 16)
2. Stop adjusting when the desired setting is reached.

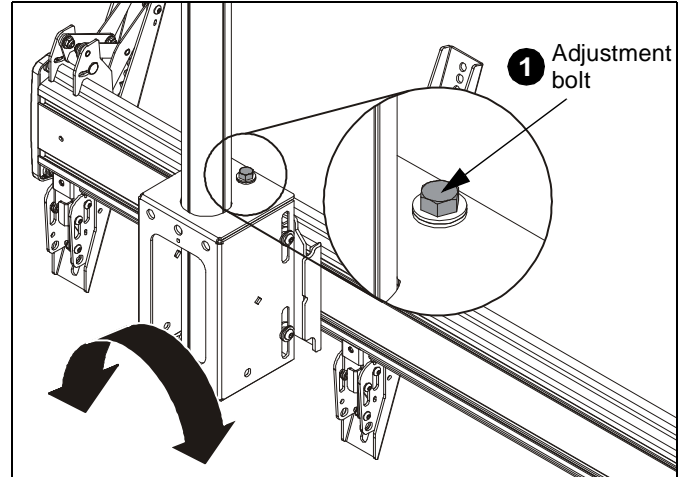


Figure 16

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 17)
4. Adjust tilt as required. (See Figure 17)
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 17)
6. Tighten tilt friction bolt as necessary.

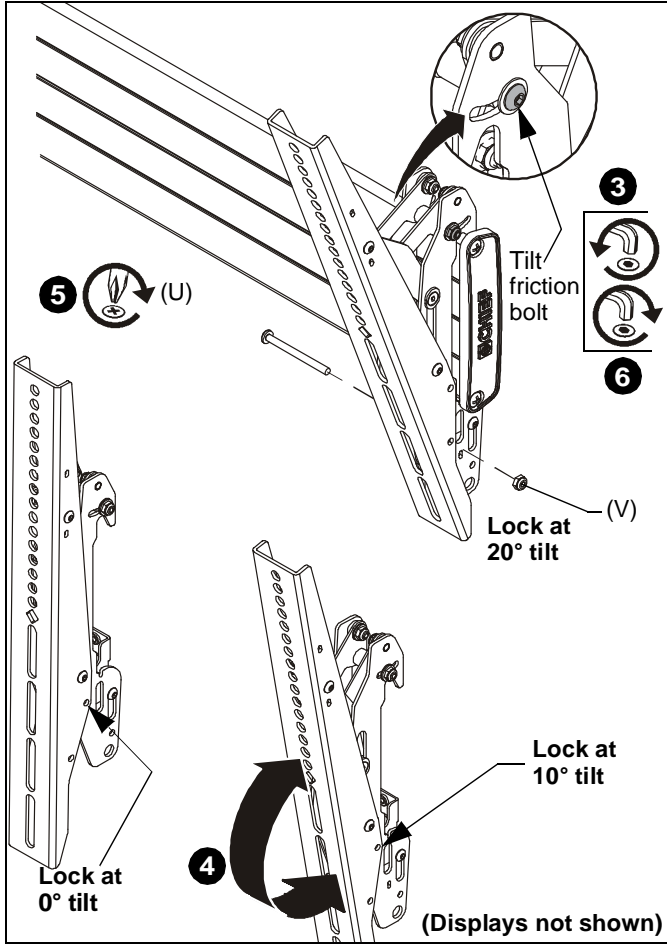


Figure 17

OPTIONAL: Security

1. **OPTIONAL:** Add padlock (not included) to each interface bracket to lock display to ceiling mount. (See Figure 18)

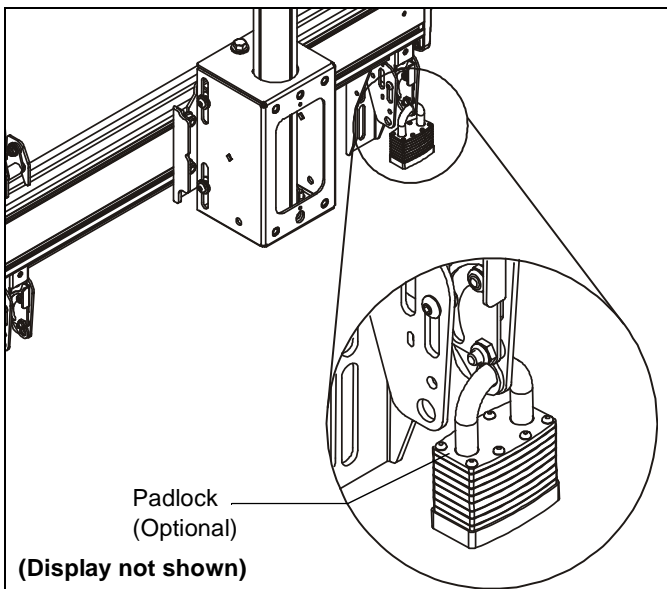


Figure 18

2. Install back cover (GG) into four holes on back of both array heads (FF). (See Figure 19)

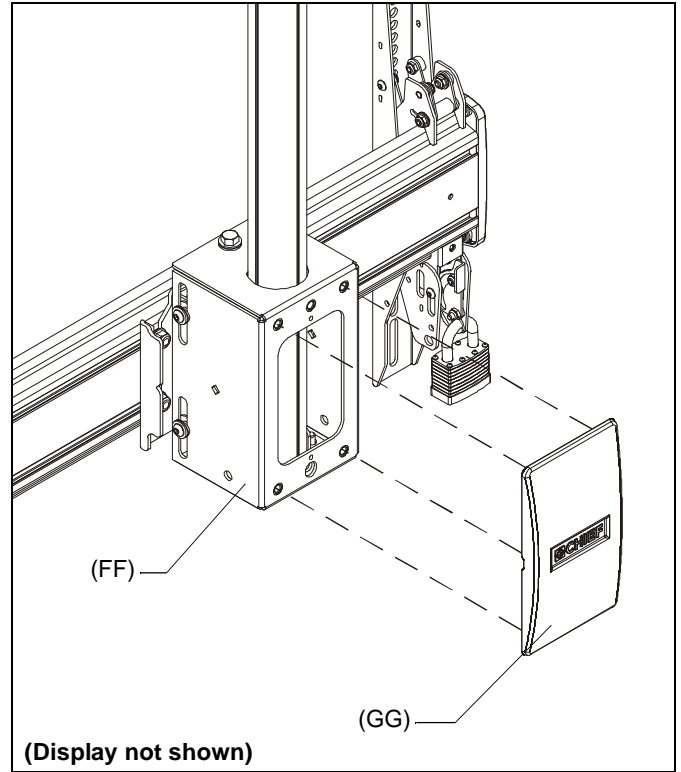


Figure 19



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