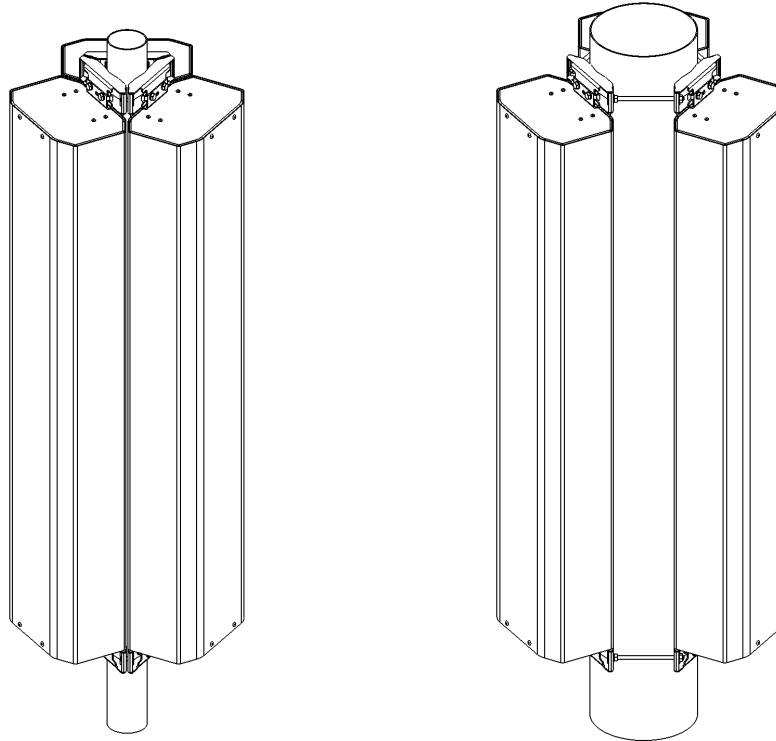




EXTENDING WIRELESS PERFORMANCE

Fixed Triple Mount Mast Bracket (TM-02) Installation Guide



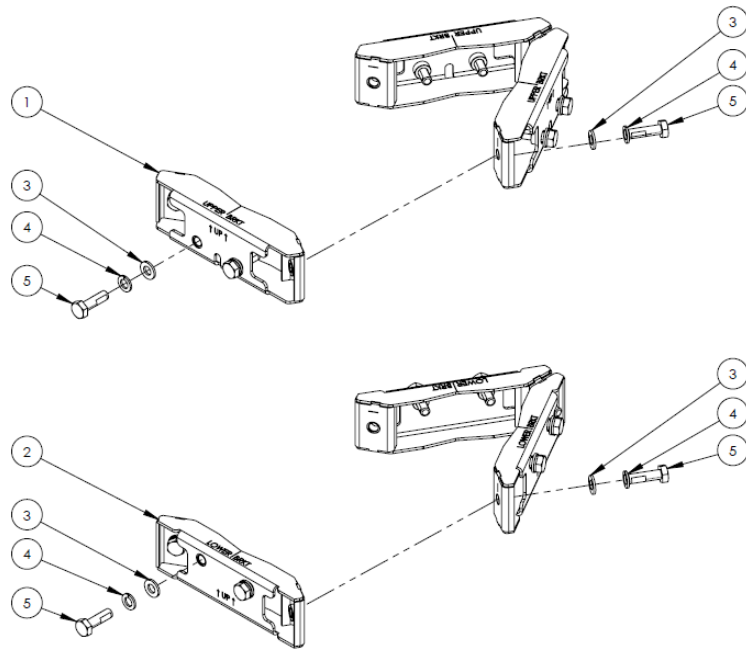
Variable Pole Mount Range Between Ø4.0" and Ø10.75" (Ø101.6mm to Ø273.1mm)

DISCLAIMER:

The installation, maintenance, or removal of an antenna requires qualified, experienced personnel. You must refer to the appropriate local safety codes and ensure proper electrical and electromagnetic compatibility before proceeding with the installation. All local codes shall take precedence over information in this document. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment. Communication Components Antennas Inc. disclaims any liability or responsibility for the results of improper or unsafe installation.

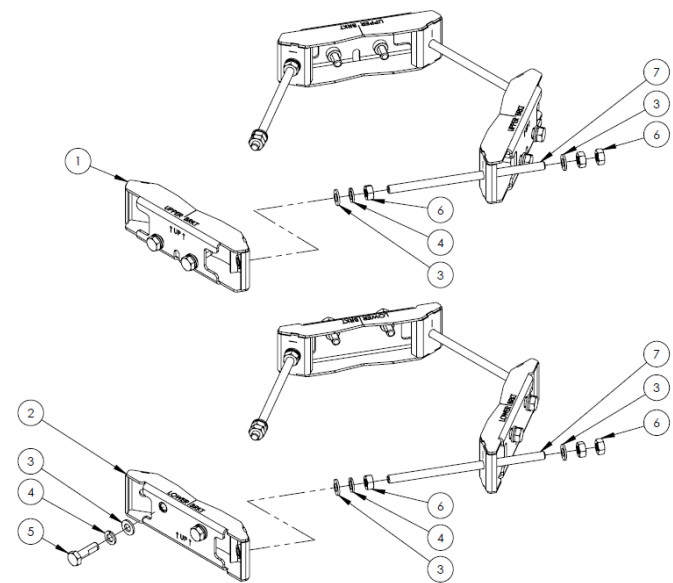
Fixed Triple Mount Mast Bracket (TM-02) Installation Guide

Fig. 1: Triple Mount Mast Bracket BOM For Ø4.0" & Ø4.5" Pole



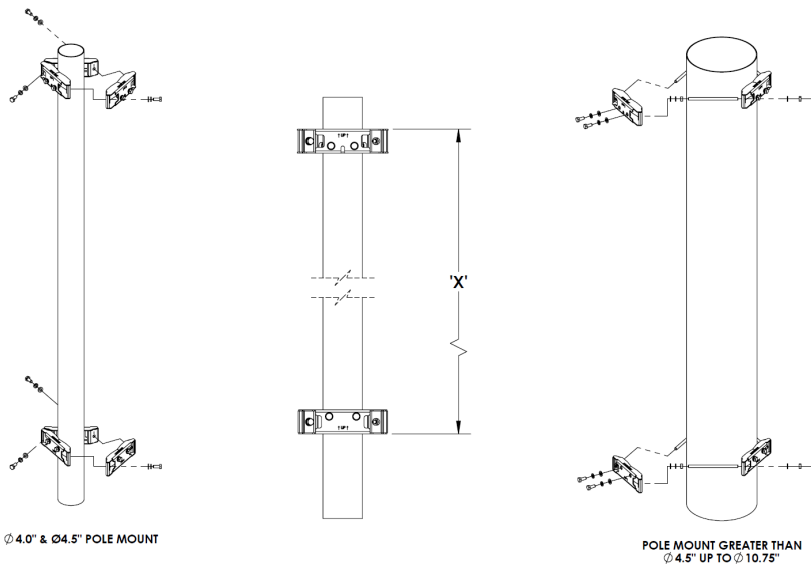
ITEM	QTY	DESCRIPTION
1	3	MOUNT, UPPER BRKT, TM-02
2	3	MOUNT, LOWER BRKT, TM-02
3	18	WASHER, FLAT, M10, 20 OD, 1.8-2.2 THK, SS
4	18	WASHER, SPLIT LOCK, M10, 20 OD, DIN 127B, 18 OD, SS
5	18	SCREW, HEX, CAP, M10X1.5, 35L, DIN 933, A4 SS, NYLOCK PATCH

Fig. 2: Triple Mount Mast Bracket BOM For Poles Greater Than Ø4.5" Up To Ø10.75"



ITEM	QTY	DESCRIPTION
1	3	MOUNT, UPPER BRKT, TM-02
2	3	MOUNT, LOWER BRKT, TM-02
3	24	WASHER, FLAT, M10, 20 OD, 1.8-2.2 THK, SS
4	18	WASHER, SPLIT LOCK, M10, 20 OD, DIN 127B, 18 OD, SS
5	12	SCREW, M10-1.5 X 35L, HEX CAP, DIN 933, A4 SS, W/NYL PATCH
6	18	NUT, HEX, M10X1.5, ISO 4032, SS, A4-70
7	6	M10X1.5 THREADED ROD – see notes for cut length

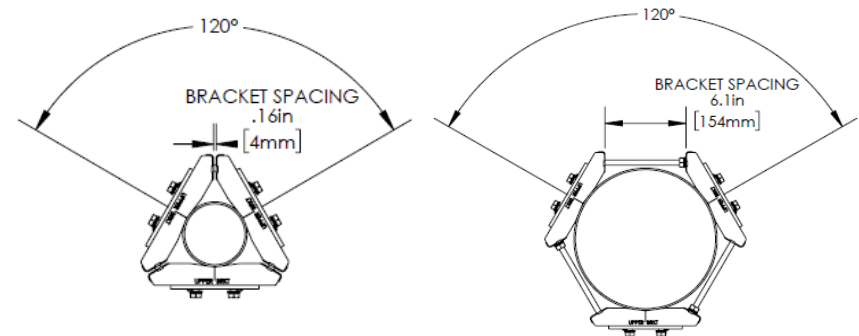
Fig. 3: Triple Mount Mast Bracket Vertical Spacing



Triple Mount Mast Bracket Vertical Spacing

ANTENNA	'X' in	'X' mm
14C65R-BUH5A	66.9	1700
16C65R-BUH8A	103.3	2625

Fig. 4: Triple Mount Mast Bracket Spacing and Threaded Rod Lengths

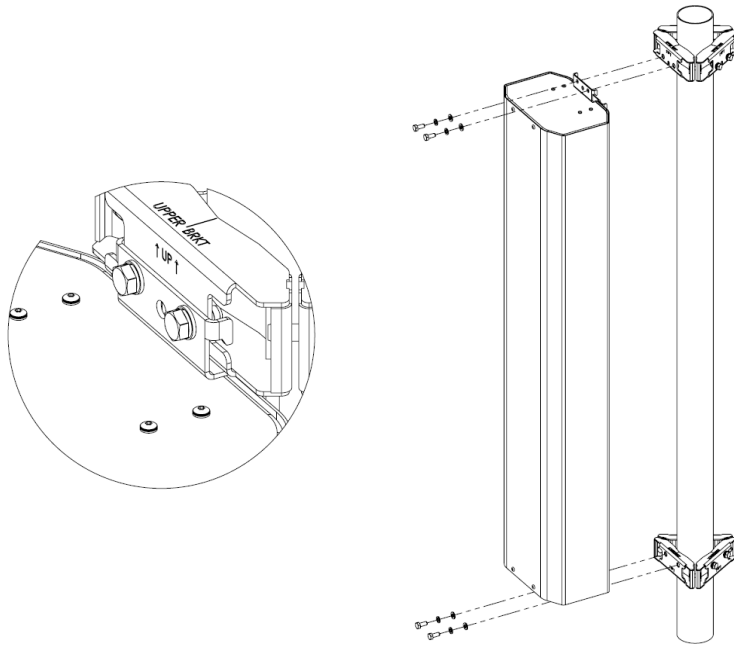


	Mast Bracket Spacing	M10 Threaded Rod Cut Lengths
POLE ϕ inches	SPACING - inches (mm)	CUT LENGTH - inches (mm)
4.000	0.2 (4.0)	Use Item 5
4.500	0.6 (16.4)	Use Item 5
5.563	1.6 (39.8)	3.4 (86)
6.625	2.5 (63.2)	4.3 (109)
8.625	4.2 (107.2)	6.0 (153)
10.750	6.1 (154)	7.9 (200)

Fixed Triple Mount Mast Bracket (TM-02) Installation Guide

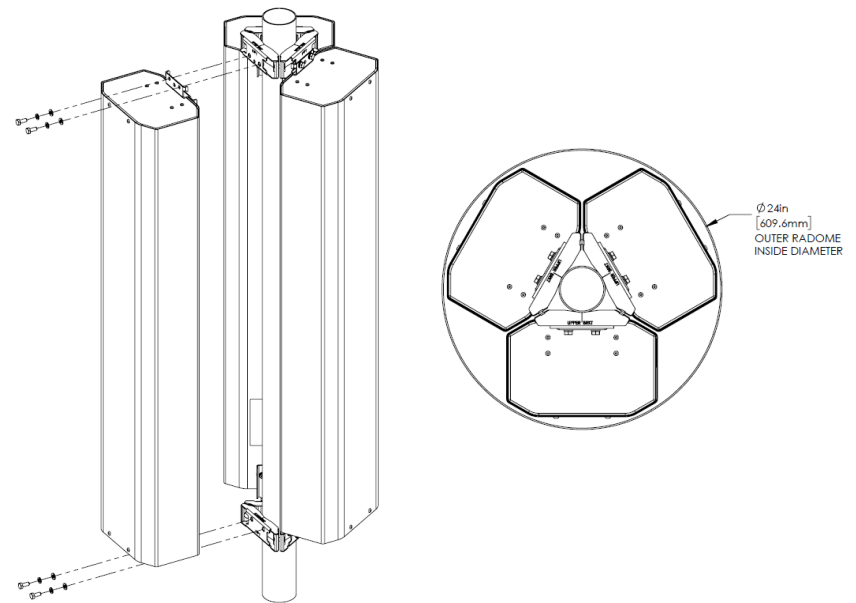
Step	Task
1	<p>See Fig. 1 for the Triple Mount Mast Bracket (TM-02) BOM to be used on a Ø4.0" (102mm) or Ø4.5" (114mm) pole.</p> <p>See Fig. 2 for the Triple Mount Mast Bracket (TM-02) BOM to be used on poles greater than Ø4.5" (114mm) up to Ø10.75" (273mm).</p> <p>Installation Note: Equal spacing between brackets will need to be maintained to obtain 120° bracket spacings. (See Fig. 4 for mast bracket spacings). To maintain equal spacing while torquing bracket hardware, tighten the first screw or nut ¼ turn and then proceed and tighten the next screw or nut ¼ turn. Continue this pattern until all hardware is torqued to 14.7 ft·lbs (20 N·m). Check that final bracket spacing measurements are within 0.1" (2 mm) of each other.</p>
2	<p>Pole mounts Ø4.0" or Ø4.5"</p> <p>Clamp the three Top Mast Brackets (item #1) around the mast using three Washers (item #3), three Lock Washers (item #4) and three Screws (item #5) as shown in Fig. 3. Finger tighten all three Screws. Rotate the Top Mast Brackets on the mast so they are orientated in the specified antenna directions and torque the Screws to 14.7 ft·lbs (20 N·m) per installation note in Step 1.</p> <p>Clamp the three Bottom Mast Brackets (item #2) around the mast using three Washers (item #3), three Lock Washers (item #4) and three Screws (item #5) as shown in Fig. 3. Finger tighten all three Screws. Align the Bottom Mast Brackets to the Top Mast Brackets. Space the Mast Brackets 'X' distance apart as shown in Fig. 3. Torque the Screws to 14.7 ft·lbs (20 N·m) per installation note in Step 1.</p>
3	<p>Pole mounts greater than Ø4.5" up to Ø10.75"</p> <p>Clamp the three Top Mast Brackets (item #1) around the mast using six Washers (item #3), three Lock washers (item #4) and nine Nuts (item #6) and three M10 threaded Rods (item #7) as shown in Fig. 3. Threaded rod lengths are shown in Fig. 4. Finger tighten all the Screws. Rotate the Top Mast Brackets on the mast so they are orientated in the specified antenna directions and torque the Screws to 14.7 ft·lbs (20 N·m) per installation note in Step 1.</p> <p>Clamp the three Bottom Mast Brackets (item #2) around the mast using six Washers (item #3), nine Nuts (item #4) and three M10 threaded Rods (cut to length) as shown in Fig. 3. Threaded rod lengths are shown in Fig. 4. Finger tighten all the Nuts. Align the Bottom Mast Brackets to the Top Mast Brackets. Space the Mast Brackets 'X' distance apart as shown in Fig. 3. Torque the Nuts to 14.7 ft·lbs (20 N·m) per installation note in Step 1.</p>

Fig. 5: Single Antenna Mounting - Shown on Ø4.0" Pole
(Mounting Is The Same On All Pole Sizes)



STEP	TASK
4	Hang the hooks from the top of the Antenna over the Top Mast Bracket Clamp as shown in Fig. 5. Secure the Antenna using four Washers (item #3), four Lock Washers (item #4) and four Screws (item #5) as shown in Fig. 4 and torque the Screws to 14.7 ft-lbs (20 N·m).

Fig. 6: Three Antenna Mounting - Shown on Ø4.0" Pole
(Mounting Is The Same On All Pole Sizes)



STEP	TASK
5	For mounting on a Ø4.0" or Ø4.5" pole, hang and secure the additional Antennas using four Washers (item #3), four Lock Washers (item #4) and four Screws (item #4) per Antenna as shown in Fig. 6. Torque the Bolts to 14.7 ft-lbs (20 N·m). On a Ø4.0" pole, three Antennas fit inside an outer radome with Ø24" (609.6mm) inside diameter. See Table 1 for other diameters.

Fig. 7: Three Antenna Mounting on Ø10.75" Pole

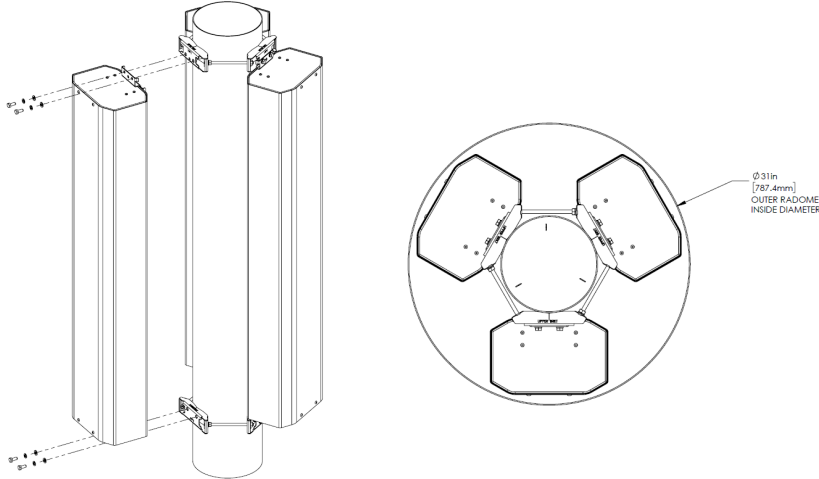


TABLE 1: Outer Radome Inside Diameter Ø

Pole Ø inches	Radome Inside Ø inches (mm)
4.000	24 (610)
4.500	25 (629)
5.563	26 (656)
6.625	27 (683)
8.625	29 (733)
10.750	7.6 (193)

Step

Task

6

For mounts on poles greater than Ø4.5" up to Ø10.75", hang and secure the additional antennas using four Washers (item #3) and four Screws (item #4) per antenna as shown in Fig. 7. Torque the Screws to 14.7 ft·lbs (20 N·m).
On a Ø10.75" pole, three Antennas fit inside an outer radome with Ø31" (787.4 mm) inside diameter. See Table 1 for other diameters.