Antennas

DATA SHEET

Multi-Band Omni Antenna

SCA360F-UHJ2A

- Two foot (0.6 m), Triband, ten port quasi-omni antenna with 360° of coverage, covering 1695-2360 MHz, 3550-3700 MHz and 5150-5925 MHz frequencies
- Four wide band ports covering 1695-2360 MHz, four CBRS band ports covering 3550-3700 MHz and two U-NII band ports covering 5150-5925 MHz, all within in a low weight and low profile cylindrical antenna
- Full Spectrum Compliance for 1695-2360 MHz, CBRS and U-NII frequencies
- Antenna meets U-NII pattern and gain requirements for US Markets
- With a 24" height and 8.5" diameter, this low profile cylindrical antenna is an ideal solution for Small Cell/C-RAN Densification deployments in difficult jurisdictional urban, suburban and rural environments
- The antenna is equipped with center mount pole, which can be used for third party concealment applications or utilize a removeable 1.5" OD center post, which makes it ideal for mounting on utility, lighting and traffic poles
- Antenna baseplate has six ¼-20 UNC threaded holes on a 2.750" bolt circle diameter pattern which can be used for third party concealment applications
- Exceeds minimum PIM performance requirements
- Equipped with new NEX10 connectors, which is 52% smaller than 4.3-10 connectors
- Ordering options include Fixed EDT of 2°, 6°, 10° or 13° for the 1695-2360 MHz ports and 2° EDT for CBRS 3550-3700 MHz and 4° U-NII 5150-5925 MHz ports

Overview

The CCI Triband Quasi-Omni array is a ten port Small Cell antenna, with four wide band ports covering 1695-2360 MHz, four CBRS band ports covering 3550-3700 MHz and two U-NII band ports covering 5150-5925 MHz. The CCI Triband Quasi-Omni Small Cell antenna provides two independent sets of 4x4 Multiple-input-Multiple-output (MIMO) functionality across the 1695-2400 MHz and CBRS 3550-3700 MHz ports and provides 2x2 Multiple-input-Multiple-output (MIMO) functionality across the U-NII 5150-5925 MHz ports.

CCI antennas are designed and produced to ISO 9001 certification standards for reliability and quality in our state-of-the-art manufacturing facilities.

Applications

- Microcells, Small Cells and C-RAN in Urban, Suburban and other visually sensitive environments
- Outdoor Distributed Antenna Systems (ODAS), neutral host in venues, campuses and other outdoor coverage applications

SPECIFICATIONS

Multi-Band Omni Antenna

SCA360F-UHJ2A

Electrical

Ports	4 x High Band Ports for 1695-2360 MHz			
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2305-2360 MHz
Gain[1] (2° EDT)	7.9 dBi	8.3 dBi	8.5 dBi	8.9 dBi
Gain[1] (6° EDT)	7.9 dBi	8.2 dBi	8.6 dBi	8.7 dBi
Gain[1] (10° EDT)	7.7 dBi	8.2 dBi	8.8 dBi	8.7 dBi
Gain[1] (13° EDT)	7.8 dBi	8.3 dBi	8.5 dBi	8.1 dBi
Gain (Average)[2] (2° EDT)	7.5 dBi	8.0 dBi	8.3 dBi	8.6 dBi
Gain (Average)[2] (6° EDT)	7.5 dBi	8.0 dBi	8.3 dBi	8.5 dBi
Gain (Average)[2] (10° EDT)	7.3 dBi	7.7 dBi	8.1 dBi	8.5 dBi
Gain (Average)[2] (13° EDT)	7.1 dBi	7.7 dBi	8.1 dBi	7.8 dBi
Elevation Beamwidth (-3dB) (2° EDT)	24.0°	22.8°	21.8°	18.5°
Elevation Beamwidth (-3dB) (6° EDT)	23.4°	22.5°	21.6°	19.5°
Elevation Beamwidth (-3dB) (10° EDT)	24.3°	23.4°	22.4°	19.8°
Elevation Beamwidth (-3dB) (13° EDT)	25.6°	24.3°	22.7°	21.5°
Electrical Downtilt	2° or 6° or 10° or 13°	2° or 6° or 10° or 13°	2° or 6° or 10° or 13°	2° or 6° or 10° or 13°
First Upper Sidelobes (at Peak Gain) (2° EDT)	< -22 dB	< -18 dB	< -18 dB	< -20 dB
First Upper Sidelobes (at Peak Gain) (6° EDT)	< -18 dB	< -17 dB	< -17 dB	< -18 dB
First Upper Sidelobes (at Peak Gain) (10° EDT)	< -19 dB	< -15 dB	< -16 dB	< -18 dB
First Upper Sidelobes (at Peak Gain) (13° EDT)	< -19 dB	< -19 dB	< -16 dB	< -13 dB
Cross-Polar Port-to-Port Isolation (all tilts)	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Interband Port to Port Isolation (all tilts)	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Voltage Standing Wave Ratio(VSWR)	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc
Input Power Continuous Wave (CW)	200 watts	200 watts	200 watts	200 watts
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground

[1]Peak gain across sub-bands.
[2]Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V9.6.

Ports	4 x High Band Ports for 3550-3700 MHz	2 x High Band Ports for 5150-5925 MHz
Frequency Range	3550-3700 MHz	5150-5925 MHz
Gain[1]	7.0 dBi	4.4 dBi
Gain (Average)[2]	6.9 dBi	4.0 dBi
Elevation Beamwidth (-3dB)	28.8°	27.2°
Electrical Downtilt	2°	4°
First Upper Sidelobes (at Peak Gain)	< -12 dB	< -17 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 20 dB
Interband Port to Port Isolation	> 25 dB	> 25 dB
Voltage Standing Wave Ratio(VSWR)	< 1.5:1	< 1.5:1
Input Power Continuous Wave (CW)	100 watts	100 watts
Polarization	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground

[1]Peak gain across sub-bands.
[2]Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V9.6.

SPECIFICATIONS

Multi-Band Omni Antenna

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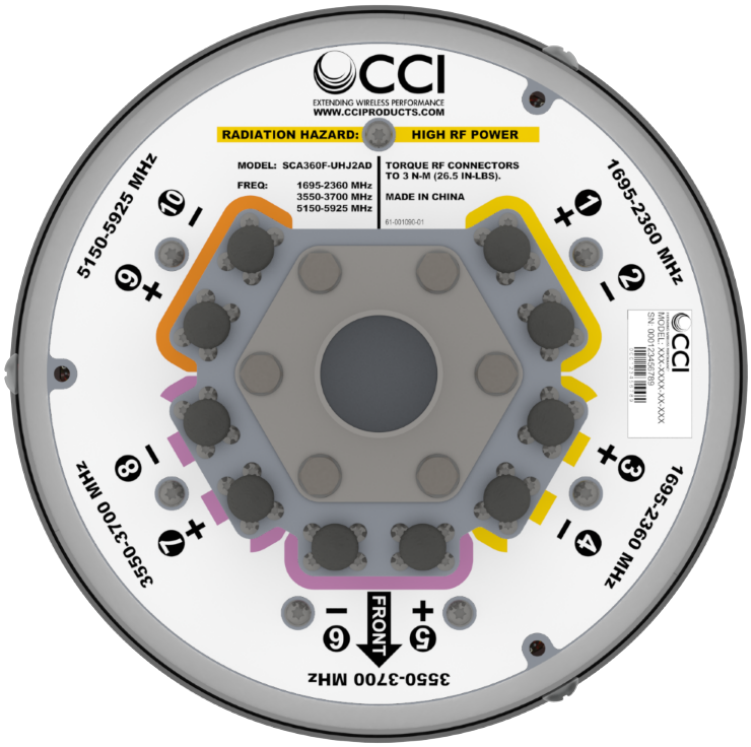
Mechanical

Dimensions (L x D)	24x8.5 in (610x216 mm)
Diameter max at top cap	8.8 in (224 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	26 lbs (116 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	1.0 ft² (0.1 m²)
Weight *	13.2 lbs (6.0 kg)
Connector	10 x NEX10 female
Mounting Pole	1 to 2.5 in (2.5 to 6.3 cm)

** Weight excludes mounting*

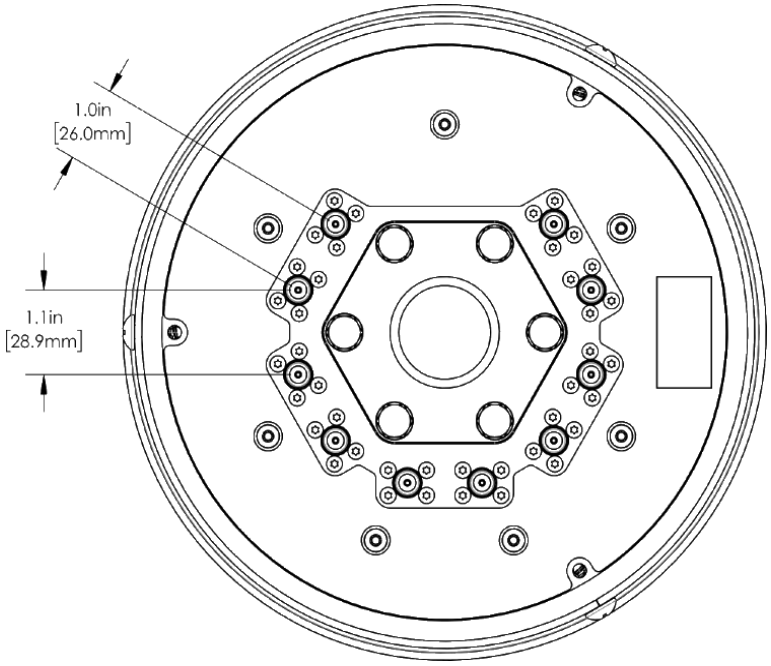
Bottom View



SPECIFICATIONS

Mechanical

Connector Spacing



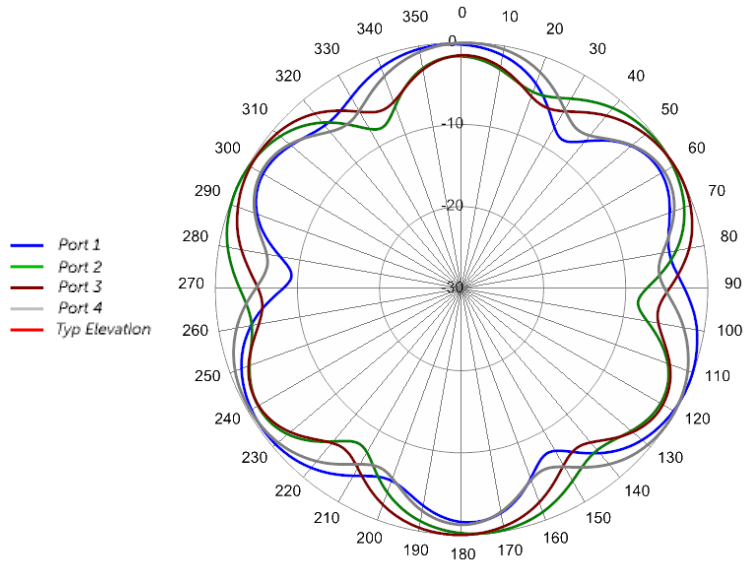
SPECIFICATIONS

Multi-Band Omni Antenna

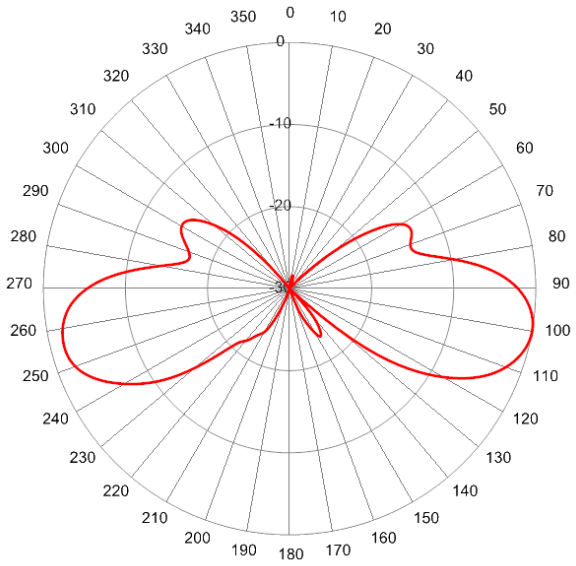
SCA360F-UHJ2A

Typical Antenna Patterns

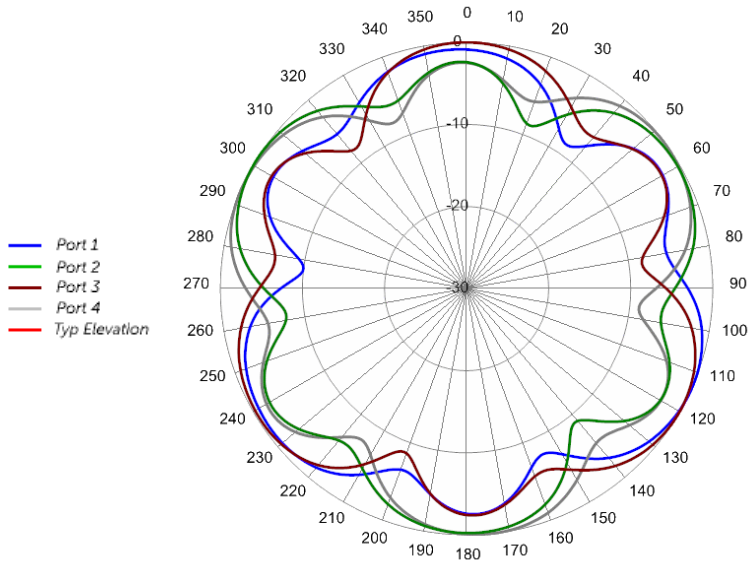
For detailed information on additional antenna patterns, contact customer support at support@cciproducts.com



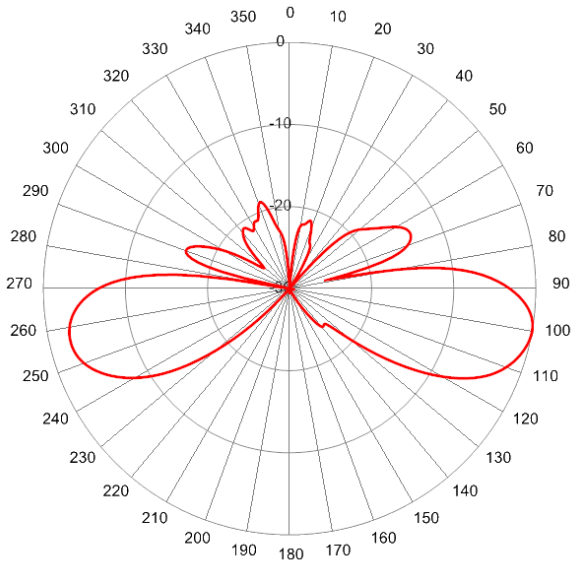
1910 MHz Azimuth



1910 MHz Elevation 10°



2110 MHz Azimuth



2110 MHz Elevation 10°

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Multi-Band Omni Antenna

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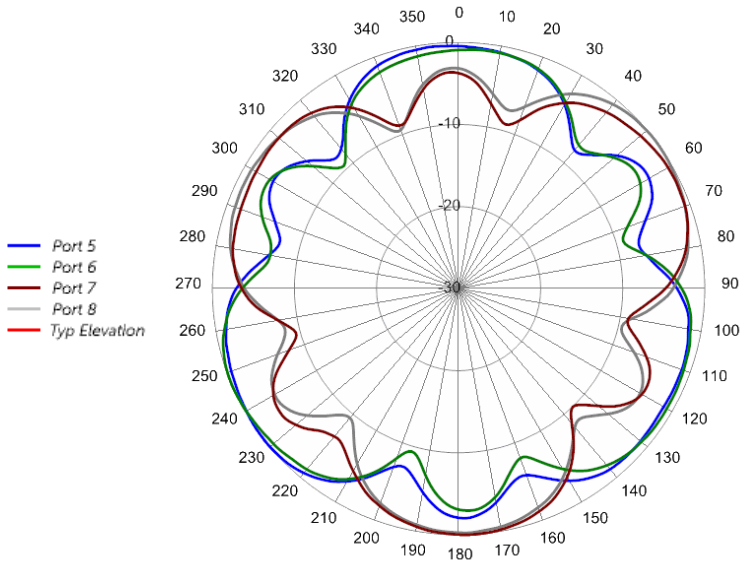
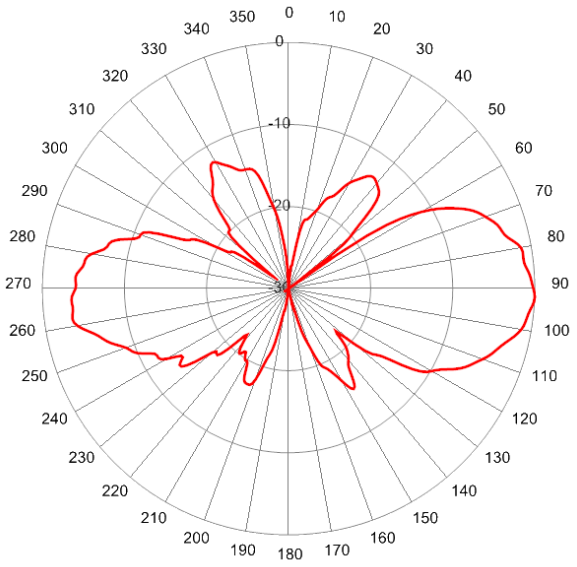
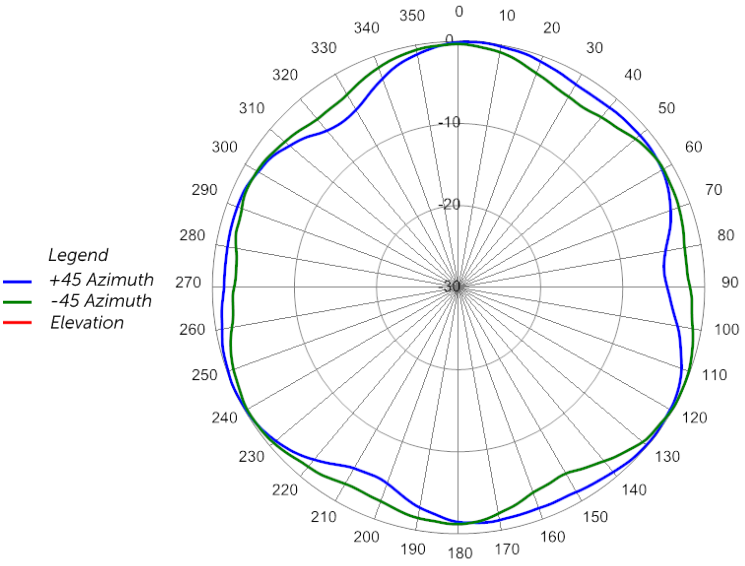
Typical Antenna Patterns



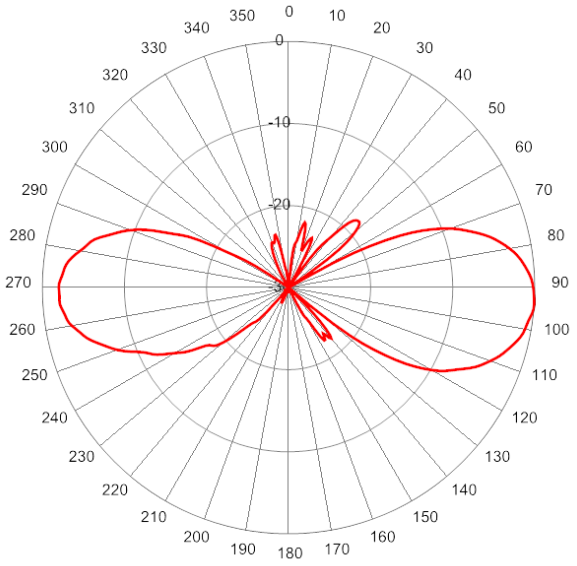
3600 MHz Azimuth



3600 MHz Elevation 2°



5150 MHz Azimuth



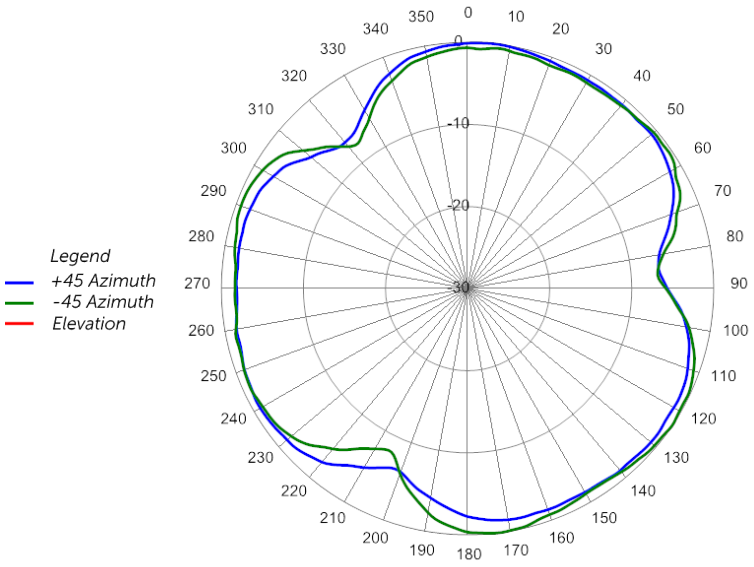
5150 MHz Elevation 4°

SPECIFICATIONS

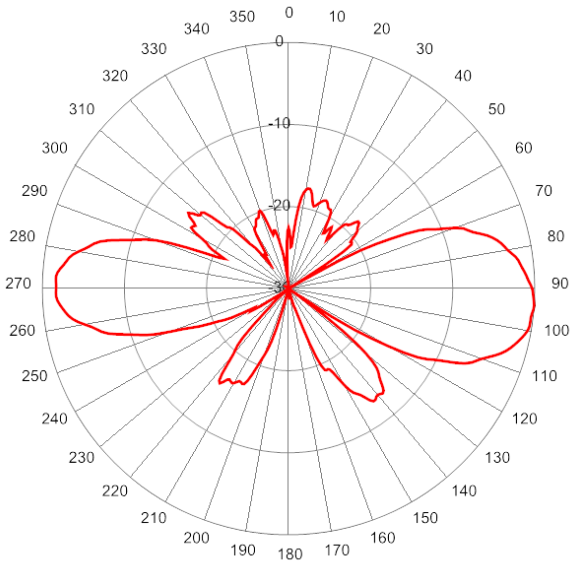
Multi-Band Omni Antenna

SCA360F-UHJ2A

Typical Antenna Patterns



5850 MHz Azimuth



5850 MHz Elevation 4°

ORDERING

Multi-Band Omni Antenna

SCA360F-UHJ2A

Parts & Accessories

SCA360F-UHJ2AA-K	Two foot (0.6 m) Multi-Band Omni antenna with 2 degree EDT on U band, NEX10 connectors and MBC-02 mounting bracket
SCA360F-UHJ2AB-K	Two foot (0.6 m) Multi-Band Omni antenna with 6 degree EDT on U band, NEX10 connectors and MBC-02 mounting bracket
SCA360F-UHJ2AC-K	Two foot (0.6 m) Multi-Band Omni antenna with 10 degree EDT on U band, NEX10 connectors and MBC-02 mounting bracket
SCA360F-UHJ2AD-K	Two foot (0.6 m) Multi-Band Omni antenna with 13 degree EDT on U band, NEX10 connectors and MBC-02 mounting bracket
MBC-02	Clamp kit, Pipe range 1 - 2.5 in. or lag bolt to wooden pole or flat surface (lag bolts not supplied)

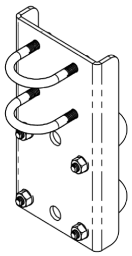
ACCESSORIES

Triple Mount Mast Bracket

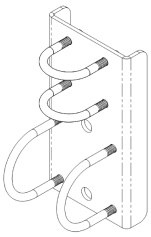
MBC-02

Mechanical

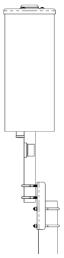
Dimensions (L x W x D)	7.9×4.3×1.1 in. (200×108×28 mm)
Weight	2.4 lbs (1.1 kg)
Fastener Size	5/16 UNC
Installation Torque (ft-lbs)	10



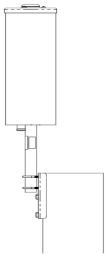
Bracket Vert. Mount View



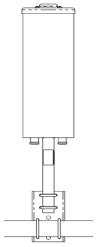
Bracket Hort. Mount View



Vertical Pole Mount



Wooden Pole Mount



Horizontal Pole Mount

STANDARDS & CERTIFICATIONS

Standards & Compliance

Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC-60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29, IEC 60068-02-30, IEC 60068-2-52, IEC 60068-2-64, GR-63-CORE 4.3.1, EN 60529, IP 24

Certifications

Federal Communication Commission (FCC) Part 15 Class B, ISO 9001