



Antennas

DATA SHEET

Multi-Band Omni Antenna

SCA360F-UHJ2Av2



- Two foot (0.6 m), Multi-Band, ten port quasi-omni antenna with 360° of coverage, covering 1695-2400 MHz, 3300-4200 MHz and 5150-5925 MHz frequencies
- Four wide band ports covering 1695-2400 MHz, four CBRS band ports covering 3300-4200 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 1695-2400 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 1/4-20 UNC threaded holes on a 2.25" bolt circle diameter pattern which can be used for third party concealment applications
- Exceeds minimum PIM performance requirements
- Equipped with 4.3-10 connectors with an option for the new NEX10 connectors, which are 52% smaller than 4.3-10 connectors
- Ordering options include Fixed EDT of 2°, 6°, 10° or 13° for the 1695-2400 MHz ports and 2° EDT for 3300-4200 MHz and 7° 5150-5925 MHz ports

Overview

The CCI Multi-Band Quasi-Omni array is a ten port Small Cell antenna, with four wide band ports covering 1695-2400 MHz, four CBRS band ports covering 3300-4200 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 3300-4200 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



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SPECIFICATIONS

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Electrical

Ports	4 x High Band Ports for 1695-2400 MHz			
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz
Gain ¹ (2° EDT)	8.2 dBi	8.3 dBi	8.4 dBi	8.7 dBi
Gain ¹ (6° EDT)	8.2 dBi	8.3 dBi	8.5 dBi	8.5 dBi
Gain ¹ (10° EDT)	8.2 dBi	8.2 dBi	8.6 dBi	8.6 dBi
Gain ¹ (13° EDT)	8.0 dBi	8.0 dBi	8.6 dBi	8.5 dBi
Gain (Average) ² (2° EDT)	7.7 dBi	8.0 dBi	8.1 dBi	8.3 dBi
Gain (Average) ² (6° EDT)	7.8 dBi	8.0 dBi	8.1 dBi	8.3 dBi
Gain (Average) ² (10° EDT)	7.7 dBi	7.9 dBi	8.1 dBi	8.3 dBi
Gain (Average) ² (13° EDT)	7.2 dBi	7.5 dBi	7.9 dBi	8.0 dBi
Elevation Beamwidth (-3dB) (2° EDT)	26.1°	24.0°	23.2°	19.7°
Elevation Beamwidth (-3dB) (6° EDT)	25.7°	24.5°	23.7°	20.3°
Elevation Beamwidth (-3dB) (10° EDT)	26.0°	24.5°	23.9°	20.0°
Elevation Beamwidth (-3dB) (13° EDT)	25.8°	25.2°	23.9°	21.0°
Electrical Downtilt	2° or 6° or 10° or 13°			
First Upper Sidelobes (at Peak Gain) (2° EDT)	< -20 dB	< -18 dB	< -18 dB	< -18 dB
First Upper Sidelobes (at Peak Gain) (6° EDT)	< -18 dB	< -18 dB	< -20 dB	< -18 dB
First Upper Sidelobes (at Peak Gain) (10° EDT)	< -18 dB	< -17 dB	< -17 dB	< -18 dB
First Upper Sidelobes (at Peak Gain) (13° EDT)	< -17 dB	< -14 dB	< -14 dB	< -13 dB
Cross-Polar Port-to-Port Isolation (all tilts)	> 25 dB			
Interband Port to Port Isolation (all tilts)	> 25 dB			
Voltage Standing Wave Ratio(VSWR)	< 1.5:1			
Passive Intermodulation (2x20W)	≤ -153 dBc			
Input Power Continuous Wave (CW)	200 watts			
Polarization	Dual Pol 45°			
Input Impedance	50 ohms			
Lightning Protection	DC Ground			

¹Peak gain across sub-bands.

²Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V9.6.

Ports	4 x High Band Ports for 3300-4200 MHz	2 x High Band Ports for 5150-5925 MHz
Frequency Range	3300-4200 MHz	5150-5925 MHz
Gain ¹	8.3 dBi	5.3 dBi
Gain (Average) ²	6.6 dBi	4.8 dBi
Elevation Beamwidth (-3dB)	36.5°	28.5°
Electrical Downtilt	2°	7°
First Upper Sidelobes (at Peak Gain)	< -14 dB	< -22 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 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)	50 watts	10 watts
Polarization	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground

¹Peak gain across sub-bands.

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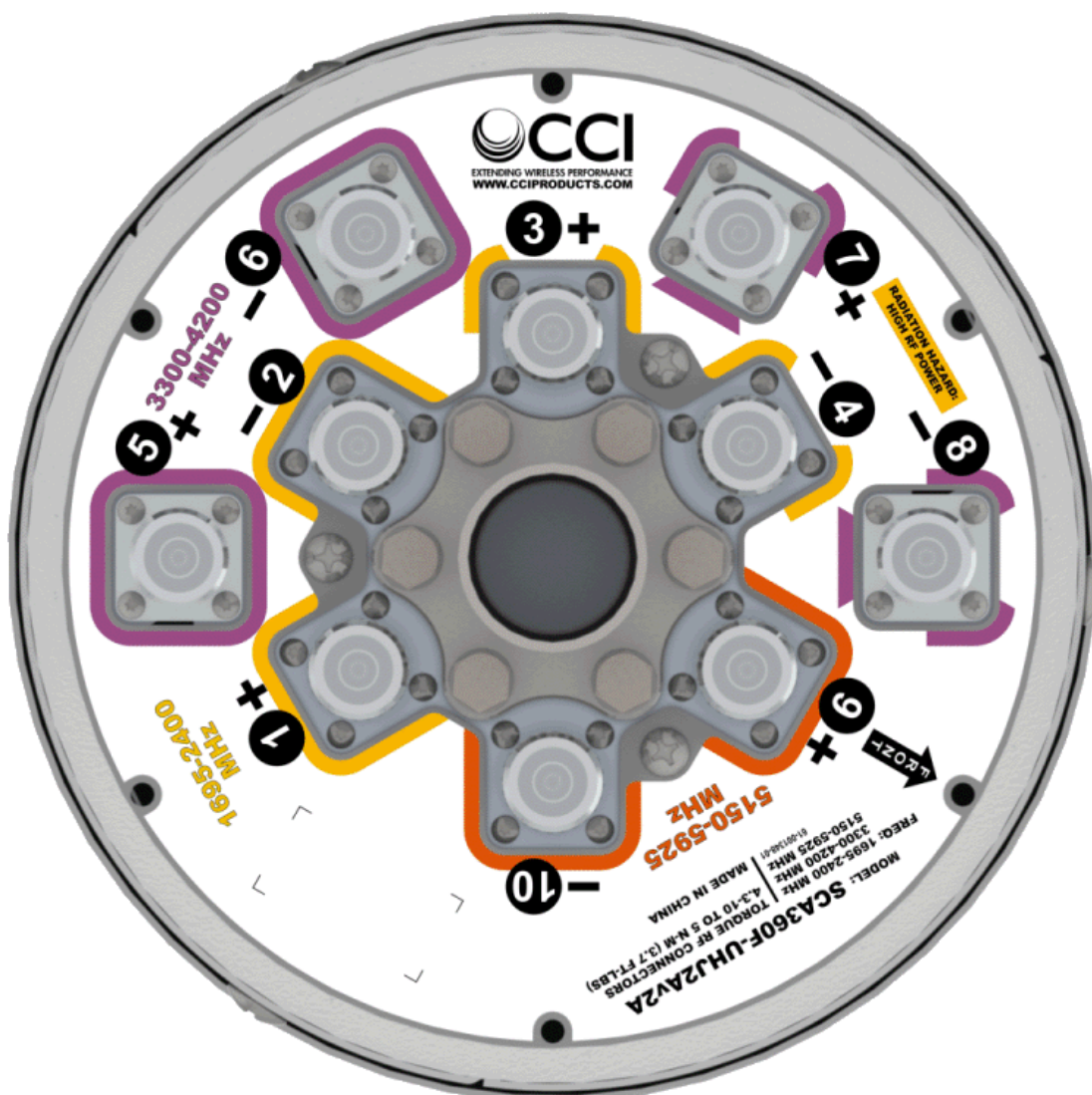
Mechanical

Dimensions (L x D)	24x8.4 in (625x214 mm)
Diameter max at top cap	8.6 in (219 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 ft ² (0.1 m ²)
Weight *	12.0 lbs (5.4 kg)
Connector	10 x 4.3-10 female or 10 x NEX10
Mounting Pole	1 to 2.5 in (2.5 to 6.3 cm)

* Weight excludes mounting kit

Bottom View

SCA360F-UHJ2Av2A Shown





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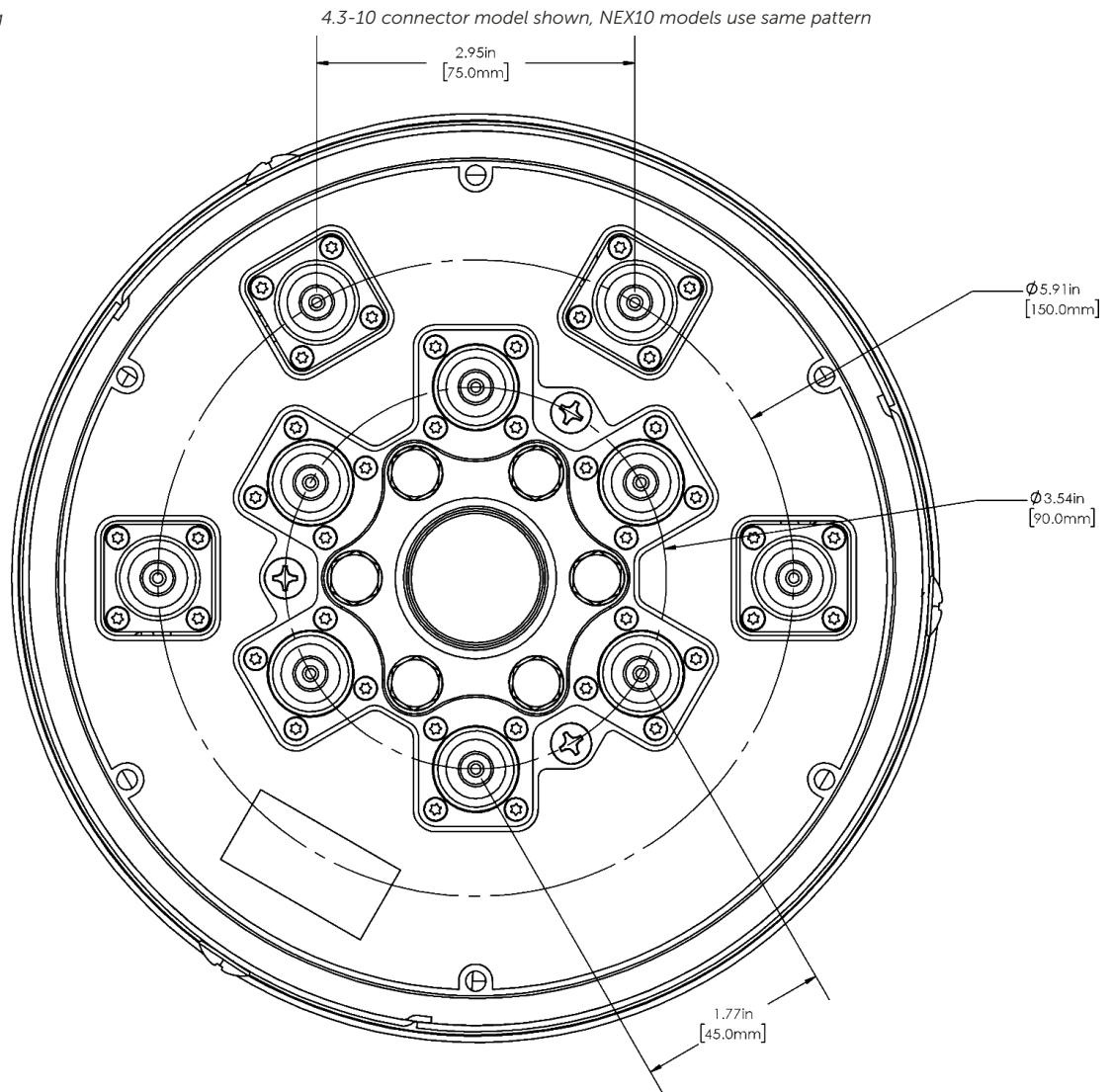
SPECIFICATIONS

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Mechanical

Connector Spacing





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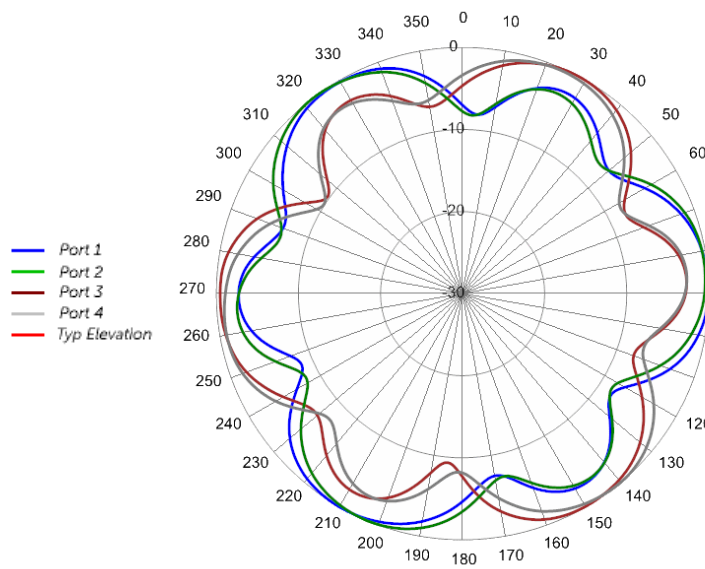
SPECIFICATIONS

Multi-Band Omni Antenna

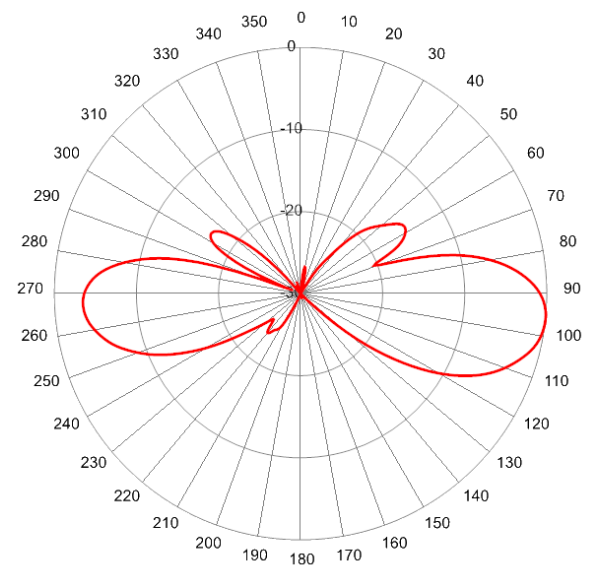
SCA360F-UHJ2Av2

Typical Antenna Patterns

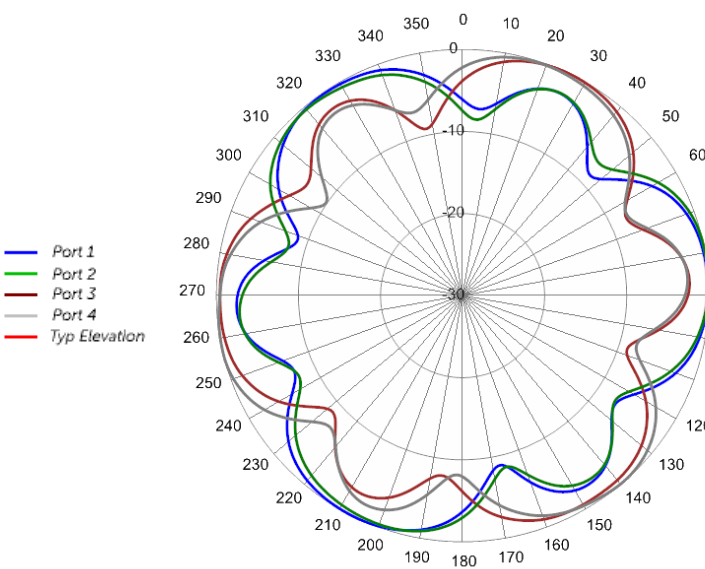
For detailed information on additional antenna patterns, contact customer support at support@cciprducts.com



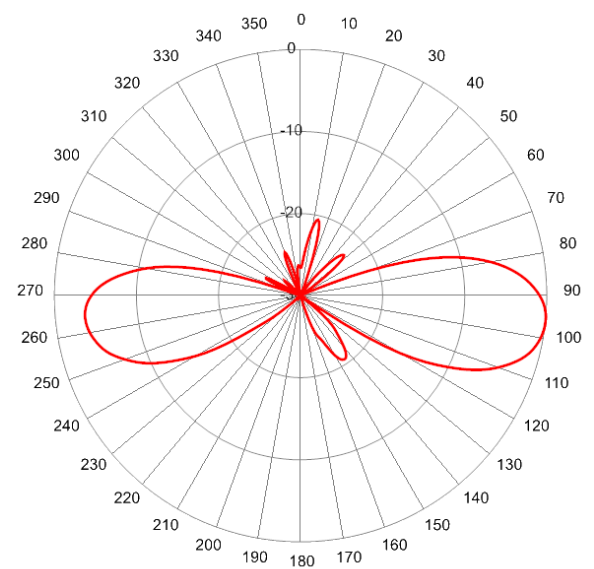
1910 MHz Azimuth



1910 MHz Elevation 6°



2110 MHz Azimuth



2110 MHz Elevation 6°



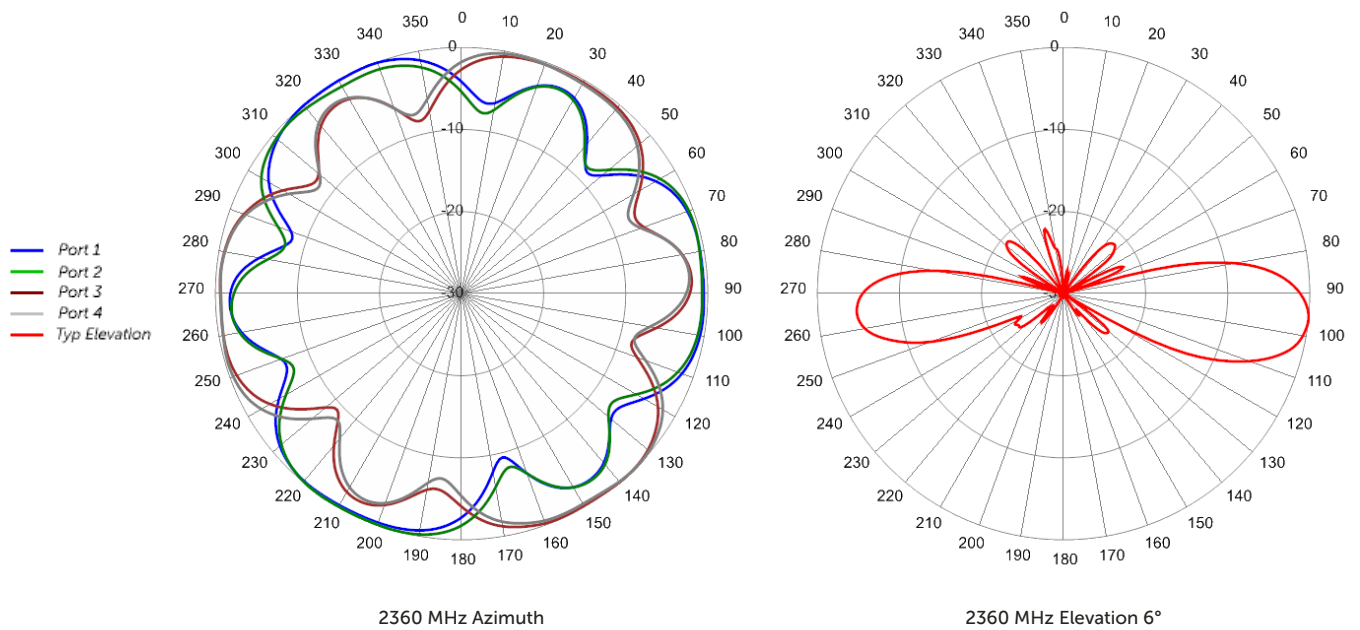
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Typical Antenna Patterns





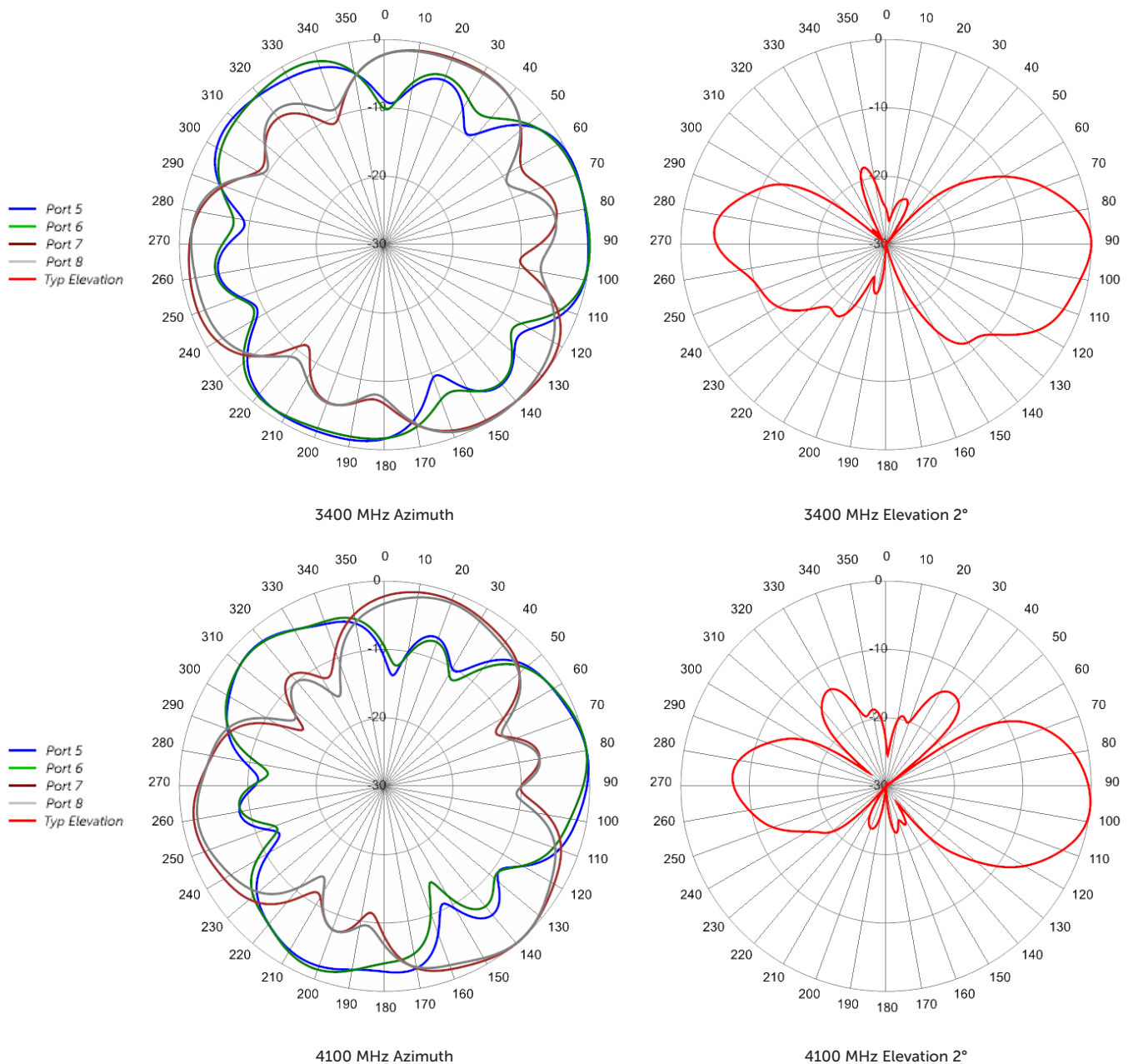
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Typical Antenna Patterns





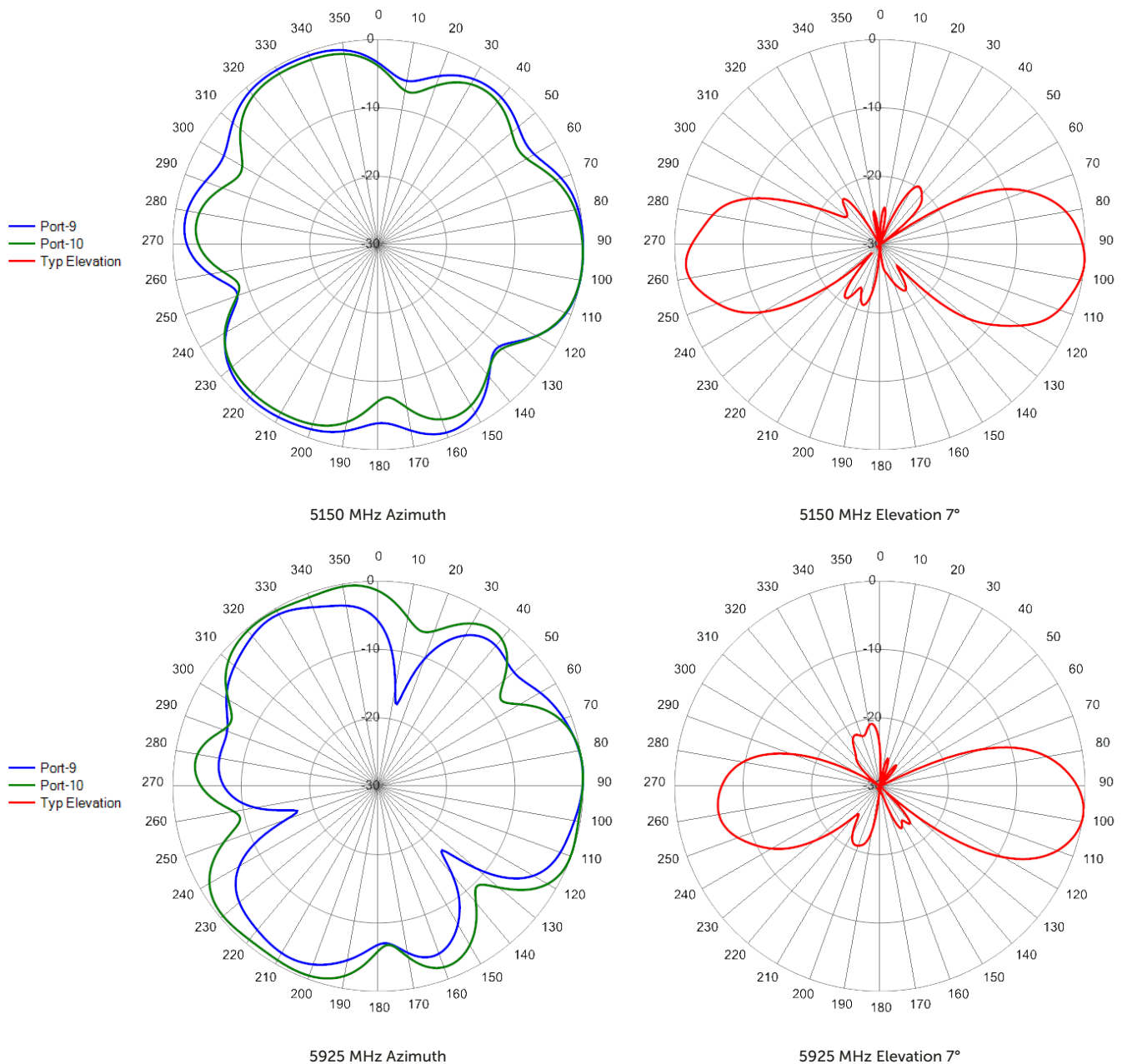
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Typical Antenna Patterns





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ORDERING

Multi-Band Omni Antenna

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Parts & Accessories

SCA360F-UHJ2Av2A-K	Two foot (0.6 m) Multi-Band Omni antenna with 2 degree EDT on E band, 4.3-10 Female connectors and MBC-02 mounting bracket
SCA360F-UHJ2Av2B-K	Two foot (0.6 m) Multi-Band Omni antenna with 6 degree EDT on E band, 4.3-10 Female connectors and MBC-02 mounting bracket
SCA360F-UHJ2Av2C-K	Two foot (0.6 m) Multi-Band Omni antenna with 10 degree EDT on E band, 4.3-10 Female connectors and MBC-02 mounting bracket
SCA360F-UHJ2Av2D-K	Two foot (0.6 m) Multi-Band Omni antenna with 13 degree EDT on E band, 4.3-10 Female connectors and MBC-02 mounting bracket
SCA360F-UHJ2Av2E-K	Two foot (0.6 m) Multi-Band Omni antenna with 2 degree EDT on E band, NEX10 connectors and MBC-02 mounting bracket
SCA360F-UHJ2Av2F-K	Two foot (0.6 m) Multi-Band Omni antenna with 6 degree EDT on E band, NEX10 connectors and MBC-02 mounting bracket
SCA360F-UHJ2Av2G-K	Two foot (0.6 m) Multi-Band Omni antenna with 10 degree EDT on E band, NEX10 connectors and MBC-02 mounting bracket
SCA360F-UHJ2Av2H-K	Two foot (0.6 m) Multi-Band Omni antenna with 13 degree EDT on E 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)



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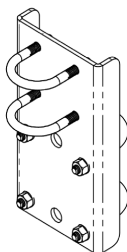
ACCESSORIES

Triple Mount Mast Bracket

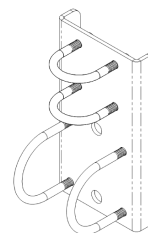
MBC-02

Mechanical

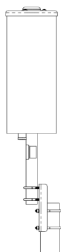
Dimensions (L x W x D)	7.9×4.3×1.1 in. (200×108×28 mm)
Weight	2.4 lbs (1.1 kg)
Fastener Size	5/16 UNC
Installation Torque (ft-lbs)	10



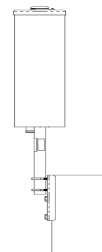
Bracket Vert. Mount View



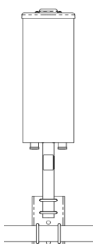
Bracket Hort. Mount View



Vertical Pole Mount



Wooden Pole Mount



Horizontal Pole Mount



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STANDARDS & CERTIFICATIONS

Multi-Band Omni Antenna

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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



CCI Communication Components Inc.
EXTENDING WIRELESS PERFORMANCE