



Antennas

DATA SHEET

Small Cell 65 Degree Panel Antenna

SCA-DR1-65F2-E-H2S



- Small Cell Sector antenna optimized over the PCS (1850-1995 MHz) and BRS (2496 to 2690 MHz) bands
- Cross-Pol design for 2x2 MIMO
- Excellent upper sidelobe suppression
- Designed for superior Front to Back performance
- Excellent PIM Performance
- Fixed tilt options of 2, 6 or 12 degrees
- Small form factor
- Lightweight < 5 lbs (2.3 kg)

Overview

CCI's Highband Small Cell Panel Antenna is optimized over the PCS (1850 to 1995 MHz) and BRS (2496 to 2690 MHz) bands and provides 65° of sectoral coverage in a small form factor panel antenna. The unique design of the CCI antenna elements provides for extremely stable azimuth patterns over the full operating frequency ranges, thus ensuring consistent coverage area for all bands of operation. The Small Cell Panel Antenna is the ideal choice for Macro, Mini-Macro and Small Cell applications in urban and suburban environments where antenna size and count are restricted. The antenna is well suited for mounting to utility, lighting and traffic poles.

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

Applications

- Macro, Mini-Macro and Small Cell deployments in Urban, Suburban and other visually sensitive environments
- Meets Macro Cell Antenna performance criteria



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SPECIFICATIONS

Small Cell 65 Degree Panel Antenna

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Electrical

Ports	2 x High Band Ports for 1850-2690 MHz	
	1850-1995 MHz	2496-2690 MHz
Frequency Range	1850-1995 MHz	2496-2690 MHz
Gain (dBi)	12.4	13.8
Azimuth Beamwidth (°)	68	62
Azimuth Beamwidth Squint (°)	2.0	1.2
Elevation Beamwidth (°)	22.4	17.3
Electrical Downtilt (°)	2 (6 and 12 tilts available)	
First Upper Sidelobe (dB)	< -18	< -18
Front-to-Back Ratio over ± 15°(dB)	> 28	> 30
Cross-Polar Discrimination at Peak (dB)	> 20	> 19
Cross-Polar Discrimination over Sector (dB)	> 15	> 10
Cross-Polar Port-to-Port Isolation (dB)	> 25	> 28
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1
Passive Intermodulation 2x20W (dBc)	≤ -150	≤ -150
Input Power Continuous Wave (W)	300	300
Polarization	Dual Linear 45°	Dual Linear 45°
Input Impedance	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground

Mechanical

Dimensions (LxWxD)	16.9x6.8x4.5 in (430x172x114 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	24 lbs (109 N) @ 100 mph (161 kph)
Side Wind Load	17 lbs (75 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	1.0 ft ² (0.1 m ²)
Weight *	4.9 lbs (2.2 kg)
Connector	2 x 4.1-9.5 Min DIN female
Mounting Pole	4" (10 cm) and larger

* Weight excludes mounting



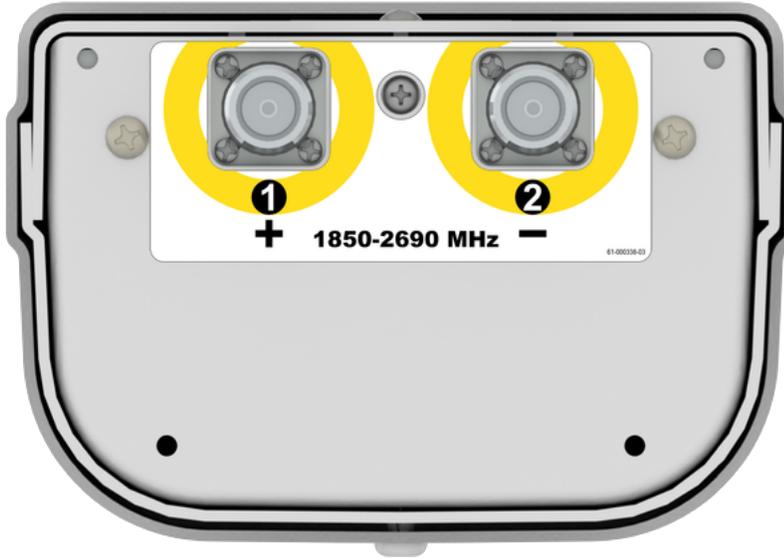
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SPECIFICATIONS

Small Cell 65 Degree Panel Antenna

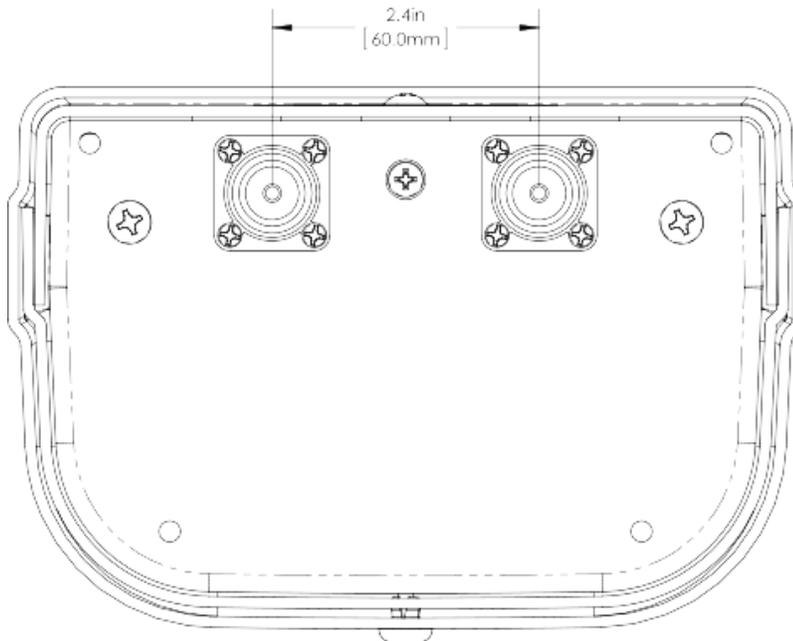
SCA-DR1-65F2-E-H2S

Bottom View



Mechanical

Connector Spacing





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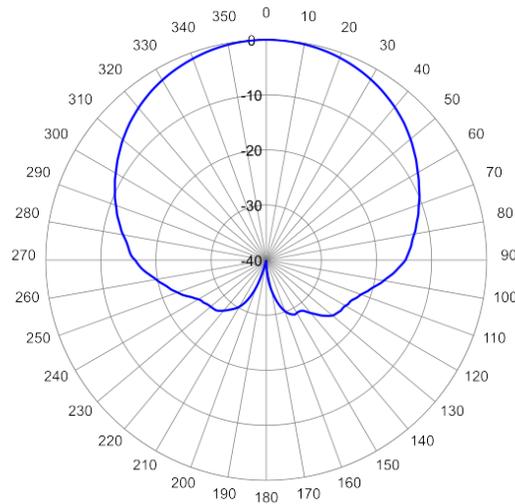
SPECIFICATIONS

Small Cell 65 Degree Panel Antenna

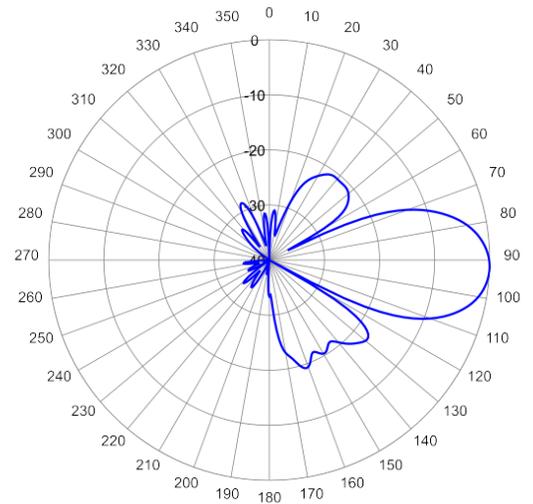
SCA-DR1-65F2-E-H2S

Typical Antenna Patterns

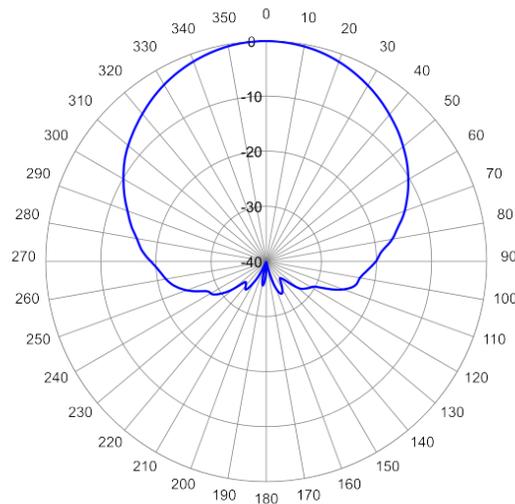
For detailed information on additional antenna patterns, contact customer support at support@cciproducts.com



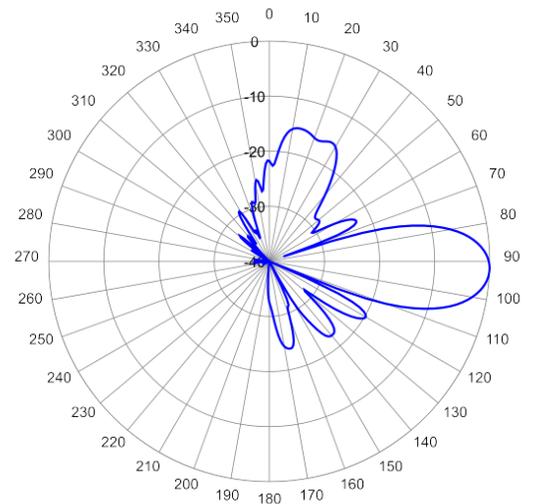
1927 MHz Azimuth



1927 MHz Elevation 2°



2630 MHz Azimuth



2630 MHz Elevation 2°



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ORDERING

Small Cell 65 Degree Panel Antenna

SCA-DR1-65F2-E-H2S

Parts & Accessories

SCA-DR1-65F2-E-H2S	1.5 foot (0.4 m) wideband antenna with 65° azimuth beamwidth and 2° fixed electrical downtilt
SCA-DR1-65F6-E-H2S	1.5 foot (0.4 m) wideband antenna with 65° azimuth beamwidth and 6° fixed electrical downtilt
SCA-DR1-65F12-E-H2S	1.5 foot (0.4 m) wideband antenna with 65° azimuth beamwidth and 12° fixed electrical downtilt
SCA-DR1-65F2-E-H2S-K	1.5 foot (0.4 m) wideband antenna with 65° azimuth beamwidth, with 2° fixed electrical downtilt and MBK-07 mounting bracket
SCA-DR1-65F6-E-H2S-K	1.5 foot (0.4 m) wideband antenna with 65° azimuth beamwidth, with 6° fixed electrical downtilt and MBK-07 mounting bracket
SCA-DR1-65F12-E-H2S-K	1.5 foot (0.4 m) wideband antenna with 65° azimuth beamwidth, with 12° fixed electrical downtilt and MBK-07 mounting bracket
MBK-07	Mounting bracket kit with $\pm 20^\circ$ of mechanical tilt adjustment



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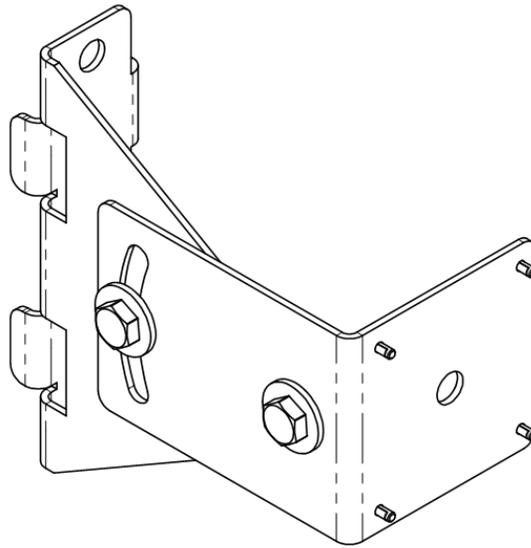
ACCESSORIES

Mounting Bracket Kit

MBK-07

Mechanical

Weight	2.7 lbs (1.2 kg)
Mounting Pole Dimension	4 in (10 cm) and greater
Mechanical Tilt Adjustment	$\pm 20^\circ$



MBK-07

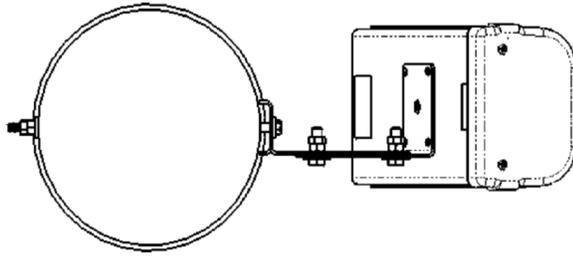


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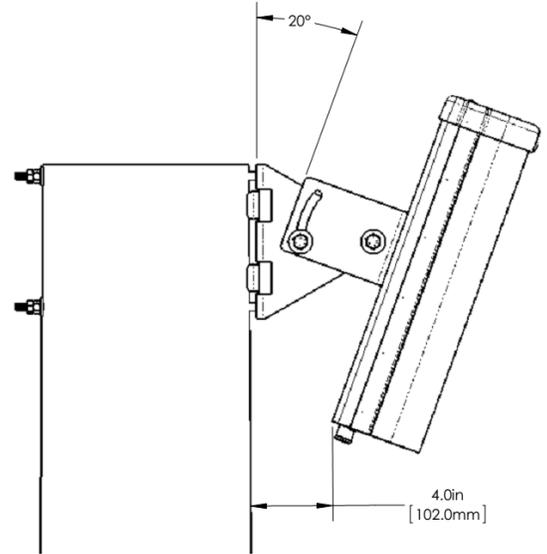
ACCESSORIES

Mounting Bracket Kit

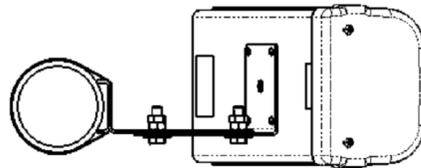
MBK-07



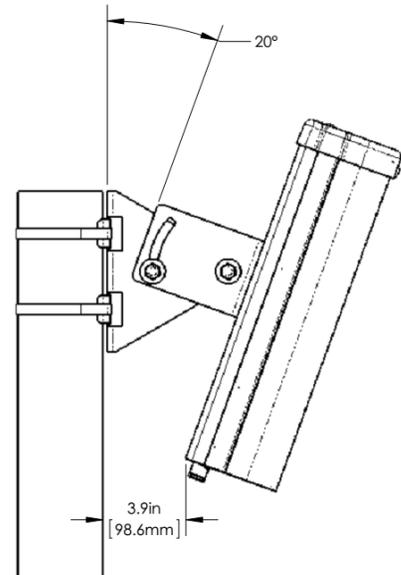
MBK-07 Typical Wooden Pole mount



MBK-07 Typical Wooden Pole mount



MBK-07 Typical Steel Pole mount



MBK-07 Typical Steel Pole mount



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STANDARDS & CERTIFICATIONS

Small Cell 65 Degree Panel 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, CE, CSA US, ISO 9001

