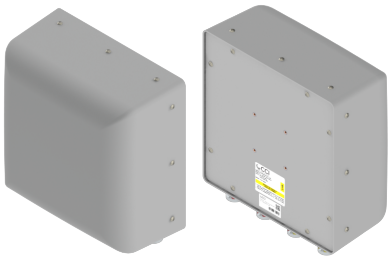
DATA SHEET

Small Cell IDA 65˚x65˚ Antenna

IDA65F-KE1A



- 2 ports covering bands between 694 and 960 MHz and 2 ports covering bands between 1695 and 2690 MHz
- 65° vertical by 65° horizontal beamwidth
- MIMO and SISO capable
- Enables multiple technology deployment
- Boosts data throughput by lowering interference
- Patented architecture minimizes interference
- Low Passive intermodulation products
- Simple wall mounting system or a wall/pole with 2-axis adjustment capability available

Overview

The CCI Hot Spot Multi-Band Antenna is an LTE ready multi-band MIMO antenna that covers the full 694 to 960 MHz and 1695 to 2690 MHz spectrum. The Hot Spot Antenna employs a unique patented architecture that provides a constant 65° horizontal by 65° vertical pattern over the full operating frequency range. As such the antenna is an ideal candidate for reducing cell-to-cell interference in indoor and outdoor multi-sector deployments. This antenna can be used in buildings and at sporting and entertainment venues where it is desirable to maximize the capacity by limiting the spillover from adjacent sectors while providing the same coverage area across all frequency bands. It is an ideal antenna for indoor DAS, outdoor DAS, Small Cell and dense urban macro deployments. Such an approach enhances data transfer rates within LTE, UMTS and EVDO network sectors and addresses "hotspots" in indoor and outdoor mobile wireless operator networks.
The Hot Spot Antenna is an ideal candidate for DAS, macro and small cell applications where the unique beam shaping technology provides a constant pattern over the full operating spectrum minimizing interference between sectors thus increasing the carrier to interference plus noise (CINR) ratio and lowering soft handover losses in LTE, UMTS/HSPA+ and CDMA/EVDO networks. The antenna supports both MIMO and SISO applications with adequate diversity for signal de-correlation. The antenna is housed in an aesthetically pleasing enclosure suitable for use in both indoor and outdoor venues.

CCI antennas are designed and produced to ISO 9001:2008 certification standards for reliability and quality in our state-of-the-art manufacturing facilities.

Applications

- Multi-sector multi-band Small Cell, iDAS and oDAS deployments
- Multi-sector multi-band sporting and entertainment venues
- Multi-sector multi-band dense Macro and Mini-Marco deployments
- Interference mitigation with tight pattern control over all frequency bands
- Neutral Host multi-band multi-operator DAS deployments

SPECIFICATIONS

Small Cell IDA 65˚x65˚ Antenna

IDA65F-KE1A

Electrical

Ports	2 x Low Band Ports for 694-960 MHz		
Frequency Range	694-806 MHz	824-896 MHz	880-960 MHz
Gain	7.9 dBi	8.1 dBi	8.4 dBi
Azimuth Beamwidth (-3dB)	70°	65°	60°
Elevation Beamwidth (-3dB)	79°	74°	68°
Electrical Downtilt	0°	0°	0°
Front-to-Back Ratio @180°	> 25 dB	> 22 dB	> 22 dB
Cross-Polar Discrimination (at Peak)	> 24 dB	> 20 dB	> 18 dB
Cross-Polar Port-to-Port Isolation	> 22 dB	> 22 dB	> 18 dB
Voltage Standing Wave Ratio(VSWR)	< 1.6:1	< 1.6:1	< 1.6:1
Passive Intermodulation (2x20W)	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc
Input Power Continuous Wave (CW)	80 watts	80 watts	80 watts
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground

Ports	2 x High Band Ports for 1695-2690 MHz				
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz	2496-2690 MHz
Gain	8.5 dBi	8.5 dBi	8.4 dBi	8.5 dBi	9.1 dBi
Azimuth Beamwidth (-3dB)	57°	61°	64°	70°	61°
Elevation Beamwidth (-3dB)	62°	64°	68°	73°	60°
Electrical Downtilt	0°	0°	0°	0°	0°
Front-to-Back Ratio @180°	> 32 dB	> 32 dB	> 32 dB	> 32 dB	> 35 dB
Cross-Polar Discrimination (at Peak)	> 28 dB	> 28 dB	> 25 dB	> 25 dB	> 25 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Voltage Standing Wave Ratio(VSWR)	< 1.75:1	< 1.75:1	< 1.75:1	< 1.75:1	< 1.75:1
Passive Intermodulation (2x20W)	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc
Input Power Continuous Wave (CW)	80 watts	80 watts	80 watts	80 watts	80 watts
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground

Mechanical

Dimensions (LxWxD)	11.8x11.8x6.1 in (300x300x156 mm)
Survival Wind Speed	> 125 mph (> 201 kph)
Front Wind Load	30 lbs (132 N) @ 100 mph (161 kph)
Side Wind Load	15 lbs (69 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	1.2 ft^2 (0.1 m^2)
Weight *	4.6 lbs (2.1 kg)
Connector	4 x 7-16 DIN female long neck or 4.3-10 Female
Mounting Pole	2 to 4.5 in (5 to 11 cm)

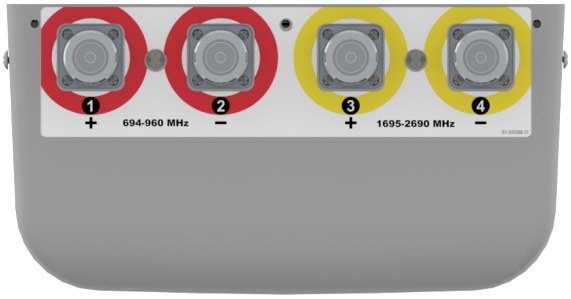
** Weight excludes mounting*

SPECIFICATIONS

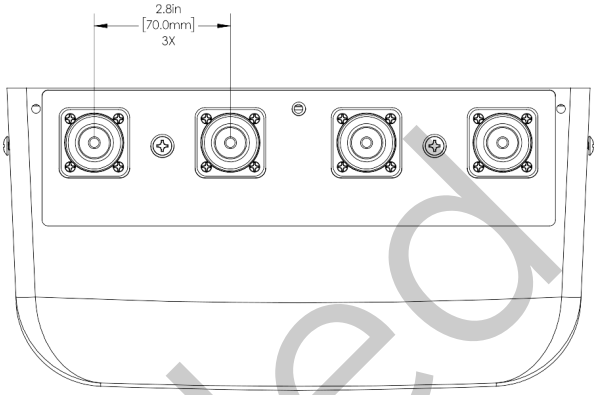
Small Cell IDA 65˚x65˚ Antenna

IDA65F-KE1A

Bottom View

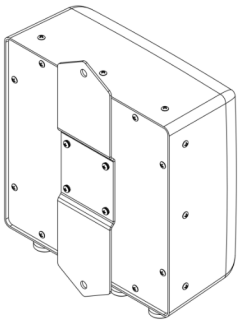


Connector Spacing

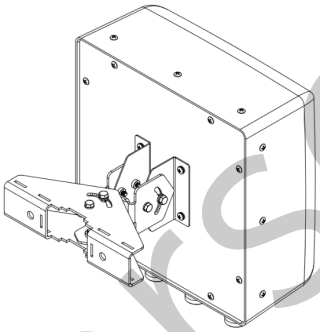


Mechanical

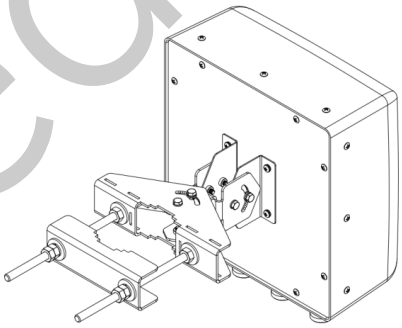
Mounting Kit Views



MBK-09



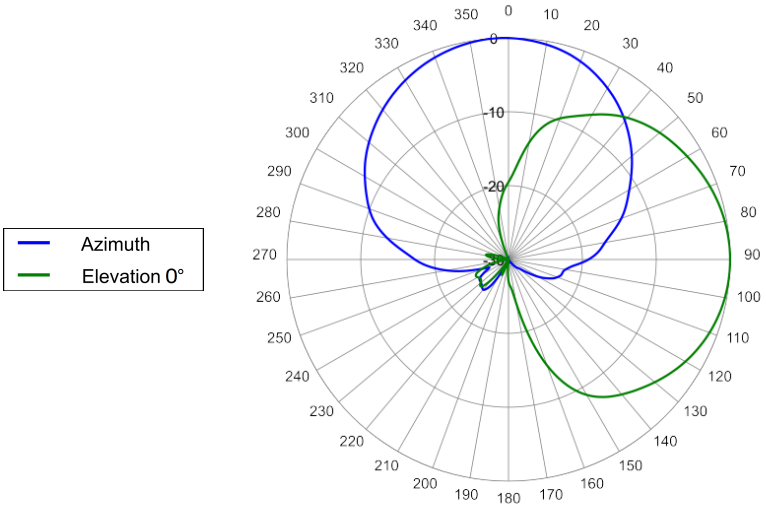
MBK-08



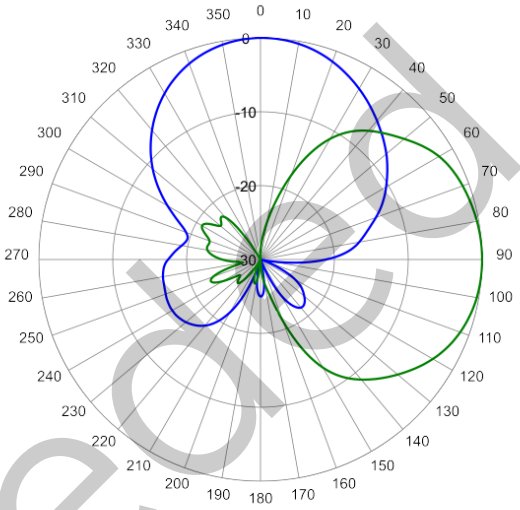
MBK-08 with optional MBC-07

Typical Antenna Patterns

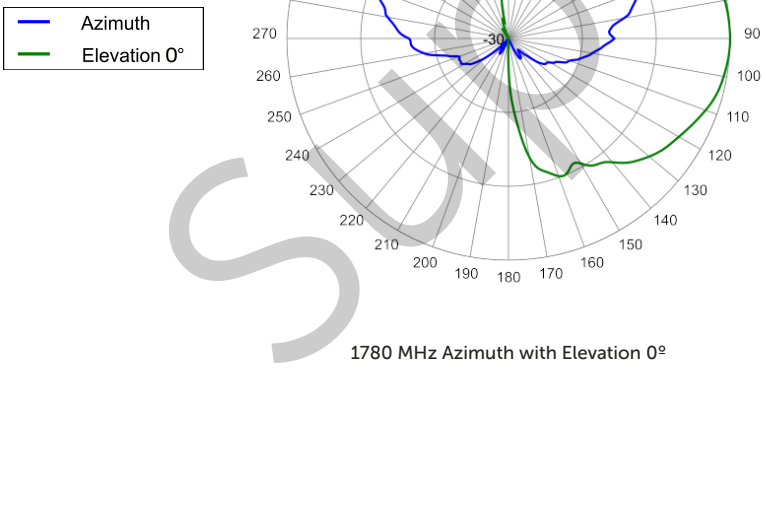
For detailed information on additional antenna patterns, contact customer support at support@cciproducts.com



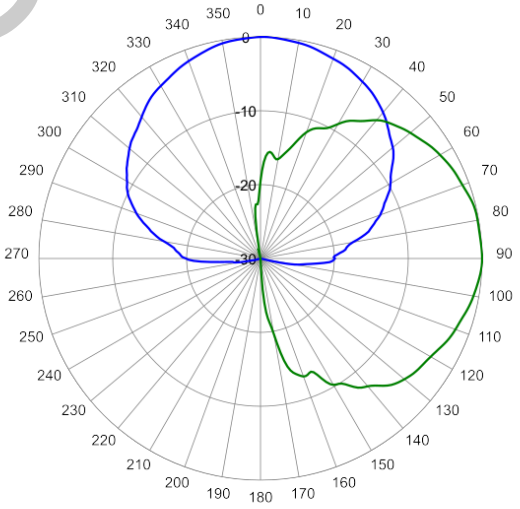
737 MHz Azimuth with Elevation 0º



896 MHz Azimuth with Elevation 0º



1780 MHz Azimuth with Elevation 0º



2542 MHz Azimuth with Elevation 0º

ORDERING

Small Cell IDA 65˚x65˚ Antenna

IDA65F-KE1A

Parts & Accessories

IDA65F-KE1AA	1 foot (0.3 M) panel antenna with 65° azimuth beamwidth and 0º electical downtilt and 7-16 DIN female connectors
IDA65F-KE1AB	1 foot (0.3 M) panel antenna with 65° azimuth beamwidth and 0º electical downtilt and 4.3-10 female connectors
IDA65F-KE1AA-K	Antenna with 7-16 DIN connectors and MBK-09 non tilting wall mount
IDA65F-KE1AB-K	Antenna with 4.3-10 connectors and MBK-09 non tilting wall mount
IDA65F-KE1AA-K1	Antenna with 7-16 DIN connectors and MBK-08 wall mount (adjustable tilt in both directions)
IDA65F-KE1AB-K1	Antenna with 4.3-10 connectors and MBK-08 wall mount (adjustable tilt in both directions)
MBK-09	Fixed wall mount kit
MBK-08	Adjustable wall mount kit
MBC-07	Pole mount clamp for use with MBK-08

STANDARDS & CERTIFICATIONS

Small Cell IDA 65˚x65˚ Antenna

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 9001:2008

ISO 9001:2008 Quality Management Systems Système de Qualité www.ca.sgs.com

RoHS COMPLIANT