

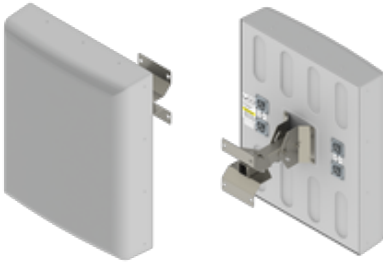


Antennas

DATA SHEET

Small Cell IDA Antenna

IDA-30F-KE-H2



- 2 ports covering bands between 698 and 960 MHz and 2 ports covering bands between 1695 and 2690 MHz
- Constant 30° vertical by 30° horizontal beamwidth
- MIMO and SISO capable
- Simultaneous multi-band coverage for all band between 698 MHz and 2690 MHz
- Enables multiple technology deployment
- Boosts data throughput by lowering interference
- Patented architecture minimizes interference
- Low Passive intermodulation products
- Simple mounting system with 2-axis adjustment capability

Overview

The CCI Hot Spot Multi-Band Antenna is an LTE ready multi-band MIMO antenna that covers the full 698 to 960 MHz and 1695 to 2690 MHz spectrum. The Hot Spot Antenna employs a unique patented architecture that provides a constant 30° horizontal by 30° 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



Antennas

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SPECIFICATIONS

Electrical

Ports	2 × Low Band Ports for 698-960 MHz			
Frequency Range	698-806 MHz	824-896 MHz	880-960 MHz	
Gain	13.0 dBi	13.9 dBi	14.3 dBi	
Azimuth Beamwidth (-3dB)	37°	33°	30°	
Elevation Beamwidth (-3dB)	36°	33°	30°	
Electrical Downtilt	0°	0°	0°	
Elevation Sidelobes (1st Upper)	< -22 dB	< -25 dB	< -22 dB	
Front-to-Back Ratio @180°	> 35 dB	> 35 dB	> 35 dB	
Front-to-Back Ratio over ± 20°	> 35 dB	> 35 dB	> 35 dB	
Cross-Polar Discrimination (at Peak)	> 25 dB	> 25 dB	> 23 dB	
Cross-Polar Port-to-Port Isolation	> 28 dB	> 28 dB	> 28 dB	
Voltage Standing Wave Ratio(VSWR)	< 1.55:1	< 1.55:1	< 1.55:1	
Passive Intermodulation (2x20W)	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	
Input Power Continuous Wave (CW)	250 watts	250 watts	250 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 × High Band Ports for 1695-2690				
Frequency Range	1850-1995 MHz	1695-1780/2110-2180 MHz		2300-2400 MHz	2496-2690 MHz
Gain	13.2 dBi	12.0 dBi	14.0 dBi	14.5 dBi	15.0 dBi
Azimuth Beamwidth (-3dB)	34°	37°	33°	29°	25°
Elevation Beamwidth (-3dB)	34°	40°	30°	26°	27°
Electrical Downtilt	0°	0°	0°	0°	0°
Elevation Sidelobes (1st Upper)	< -25 dB	< -25 dB	< -17 dB	< -20 dB	< -18 dB
Front-to-Back Ratio @180°	> 35 dB	> 35 dB	> 35 dB	> 35 dB	> 35 dB
Front-to-Back Ratio over ± 20°	> 35 dB	> 35 dB	> 35 dB	> 35 dB	> 35 dB
Cross-Polar Discrimination (at Peak)	> 25 dB	> 20 dB	> 25 dB	> 25 dB	> 20 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 23 dB	> 25 dB
Voltage Standing Wave Ratio(VSWR)	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1	< 1.55:1
Passive Intermodulation (2x20W)	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc
Input Power Continuous Wave (CW)	250 watts	250 watts	250 watts	250 watts	250 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



Antennas

SPECIFICATIONS

Small Cell IDA Antenna

IDA-30F-KE-H2

Mechanical

Dimensions (LxWxD)	30.1x24.4x6.9 in (764x620x176 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	157 lbs (697 N) @ 100 mph (161 kph)
Side Wind Load	47 lbs (211 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	6.1 ft ² (0.6 m ²)
Weight *	20.0 lbs (9.1 kg)
Connector	4x 7-16 DIN female long neck or 4x 4.3-10 female
Mounting Pole	2 to 5 in (5 to 12 cm)

* Weight excludes mounting

Superseded



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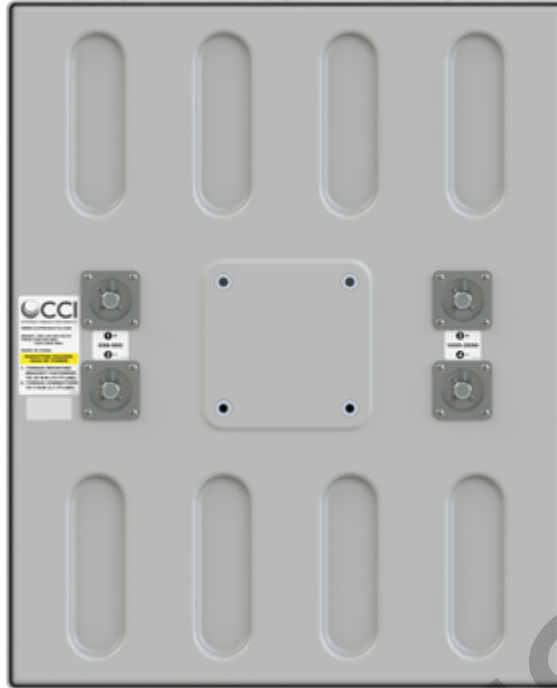
SPECIFICATIONS

Small Cell IDA Antenna

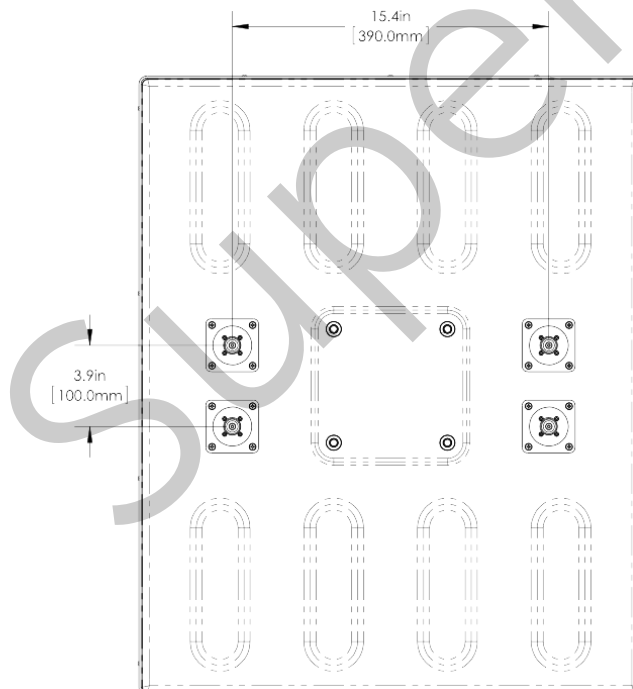
IDA-30F-KE-H2

Mechanical

Rear View



Connector Spacing





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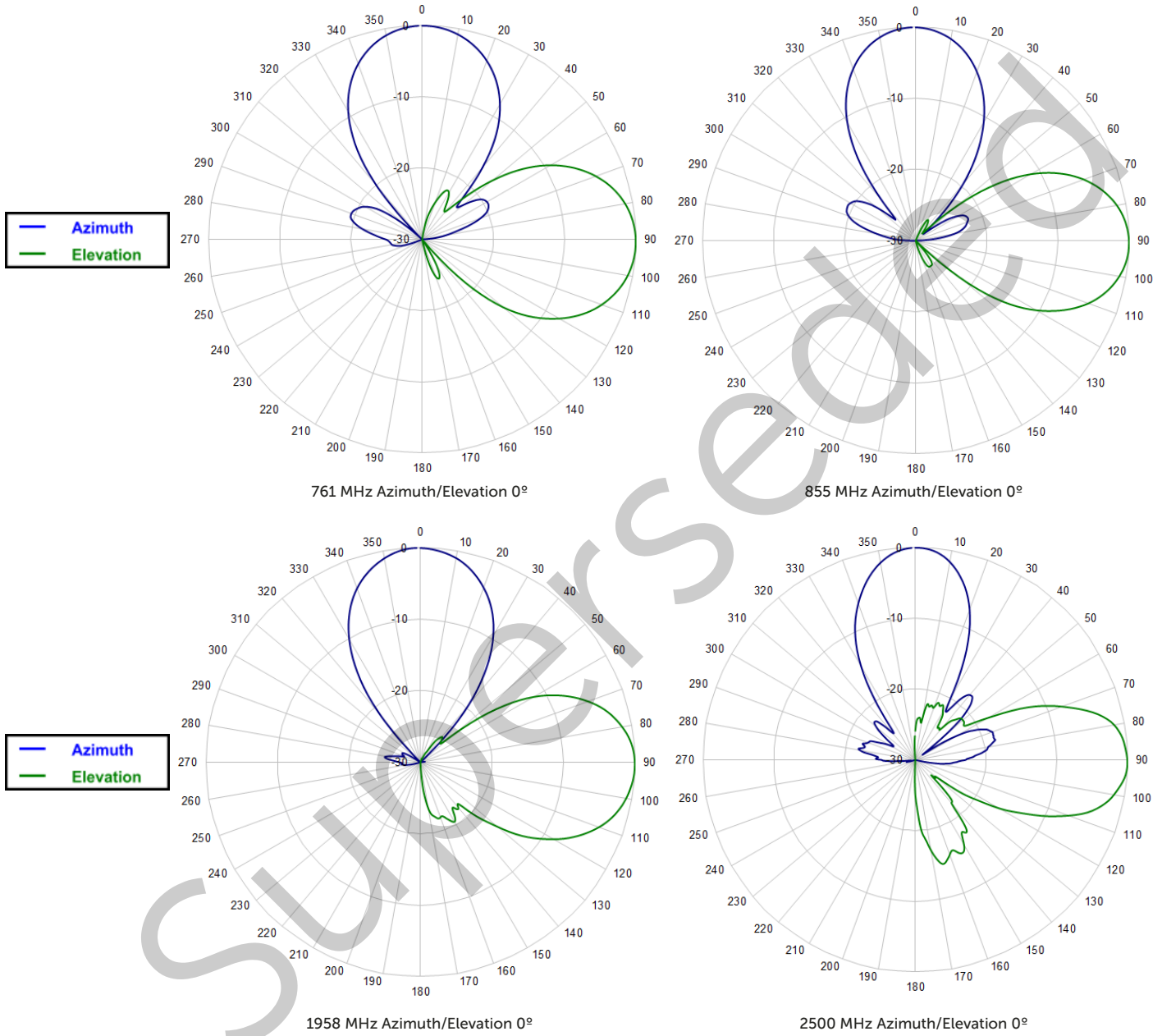
SPECIFICATIONS

Small Cell IDA Antenna

IDA-30F-KE-H2

Typical Antenna Patterns

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





Antennas

ORDERING

Small Cell IDA Antenna

IDA-30F-KE-H2

Parts & Accessories

IDA-30F-KE-H2-C1	2 foot (0.8 m) antenna with 30° azimuth beamwidth and 7/16 DIN female connectors
IDA-30F-KE-H2-C2	2 foot (0.8 m) antenna with 30° azimuth beamwidth and 4.3-10 female connectors
IDA-30F-KE-H2-C1-K	Antenna with 7/16 DIN connectors, BSA-M05 mounting bracket and MBC-01 mast bracket
IDA-30F-KE-H2-C2-K	Antenna with 4.3-10 connectors, BSA-M05 mounting bracket and MBC-01 mast bracket
BSA-M05	Adjustable mast bracket kit with $\pm 35^\circ$ horizontal adjustment and $\pm 55^\circ$ vertical adjustment mechanical tilt
MBC-01	Mast bracket clamp for mast mounting of BSA-M05

Superseded



Antennas

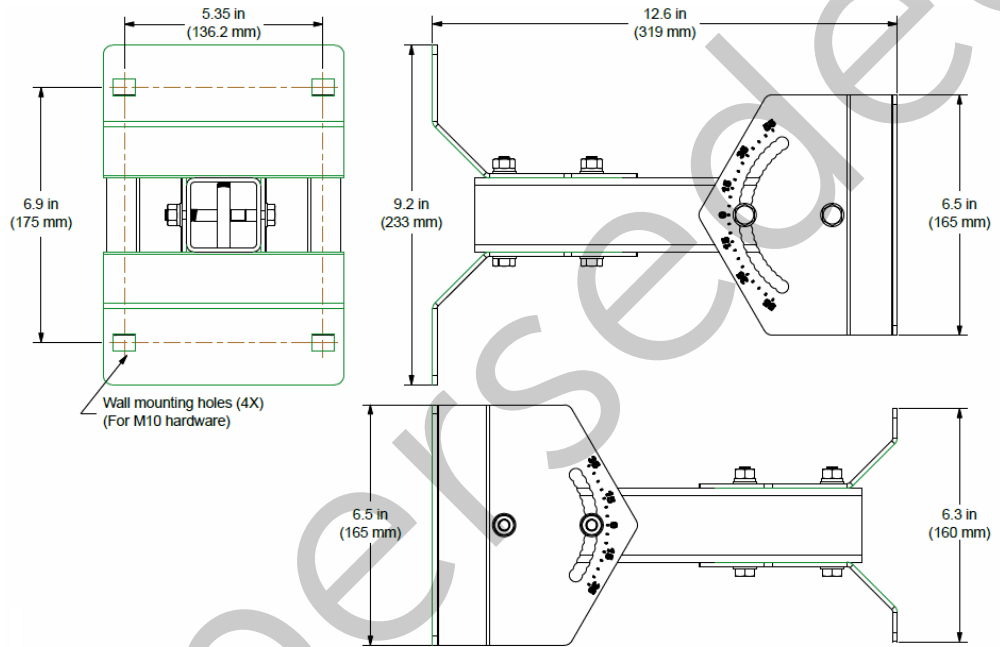
ACCESSORIES

Adjustable Mast Bracket

BSA-M05

Mechanical

Weight	7.7 lbs (3.5 kg)
Hinge Pitch	Horizontal($\pm 35^\circ$), Vertical($\pm 55^\circ$)
Fastener Size	M10
Installation Torque	15 ft-lbs (20 Nm)
Mechanical Tilt Adjustment	Horizontal($\pm 35^\circ$), Vertical($\pm 55^\circ$)
Mounting Pole(when used with MBC-01)	2 to 5 in (5 to 12 cm)



BSA-M05
Dimensions

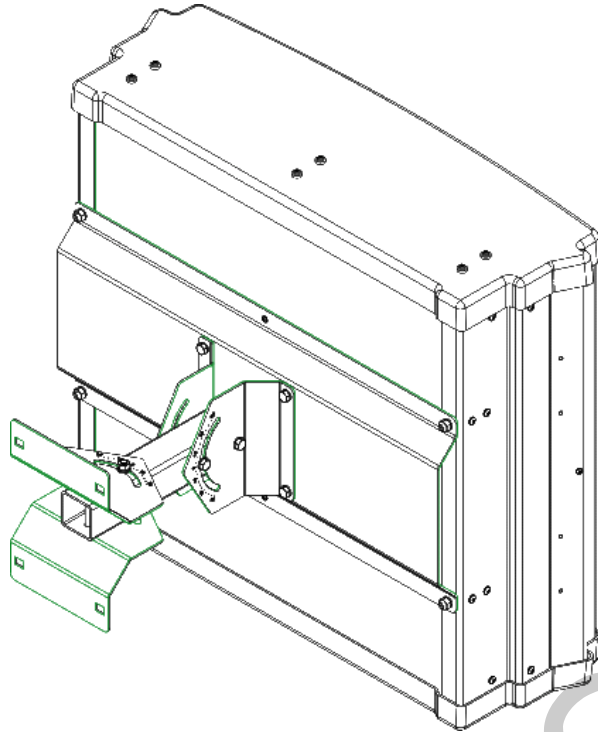


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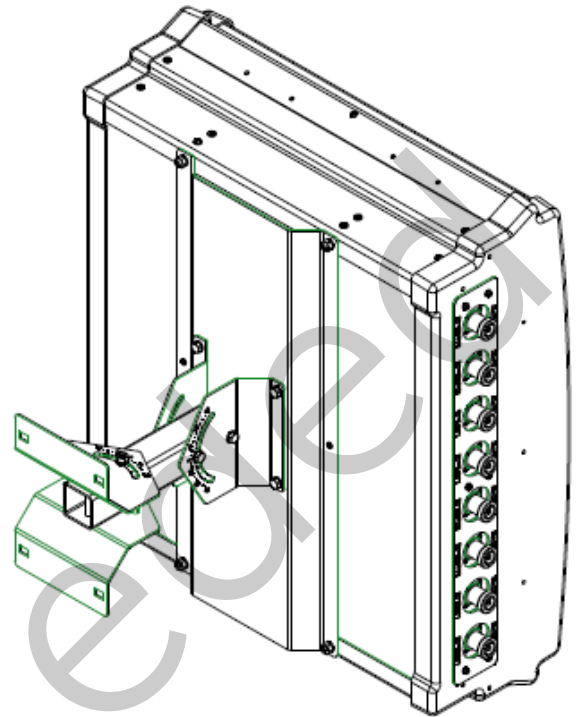
ACCESSORIES

Adjustable Mast Bracket

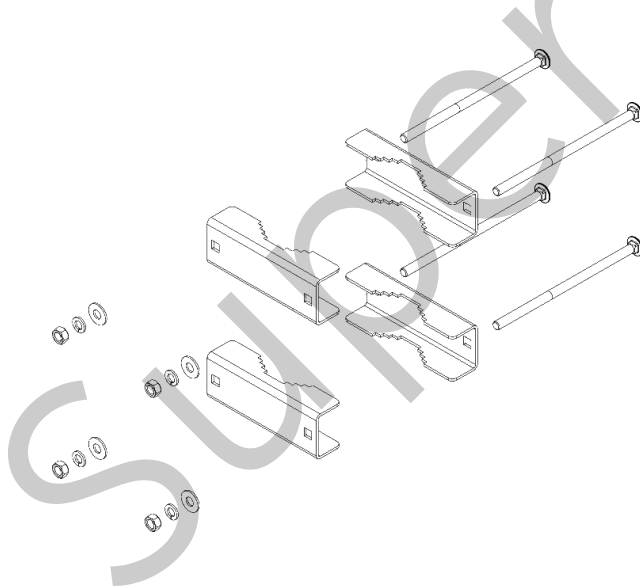
BSA-M05



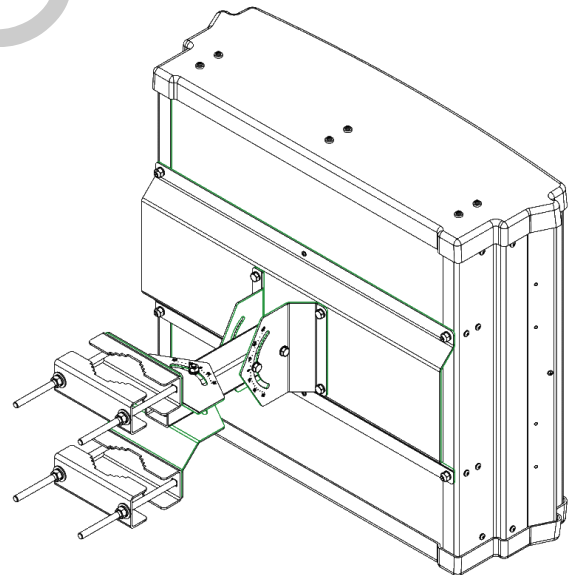
BSA-M05 horizontal mount on "Stadium Antenna"



BSA-M05 vertical mount on "Stadium Antenna"



MBC-01 Mast Bracket Clamp



BSA-M05 and MBC-01 mounting application



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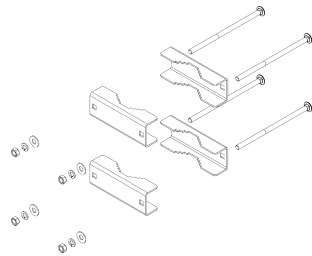
ACCESSORIES

Mounting Bracket Clamp

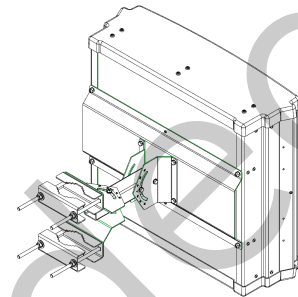
MBC-01

Mechanical

Weight	5.4 lbs (2.4 kg)
Mounting Pole Dimension	2 to 5 in (5 to 12 cm)
Fastener Size	M10
Installation Torque	15 ft-lb (20 Nm)



MBC-01



MBC-01 with BSA-M05



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STANDARDS & CERTIFICATIONS

Small Cell IDA Antenna

IDA-30F-KE-H2

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



Superseded



CCI Communication Components Inc.
EXTENDING WIRELESS PERFORMANCE