



Antennas

DATA SHEET

Nine-Beam Special Events Antenna

MBA9F-V2A



- Nine high-band beams optimized for maximum throughput over the 2300-2690 MHz frequency band
- Separate beams support nine high-band sub-sectors
- Dual +/- 45° cross-polarization for each beam pair
- Eighteen high-band ports simultaneously covering WCS 2300 MHz and BRS 2600 MHz bands
- Excellent PIM performance
- Increases site capacity through higher order sectorization
- Optimized interbeam azimuth crossover and azimuth offsets for maximum throughput
- Boosts data throughput by lowering interference

Overview

The single panel design of the CCI Nine-Beam Special Event Antenna offers the opportunity to reduce antenna count and directly replaces multiple narrow beam antennas.

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

Applications

- Upgrade of data-throughput or capacity constrained sites
- Spectrum limited markets
- Deferral of CDMA/EVDO or UTMS/HSPA+ carrier adds



Antennas

SPECIFICATIONS

Nine-Beam Special Events Antenna

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Electrical

	Ports	
	18 x High Band Ports for 2300-2690 MHz	
Frequency Range	2300-2400 MHz	2496-2690 MHz
Gain	23.6 dBi	24.7 dBi
Azimuth Beamwidth (-3dB)	6.1°	5.4°
Azimuth Beam Crossover	10.2°	10.4°
Elevation Beamwidth (-3dB)	12.3°	11.4°
Electrical Downtilt	4°	4°
Elevation Sidelobes (1st Upper)	< -20 dB	< -18 dB
Front-to-Back Ratio @180°	> 35 dB	> 35 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB
Interbeam Co-Pol Isolation (Non-Adjacent Beams, Worst Case)	> 12 dB	> 12 dB
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc
Input Power Continuous Wave (CW)	200 watts	200 watts
Polarization	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground

Mechanical

Dimensions (LxWxD)	23.9x53.3x6.7 in (608x1354x170 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	272 lbs (1210 N) @ 100 mph (161 kph)
Side Wind Load	36 lbs (158 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	10.6 ft ² (1.0 m ²)
Weight*	73.4 lbs (33.3 kg)
Connector	18 x 7-16 DIN female long neck or 4.3-10 female
Mounting Poles	2x 2 to 5 in (5 to 12 cm)
Mounting Pole Spacing	31.5 in (800 mm)

* Weight excludes mounting

Bottom View





Antennas

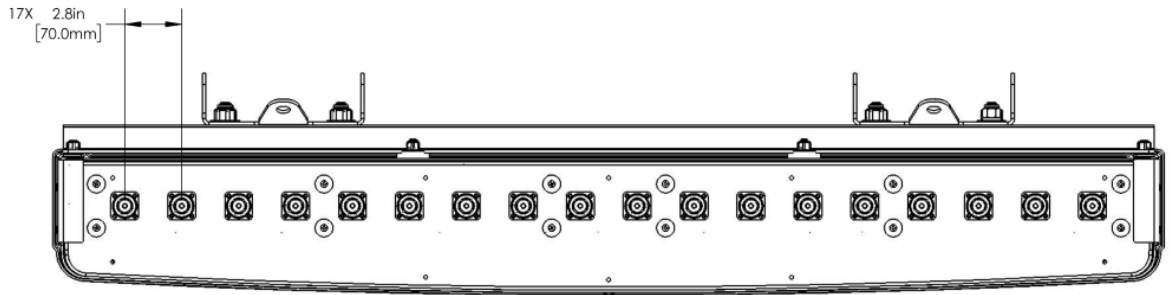
SPECIFICATIONS

Nine-Beam Special Events Antenna

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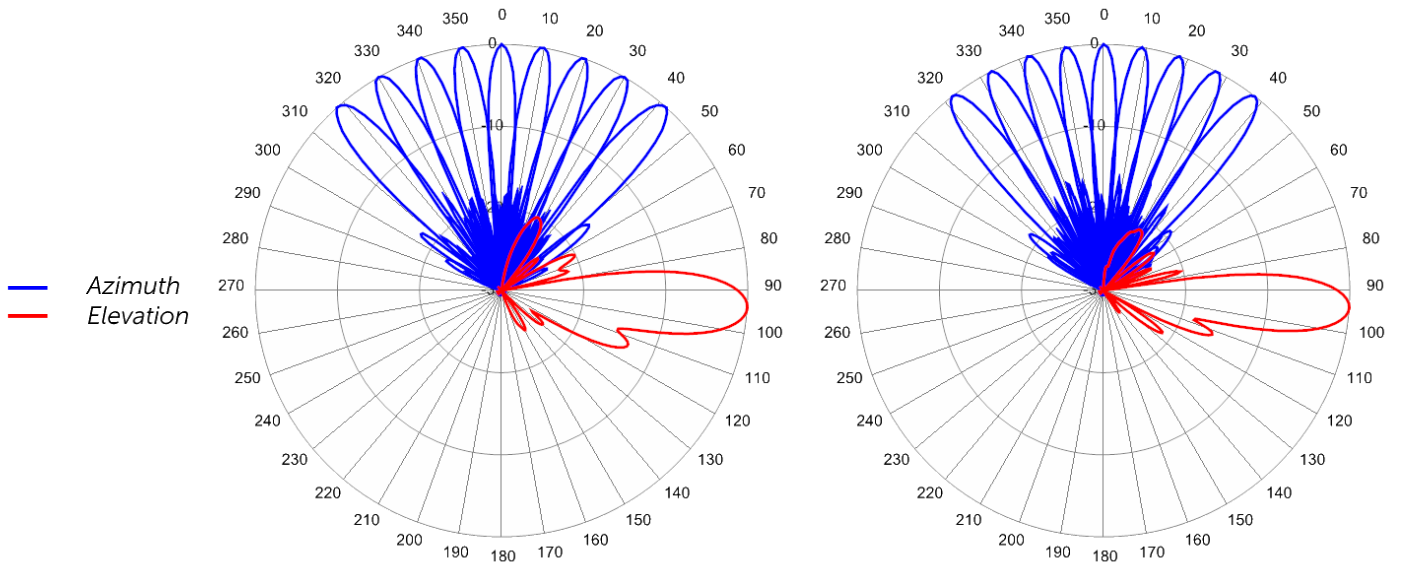
Mechanical

Connector Spacing



Typical Antenna Patterns

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



2310 MHz Azimuths with Elevation 4°

2500 MHz Azimuths with Elevation 4°



Antennas

ORDERING

Nine-Beam Special Events Antenna

MBA9F-V2A

Parts & Accessories

- | | |
|---------------------|---|
| MBA9F-V2AA-K | 2 foot (0.6 m) Special Events 9-Beam Antenna with fixed electrical tilt, 7-16 DIN connectors and MBK-03 mounting bracket. |
| MBA9F-V2AB-K | 2 foot (0.6 m) Special Events 9-Beam Antenna with fixed electrical tilt, 4.3-10 connectors and MBK-03 mounting bracket. |
| MBK-03(x2) | Mounting bracket kit (top and bottom) with 0° to 12° mechanical tilt adjustment |



Antennas

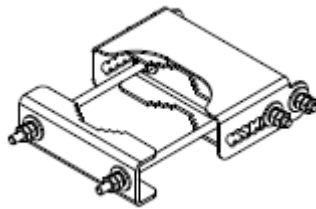
ACCESSORIES

Mounting Bracket Kit

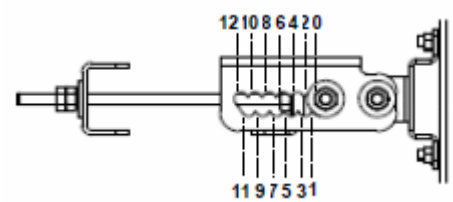
MBK-03

Mechanical

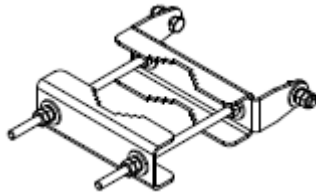
Weight	9.8 lbs (4.4 kg)
Hinge Pitch	13 in (330 mm)
Mounting Pole Dimension	2 to 5 in (5 to 12 cm)
Fastener Size	M10
Installation Torque	15 ft-lbs (20 Nm)
Mechanical Tilt Adjustment	0° - 12°



MBK-03 Top Adjustable Bracket



MBK-03 Top Adjustable Bracket Side View



MBK-03 Bottom Fixed Bracket



Antennas

STANDARDS & CERTIFICATIONS

Nine-Beam Special Events Antenna

MBA9F-V2A

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

