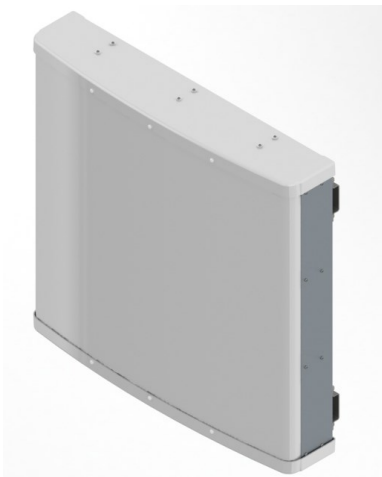




EXTENDING WIRELESS PERFORMANCE

SIX-BEAM SPECIAL EVENTS ANTENNA

Model MBA6-12F-U-H3-K



Six- Beam Special Events Antenna

The CCI Six-Beam Special Events Antenna is an LTE ready multi-beam antenna that supports multiple sectors (6) from a single antenna. This Six-Beam Antenna is intended for use at sporting and entertainment venues where social media and the ability to share photos and videos demand high capacity and high data rates. The antenna provides capability for PCS 1900 MHz, AWS 1710/2170 MHz and WCS 2300 MHz coverage in a compact, 3 ft high single enclosure. This six-beam antenna has one row of six dual +45° and -45° cross-polarized beam pairs, each roughly 15 degrees apart that are used to segment large audiences into multiple sectors. The antenna enables maximum spectrum re-use by sectorization, providing as much as nine times increase in network capacity. Our unique beam shaping technology provides fast roll off between beams, 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. Such an approach enhances data transfer rates within LTE, UMTS and EVDO network sectors and addresses “hotspots” in mobile wireless operator networks.

The single panel design of the CCI Six-Beam Special Event Antenna offers the opportunity to reduce antenna count and directly replaces multiple narrow beam antennas. The antenna minimizes the need for optimization as each beam is spaced optimally for maximum throughput thus providing significant CAPEX and OPEX cost savings.

All CCI antennas are manufactured under ISO 9001.

Benefits

- ◆ Ultra wideband applications – PCS 1900 MHz, AWS 1710/2170 MHz and 2300 MHz WCS
- ◆ Enables efficient evolution of wireless networks
- ◆ Increase site capacity through higher order sectorization
- ◆ Avoid carrier-adds and building of new capacity sites
- ◆ Boosts data throughput by lowering interference
- ◆ Patented beam shaping technology maximizes coverage
- ◆ Optimized beam crossover and spacing for maximum throughput

Features

- ◆ Six dual beams optimized for maximum throughput over a wide range of frequency bands (1710 - 2360 MHz)
- ◆ 3 ft tall, single panel design supporting nine beams without mount changes
- ◆ Dual +45° and -45° cross-polarization for each beam pair
- ◆ Separate beams support 6 sub-sectors
- ◆ Rugged, weather resistant and highly reliable internal design

Applications

- ◆ Upgrade of data-throughput or capacity constrained sites
- ◆ Spectrum limited markets
- ◆ Deferral of CDMA/EVDO or UMTS//HSPA+ carrier adds
- ◆ Spectrum clearing and refarming





EXTENDING WIRELESS PERFORMANCE

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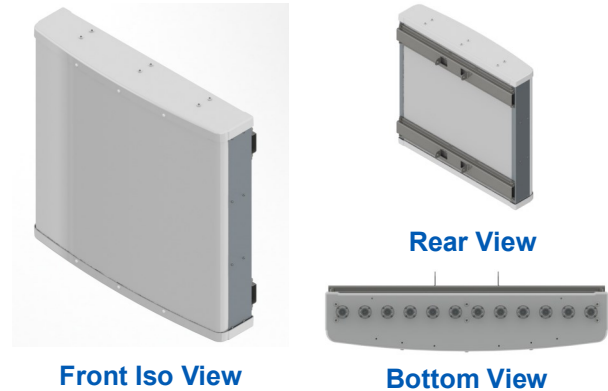
Model MBA6-12F-U-H3-K

Multi-Beam Antenna Array
Electrical Specifications

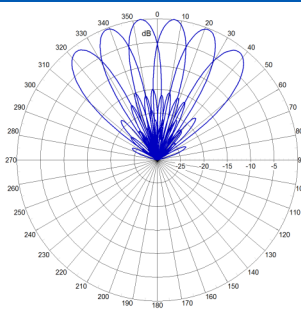
Frequency Range	12 X High Band Ports which cover the full range from 1710-2360 MHz			
	1850-1990 MHz	1710-1755/2110-2155 MHz	2305-2360 MHz	
Gain	21.7 dBi	20.6 dBi	22.3 dBi	22.2 dBi
Azimuth Beamwidth (-3dB)	6 x 12°	6 x 14°	6 x 11°	6 x 10°
Azimuth Beam Crossover	-5.0 dB	-5.0 dB	-5.0 dB	-5.0 dB
Elevation Beamwidth (-3dB)	11.0°	12.5°	10.5°	10.5°
Electrical Downtilt	6°	6°	6°	6°
Elevation Sidelobes (1st Upper) (Typ.)	< -17 dB	< -17 dB	< -17 dB	< -16 dB
Front-to-Back Ratio @180° (Typ.)	> 30 dB	> 30 dB	> 30 dB	> 30 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Interbeam Co-Pol Isolation	> 20 dB	> 20 dB	> 20 dB	> 20 dB
VSWR	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc	≤ -150 dBc
Polarization	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 Ohms	50 Ohms	50 Ohms	50 Ohms
Input Power	300 Watts CW	300 Watts CW	300 Watts CW	300 Watts CW
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground

Mechanical Specifications

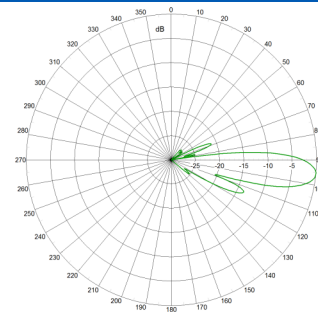
Dimensions (LxWxD)	33.0 x 34.1 x 6.9 inches (839 x 867 x 174 mm)
Survival Wind Speed	> 125 mph (> 201 km/hr)
Front Wind Load	238 lbs (1059 N) @ 100 mph (161 kph)
Side Wind Load	52 lbs (233 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	9.3 ft ² (0.9 m ²)
Weight (without Mounting)	54.2 lbs (24.6 kg)
Connector	12; 7-16 DIN female
Mounting Pole	2-5 inches (5-12 cm)



Antenna Patterns*



1930 MHz Azimuth



1930 MHz Elevation 6°

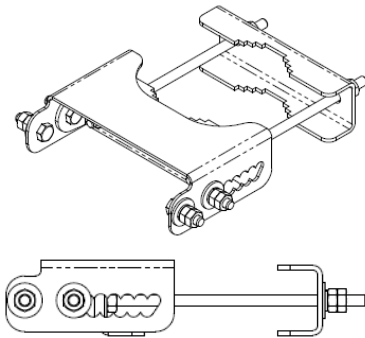
*Typical antenna patterns. For detailed information on antenna patterns, please contact us at info@cciproducts.com. All specifications are subject to change without notice.

SIX-BEAM SPECIAL EVENTS ANTENNA

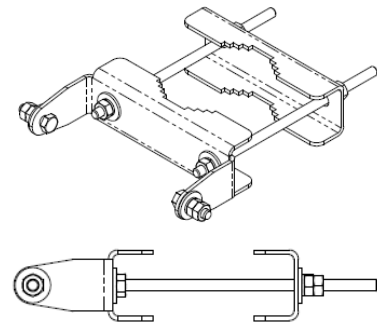
Model MBA6-12F-U-H3-K

Ordering Information:

- MBA6-12F-U-H3 Antenna (3'), Six-Beam Special Events Ultra-Wideband (PCS/AWS/WCS) Antenna with Fixed Electrical Tilt
- MBA6-12F-U-H3-K Complete Kit with Antenna (3'), and MBK-03 Mounting Bracket
- MBK-03 Mounting Bracket (Top & Bottom) with 0° through 12° Mechanical tilt Adjustment: : Weight 10 Lbs. (4.5 kg)

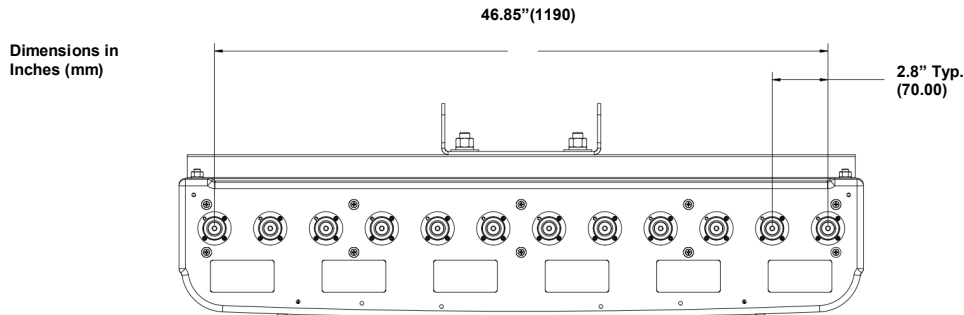


MBK-03 Top Mounting Bracket



MBK-03 Bottom Mounting Bracket

**MBA6-12F-U-H3
Antenna Port Marking
and Port Identification**



MBA6-12F-U-H3 Antenna Port Spacing

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 60068-2-30, IEC 60068-2-52, IEC 60068-2-64, GR-63-CORE 4.3.1, EN60529 IP24