

- Two foot (0.6 m), MultiBand, six port antenna with a 65° azimuth beamwidth covering 698-896 MHz and 1695-2180 MHz frequencies
- Four wide high band ports covering 1695-2180 MHz and two wide low band ports covering 698-896 MHz in a single antenna
- Full Spectrum Compliance 698-896 MHz / 1695-2180 MHz
- LTE Optimized FBR and SPR performance, providing for an efficient use of valuable radio capacity
- LTE Optimized Boresight and Sector XPD and USL performance, essential for LTE Performance
- Exceeds minimum PIM performance requirements
- 4.3-10 connector, which is 40% smaller than traditional 7/16 DIN connector

### Overview

The CCI MultiBand is a six port antenna, with four wide high band ports covering 1695-2180 MHz and two wide low band ports covering 698-896 MHz. The CCI MultiBand antenna provides the capability to deploy 4x4 Multiple-input Multiple-output (MIMO) in the high band and 2x2 Multiple-input Multiple-output in the low band.

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

### Applications

- 4x4 MIMO for the high band and 2x2 MIMO for the low band
- Ready for Network Standardization on 4.3-10 connectors
- With CCI's MultiBand antennas, wireless providers can connect multiple platforms to a single antenna, reducing tower load, lease expense, deployment time and installation costs



MultiBand Antenna

HPA65F-BW2A

SPECIFICATIONS

Electrical

Ports	2 x Low Band Ports for 698-896 MHz	
Frequency Range	698-806 MHz	806-896 MHz
Gain	10.7 dBi	10.6 dBi
Azimuth Beamwidth (-3dB)	65°	68°
Elevation Beamwidth (-3dB)	31.7°	29.0°
Electrical Downtilt	6°	6°
Elevation Sidelobes (1st Upper)	< -20 dB	< -18 dB
Front-to-Back Ratio @180°	> 35 dB	> 35 dB
Cross-Polar Discrimination at Peak	> 25 dB	> 25 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc
Input Power Continuous Wave (CW)	500 watts	500 watts
Polarization	Dual Linear 45°	Dual Linear 45°
Input Impedance	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground

Ports	4 x High Band Ports for 1695-2180 MHz		
Frequency Range	1695-1850 MHz	1850-1910 MHz	1910-2180 MHz
Gain	12.3 dBi	12.7 dBi	13.2 dBi
Azimuth Beamwidth (-3dB)	62°	58°	59°
Elevation Beamwidth (-3dB)	20.9°	19.8°	18.5°
Electrical Downtilt	4°	4°	4°
Elevation Sidelobes (1st Upper)	< -14 dB	< -15 dB	< -19 dB
Front-to-Back Ratio @180°	> 30 dB	> 32 dB	> 34 dB
Cross-Polar Discrimination at Peak	> 18 dB	> 16 dB	> 18 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc
Input Power Continuous Wave (CW)	250 watts	250 watts	250 watts
Polarization	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°
Input Impedance	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground

Mechanical

Dimensions (LxWxD)	24.3x11.9x7.6 in (618x303x193 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	62 lbs (276 N) @ 100 mph (161 kph)
Side Wind Load	40 lbs (180 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	2.4 ft <sup>2</sup> (0.2 m <sup>2</sup> )
Weight*	17.8 lbs (8.1 kg)
Connector	6x 4.3-10 female
Mounting Pole	2 to 5 in (5 to 12 cm)

\* Weight excludes mounting



SPECIFICATIONS

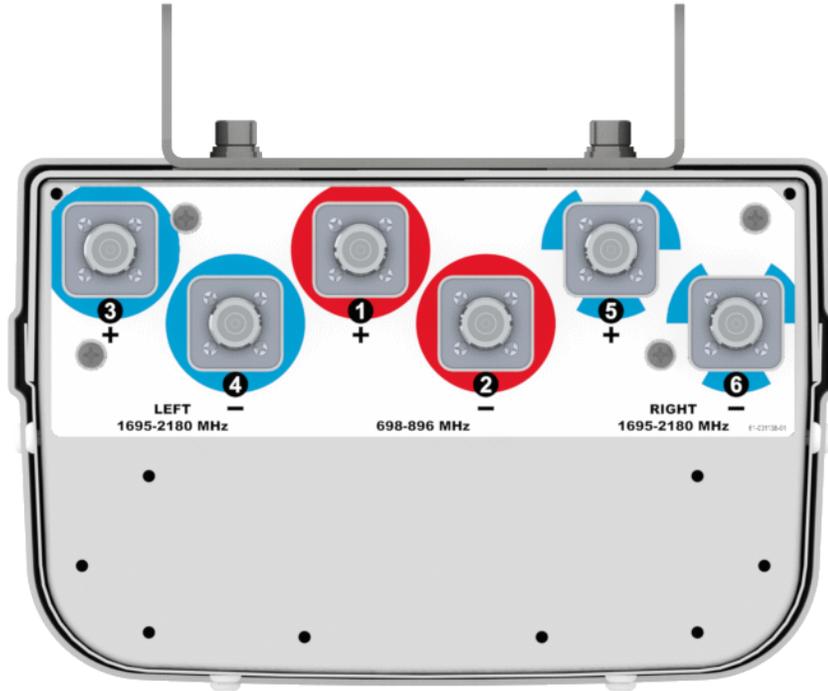
MultiBand Antenna

HPA65F-BW2A

Mechanical

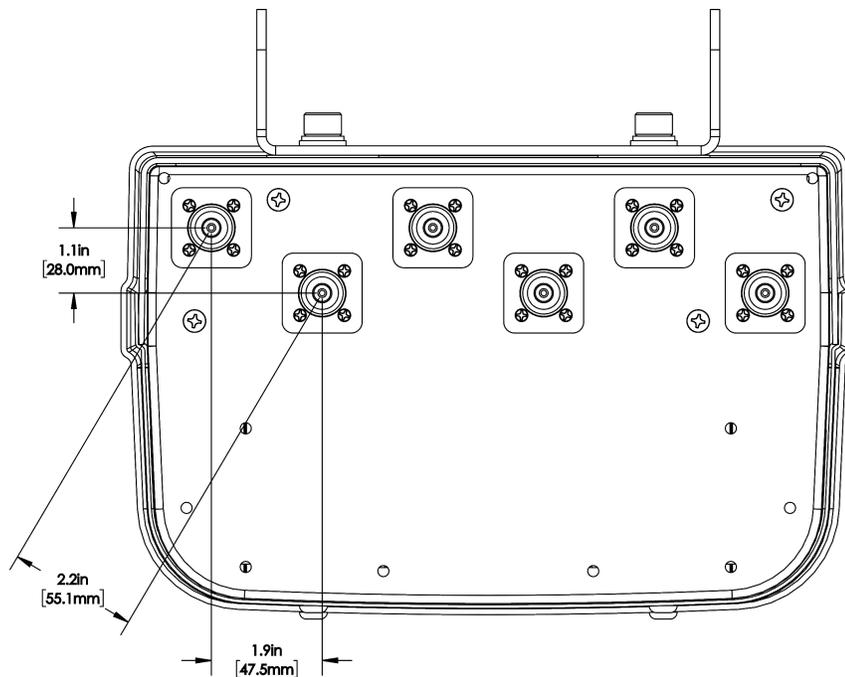
Bottom View

HPA65F-BW2A



Connection Spacing Diagram

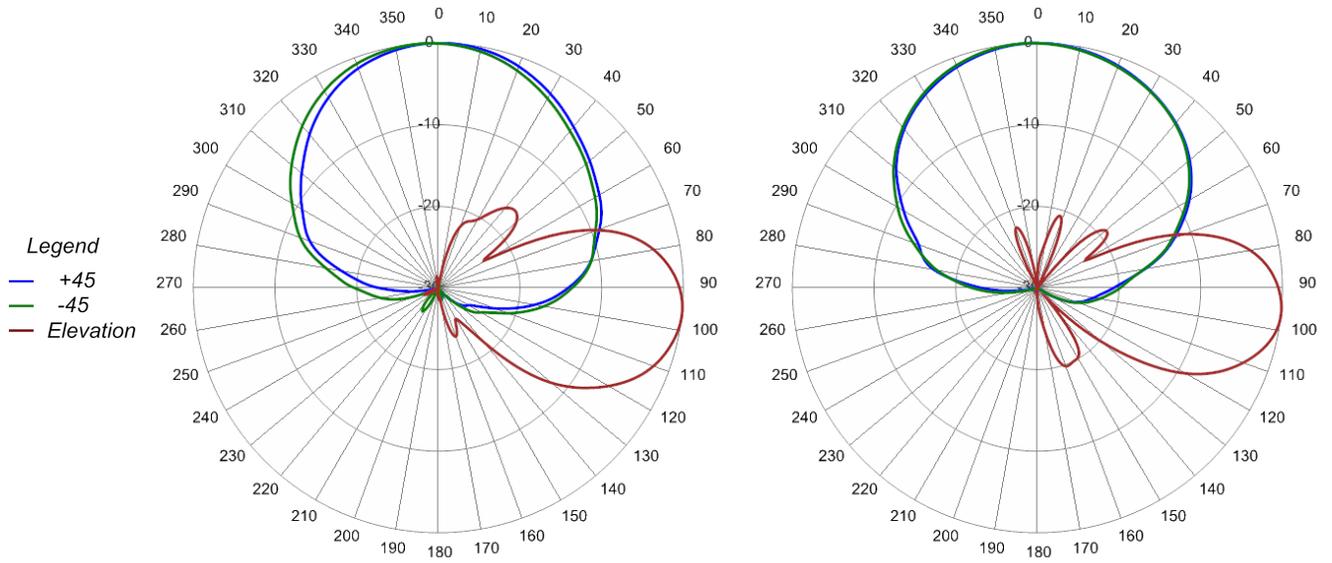
HPA65F-BW2A





Typical Antenna Patterns

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

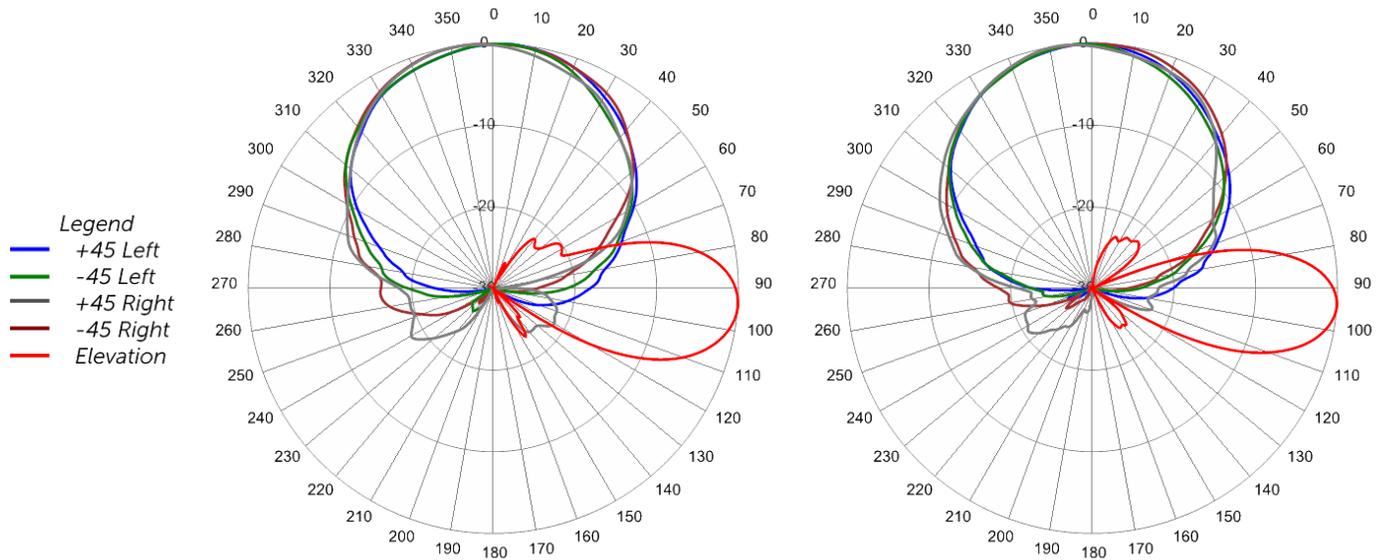


704 MHz Azimuth with Elevation 6°

850 MHz Azimuth with Elevation 6°

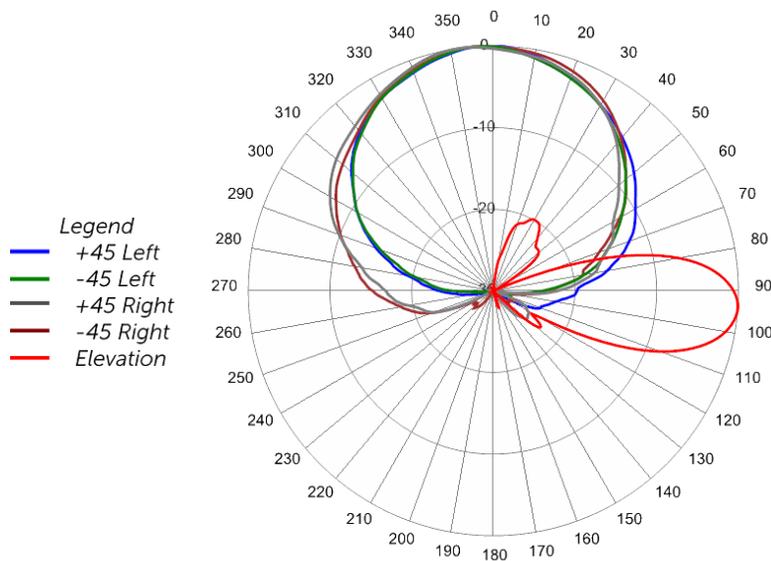


Typical Antenna Patterns



1710 MHz Azimuth with Elevation 4°

1970 MHz Azimuth with Elevation 4°



2155 MHz Azimuth with Elevation 4°



ORDERING

MultiBand Antenna

HPA65F-BW2A

Parts & Accessories

**HPA65F-BW2AA** Two foot (0.6 m) DualBand antenna with 65° azimuth beamwidth, 4.3-10 female connectors and MBK-03 mounting bracket

**MBK-03** Mounting bracket kit (top and bottom) with 0° to 10° mechanical tilt adjustment

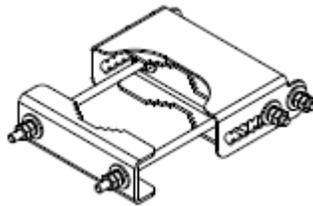


Mounting Bracket Kit

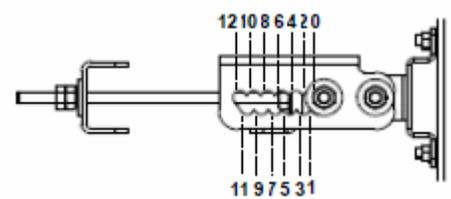
MBK-03

Mechanical

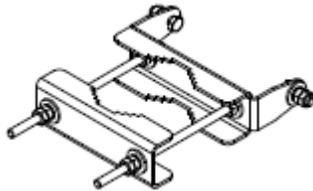
Weight	9.8 lbs (4.4 kg)
Hinge Pitch	13 in (330 mm)
Mounting Pole Dimension	2 to 5 in (5 to 12 cm)
Fastener Size	M10
Installation Torque	15 ft-lbs (20 N·m)
Mechanical Tilt Adjustment	0° - 12°



MBK-03 Top Adjustable Bracket



MBK-03 Top Adjustable Bracket Side View



MBK-03 Bottom Fixed Bracket



STANDARDS & CERTIFICATIONS

MultiBand Antenna

HPA65F-BW2A

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 60068-2-30, 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

