



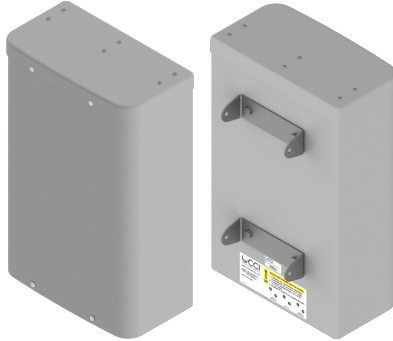
# Antennas

MultiPort Series

DATA SHEET

## MultiBand Antenna

HPA45F-BU2A



- Two foot (0.6 m), MultiBand, six port antenna with a 45° azimuth beamwidth covering 698-896 MHz and 1695-2400 MHz frequencies
- Four wide high band ports covering 1695-2400 MHz and two wide low band ports covering 698-896 MHz in a single antenna
- Full Spectrum Compliance 698-896 MHz / 1695-2400 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 1695-2400 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



SPECIFICATIONS

MultiBand Antenna

HPA45F-BU2A

Electrical

Ports	2 x Low Band Ports for 698-896 MHz	
Frequency Range	698-806 MHz	824-896 MHz
Gain	12.5 dBi	13.2 dBi
Azimuth Beamwidth (-3dB)	50°	46°
Elevation Beamwidth (-3dB)	33.2°	30.4°
Electrical Downtilt	4°	4°
Elevation Sidelobes (1st Upper)	<-22 dB	<-21 dB
Front-to-Back Ratio @180°	> 30 dB	> 30 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 1695-2400 MHz			
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz
Gain	14.4 dBi	14.7 dBi	15.1 dBi	15.8 dBi
Azimuth Beamwidth (-3dB)	44°	41°	39°	38°
Elevation Beamwidth (-3dB)	19.4°	18.4°	17.4°	15.1°
Electrical Downtilt	4°	4°	4°	4°
Elevation Sidelobes (1st Upper)	<-14 dB	<-16 dB	<-16 dB	<-15 dB
Front-to-Back Ratio @180°	> 30 dB	> 32 dB	> 34 dB	> 35 dB
Cross-Polar Discrimination at Peak	> 20 dB	> 19 dB	> 22 dB	> 25 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc
Input Power Continuous Wave (CW)	300 watts	300 watts	300 watts	300 watts
Polarization	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground



SPECIFICATIONS

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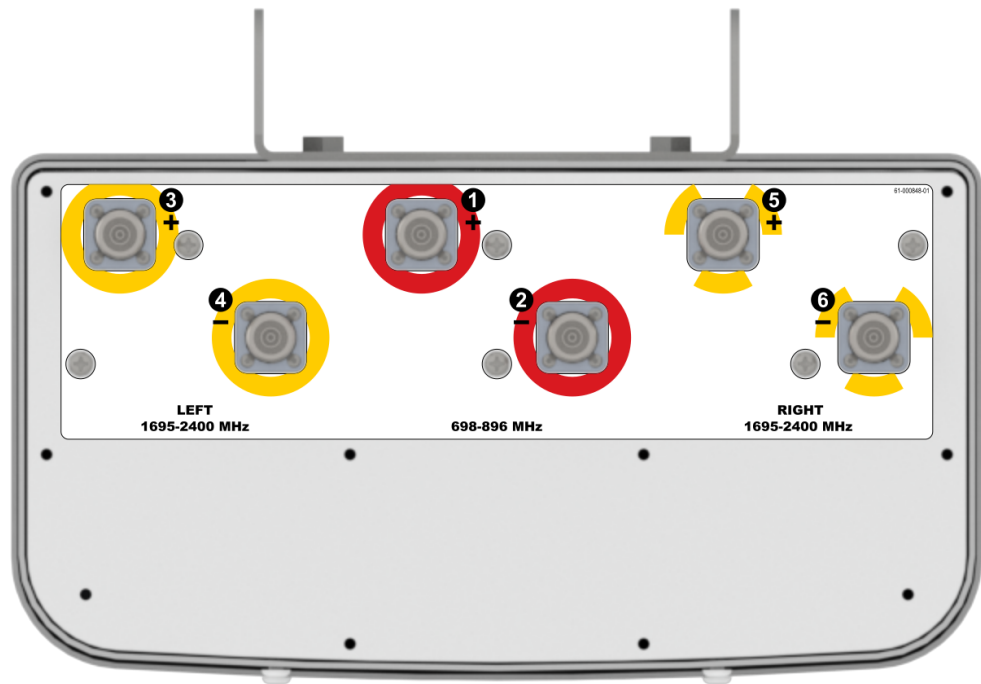
Mechanical

Dimensions (LxWxD)	24.3x15.3x8.2 in (618x389x208 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	79 lbs (353 N) @ 100 mph (161 kph)
Side Wind Load	43 lbs (192 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	3.1 ft <sup>2</sup> (0.3 m <sup>2</sup> )
Weight*	17.0 lbs (7.7 kg)
Connector	6x 4.3-10 female
Mounting Pole	2 to 5 in (5 to 12 cm)

\* Weight excludes mounting

Bottom View

HPA45F-BU2AA



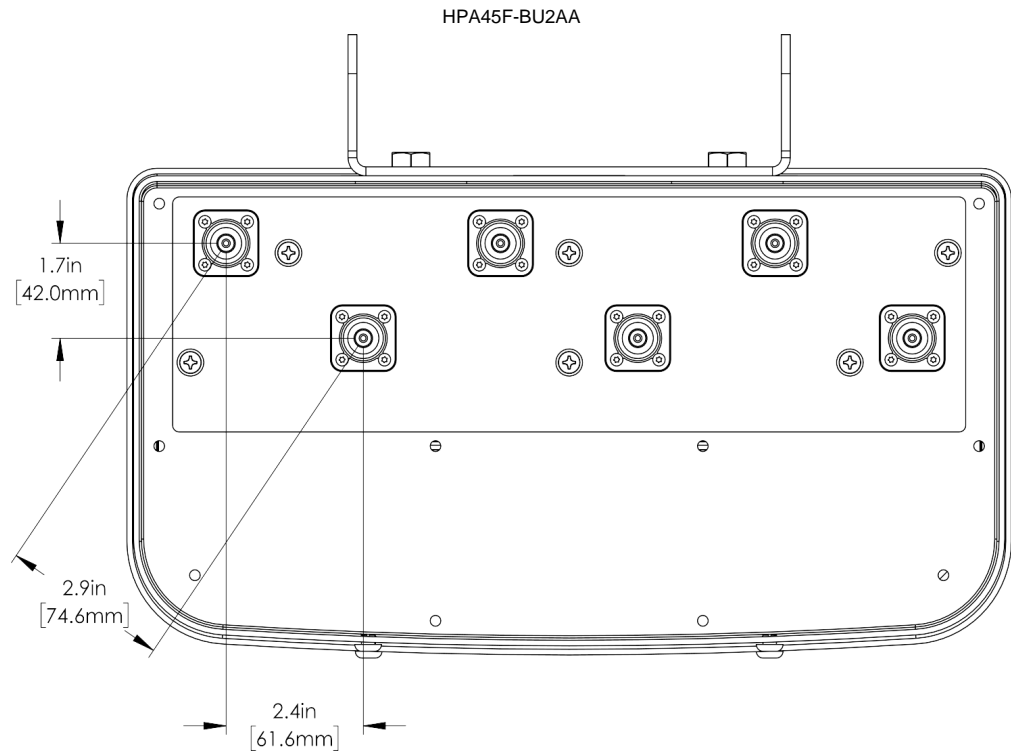
MultiBand Antenna

HPA45F-BU2A

SPECIFICATIONS

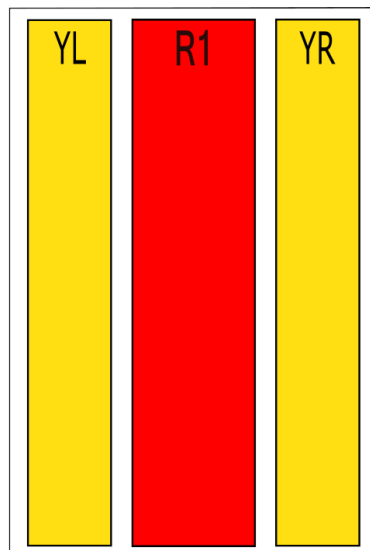
Mechanical

Connection Spacing Diagram



Element Array Diagram

**Top of antenna  
Viewed from rear**

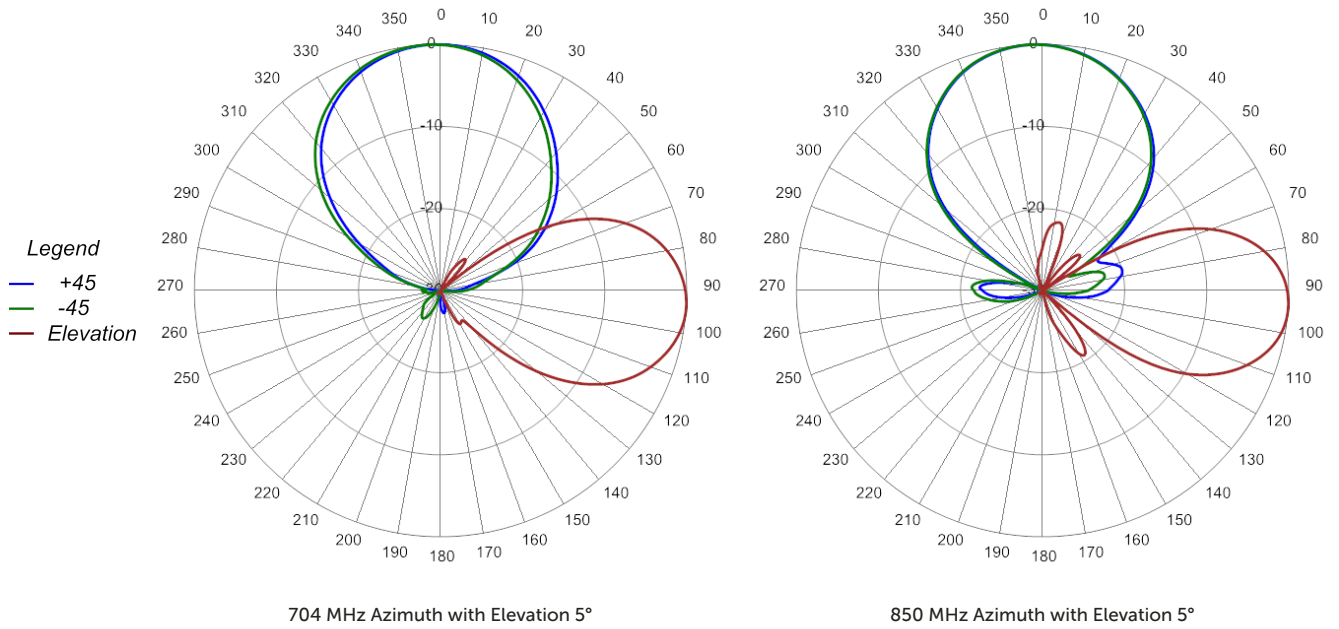


Array	Ports	Freq (MHz)
<b>R1</b>	<b>1, 2</b>	<b>698-896</b>
<b>YL</b>	<b>3, 4</b>	<b>1695-2400</b>
<b>YR</b>	<b>5, 6</b>	<b>1695-2400</b>



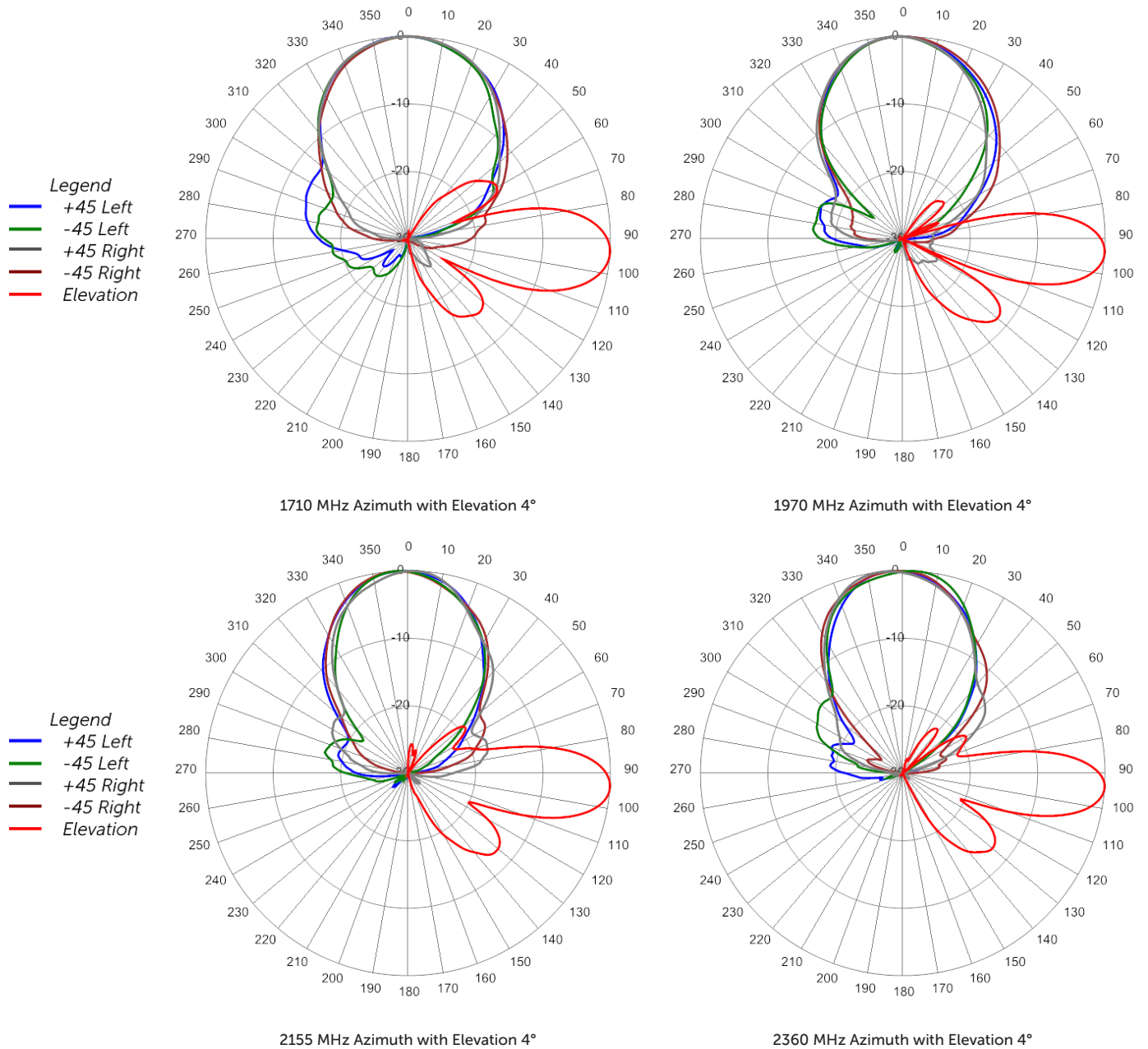
Typical Antenna Patterns

For detailed information on additional antenna patterns, contact customer support at [support@cciproducts.com](mailto:support@cciproducts.com)





Typical Antenna Patterns





Parts & Accessories

<b>HPA45F-BU2AA-K</b>	Two foot (0.6 m) DualBand antenna with 45° azimuth beamwidth, 4.3-10 female connectors and MBK-03 mounting bracket
<b>MBK-03</b>	Mounting bracket kit (top and bottom) with 0° to 10° mechanical tilt adjustment

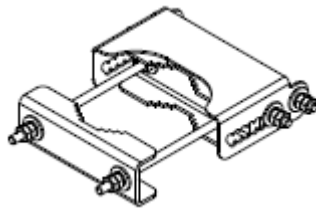


Mounting Bracket Kit

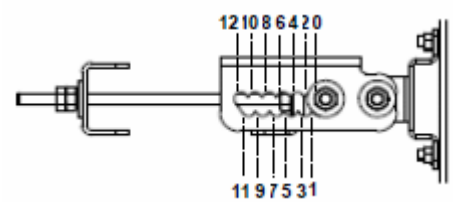
MBK-03

Mechanical

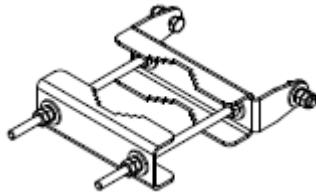
Weight	9.8 lbs (4.4 kg)
Hinge Pitch	13 in (330 mm)
Mounting Pole Dimension	2 to 5 in (5 to 12 cm)
Fastener Size	M10
Installation Torque	15 ft-lbs (20 Nm)
Mechanical Tilt Adjustment	0° - 12°



MBK-03 Top Adjustable Bracket



MBK-03 Top Adjustable Bracket Side View



MBK-03 Bottom Fixed Bracket





STANDARDS & CERTIFICATIONS

MultiBand Antenna

HPA45F-BU2A

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

