



Quad Port High-Band Antenna



- Five foot (1.5 m), WideBand, four port antenna with a 65° azimuth beamwidth covering 1695-2690 MHz frequencies
- Four wide high band ports covering 1695-2690 MHz, with full spectrum compliance
- Narrow enclosure with 12.1" (307 mm) width, reducing tower loading issues
- 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
- Equipped 4.3-10 connector, which is 40% smaller than traditional 7/16 DIN connector
- Equipped with 1 field replaceable, integrated AISG 2.0 compliant Remote Electrical Tilt (RET) controller

Overview

The CCI WideBand Antenna is a four port antenna, with four wide high band ports covering 1695-2690 MHz. The CCI WideBand Antenna provides the capability to deploy 4x4 Multiple-input Multiple-output (MIMO). The CCI WideBand antenna single RET configuration tilts all four ports together, allowing for electrical downtilt uniformity across all four ports.

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
- Ready for Network Standardization on 4.3-10 DIN connectors
- With CCI's WideBand Antennas, wireless providers can connect platforms to a single antenna, reducing tower load, lease expense, deployment time and installation costs



SPECIFICATIONS

Quad Port High-Band Antenna

QPA65R-E5A

Electrical

Ports	4 × High Band Ports for 1695-2690 MHz				
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz	2496-2690 MHz
Gain	17.6 dBi	17.7 dBi	18.3 dBi	18.4 dBi	18.4 dBi
Gain (Average)	17.2 dBi	17.4 dBi	17.6 dBi	17.9 dBi	17.4 dBi
Azimuth Beamwidth (-3dB)	64°	64°	64°	65°	62°
Elevation Beamwidth (-3dB)	6.5°	6.0°	5.5°	4.5°	4.3°
Electrical Downtilt	0° to 10°	0° to 10°	0° to 10°	0° to 10°	0° to 10°
Elevation Sidelobes (1st Upper)	< -16 dB	< -17 dB	< -17 dB	< -16 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)	> 22 dB	> 18 dB	> 22 dB	> 22 dB	> 22 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 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	< 1.5:1
Passive Intermodulation (2×20W)	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc
Input Power Continuous Wave (CW)	300 watts	300 watts	300 watts	300 watts	300 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

Mechanical

Dimensions (LxWxD)	60.0×12.1×4.2 in (1524×307×106 mm)	
Survival Wind Speed	> 150 mph (> 241 kph)	
Front Wind Load ¹	119 lbf @ 100 mph	531 N @ 161 kph
Side Wind Load ¹	59 lbf @ 100 mph	261 N @ 161 kph
Equivalent Flat Plate Area	5.2 ft ² (0.5 m ²)	
Weight *	29.0 lbs (13.2 kg)	
Connector	4 × 4.3-10 female	
Mounting Pole	2 to 5 in (5 to 12 cm)	

¹Windload values calculated using EN 1991-1-4 (2005) standard

* Weight excludes mounting kit

* Weight excludes mounting



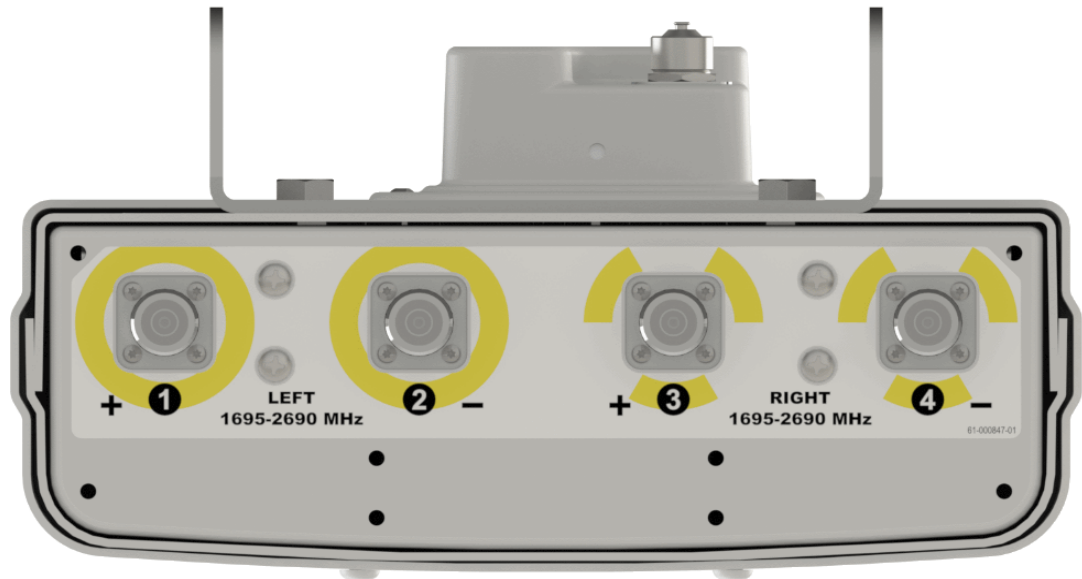
SPECIFICATIONS

Quad Port High-Band Antenna

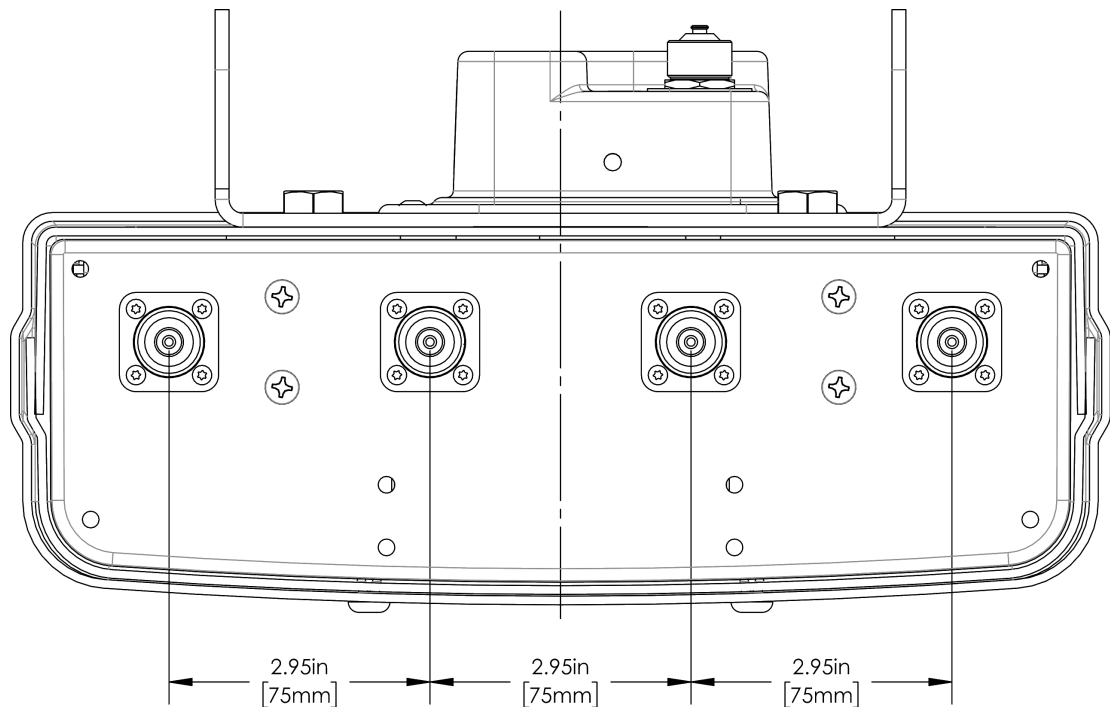
QPA65R-E5A

Mechanical

Bottom View



Connector Spacing





SPECIFICATIONS

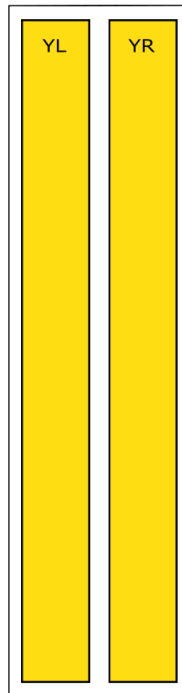
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Mechanical

RET to Element Configuration

Element arrays as viewed
from rear of antenna



RET placement
as viewed from rear
of antenna

Top of antenna



1695-2690
Ports 1, 2, 3 & 4
(YL & YR)

Array	Ports	Freq (MHz)	Ports controlled by common RET
YL	1, 2	1695-2690	1, 2, 3, 4
YR	3, 4	1695-2690	



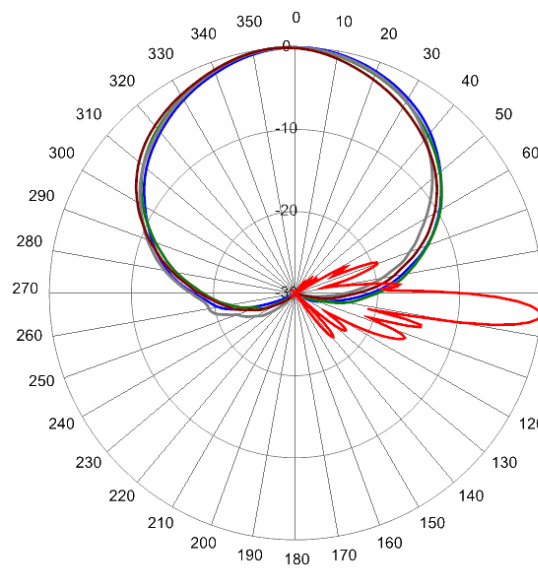
SPECIFICATIONS

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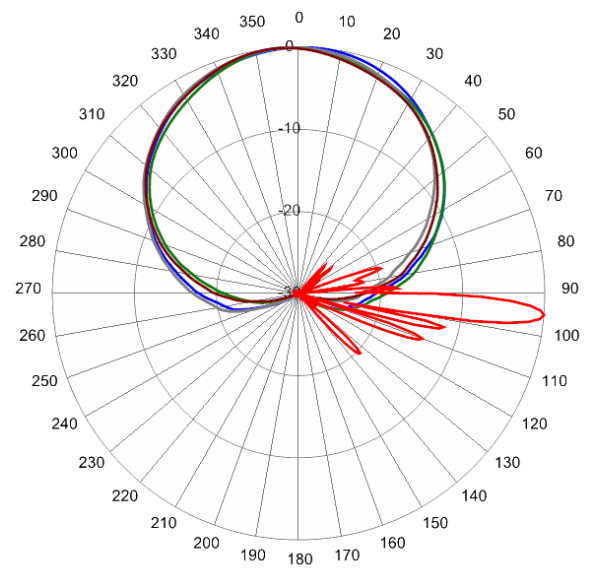
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Typical Antenna Patterns

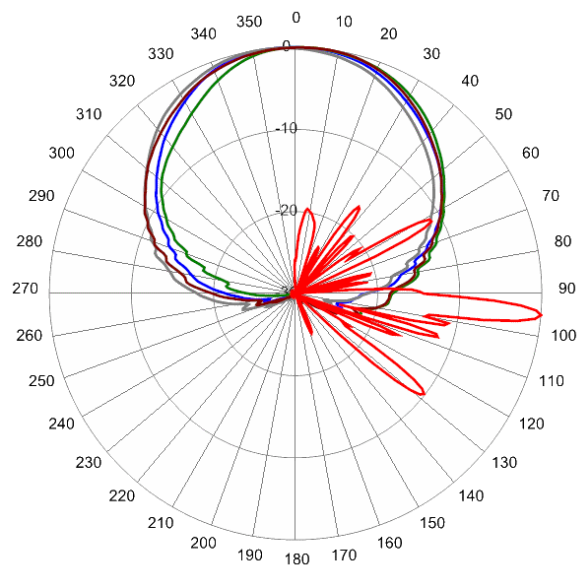
For detailed information on additional antenna patterns, contact customer support at support@cciprducts.com



1920 MHz Azimuth & Elevation 5°



2155 MHz Azimuth & Elevation 5°



2580 MHz Azimuth & Elevation 5°



ORDERING

Quad Port High-Band Antenna

QPA65R-E5A

Parts & Accessories

QPA65R-E5AA-K	Five foot (1.5 m) QuadPort antenna with 65° azimuth beamwidth, 4.3-10 female connectors, 1 factory installed BSA-RET200 RET actuator (Type 1 External) and MBK-02 mounting brackets
MBK-02	Mounting bracket kit (top and bottom) with 0° to 10° mechanical tilt adjustment
BSA-RET200	Remote electrical tilt actuator
AISGC-M-F-xFT	RRU AISG cable for single RET antenna



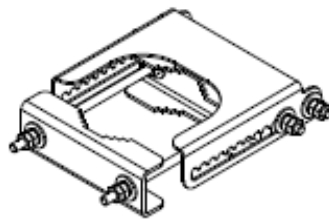
ACCESSORIES

Mounting Bracket Kit

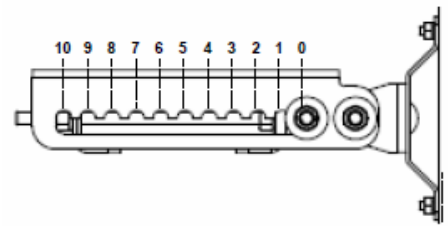
MBK-02

Mechanical

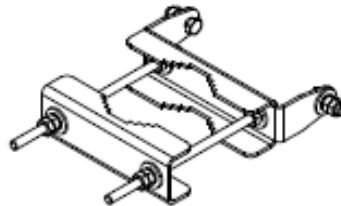
Weight	9.8 lbs (4.4 kg)
Hinge Pitch	31.5 in (800 mm)
Mounting Pole Dimension	2 to 5 in (5 to 12 cm)
Fastener Size	M10
Installation Torque	15 ft·lbs (20 N·m)
Mechanical Tilt Adjustment	0° - 10°



MBK-02 Top Adjustable Bracket



MBK-02 Top Adjustable Bracket Side View



MBK-02 Bottom Fixed Bracket



ACCESSORIES

Remote Electrical Tilt Actuator (RET)

BSA-RET200

General Specifications

Part Number	BSA-RET200
Protocols	AISG 2.0
RET Type	Type 1
Adjustment Cycles	>10,000 cycles
Tilt Accuracy	$\pm 0.1^\circ$
Temperature Range	-40° C to 70° C

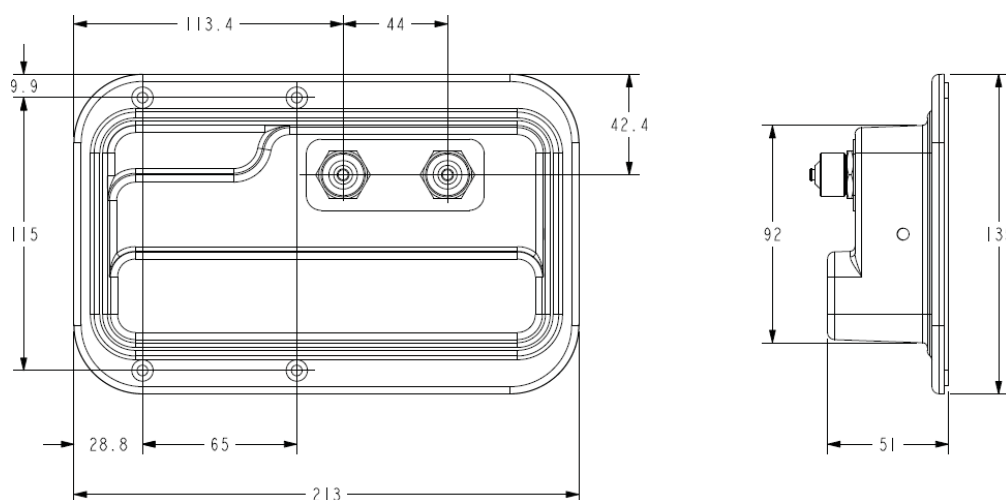
Electrical

Data Interface Signal	DC
Input Voltage	10-30 Vdc
Current Consumption Tilt	120 mA at $V_{in}=24$
Current Consumption Idle	55 mA at $V_{in}=24$
Hardware Interface	AISG-RS 485 A/B
Input Connector	Male 1 × 8 pin Daisy Chain
Output Connector	Female 1 × 8 pin Daisy Chain

Mechanical

Dimensions (LxWxD)	8.0x5.0x2.0 in. (213x135x51 mm)
Housing	ASA/ABS/Aluminum
Weight	1.7 lbs (0.75 kg)

ASA= Acrylic Styrene Acrylonitrile
ABS=Acrylonitrile Butadiene Styrene





ACCESSORIES

AISG Cable

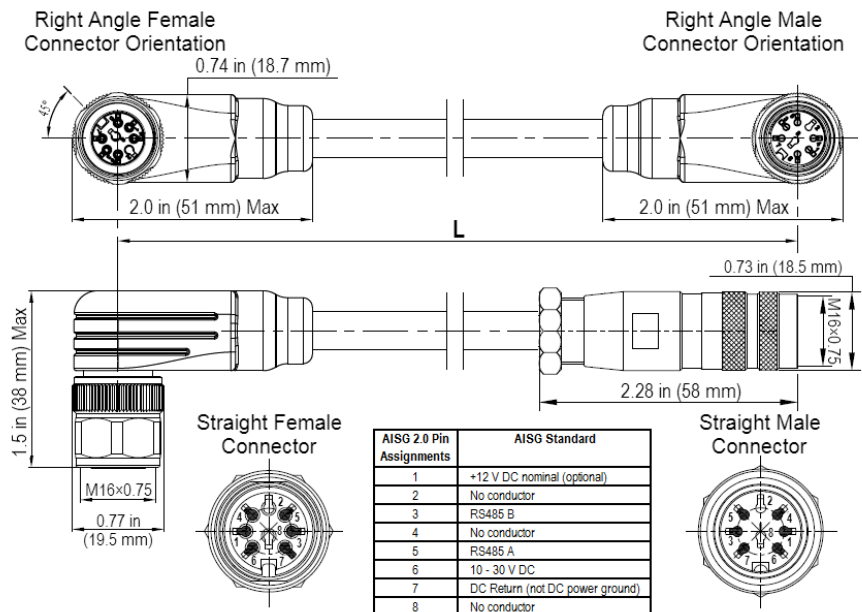
AISGC-M-F-xFT

Electrical Specifications

Individual Cable Part Number	AISGC-M-F-x(FT)
Cable style	UL2464
Protocol	AISG 1.1 and AISG 2.0
Maximum voltage	300 V
Rated current	5 A at 104° F (40° C)

Mechanical Specifications

Individual Cable Part Number	AISGC-M-F-x(FT)
Cables per kit	1
Connectors	2 x 8 pin IEC 60130-9 Straight male/straight female
Tightening torque	Hand tighten only ≈ 1.84 ft-lbs (2.5 Nm)
Construction	Shielded (Tinned Copper Braid)
Braid coverage	85%
Jacket Material	Matte Polyurethane (Black)
Conductors	1 twisted pair - 24 AWG 3 conductors - 19 AWG AWM style 2464
Cable Diameter	0.307 in (7.8 mm)
Length	See order details
Minimum bend radius	3.15 in (80 mm)



AISG-Male to AISG-Female Jumper Cable



Environmental Specifications

Individual Cable Part Number	AISGC-M-F-xFT
Temperature Range	-40° to 80° C
Flammability	UL 1581 VW-1
Ingress Protection	IEC 60529:2001, IP67



STANDARDS &
CERTIFICATIONS

Quad Port High-Band Antenna

QPA65R-E5A

Standards & Compliance

Safety	EN 60950-1, UL 60950-1
Emission	EN 55022
Immunity	EN 55024
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

Antenna Interface Standards Group (AISG), Federal Communication
Commission (FCC) Part 15 Class B, CE, CSA US, ISO 9001

