

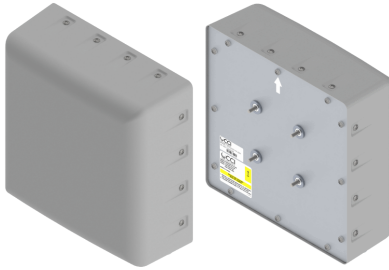


# Antennas

DATA SHEET

## DualBand Small Cell Panel Antenna

SCA65F-EH1A



- One foot (298 mm), Dualband, eight port antenna with a 65° azimuth beamwidth, covering 1695-2690 MHz and 3400-3800 MHz frequencies
- Four wide band ports covering 1695-2690 MHz and four wide band ports covering 3400-3800 MHz, all within in a low weight and low profile 11.7" x 11.9" (298 x 302 mm) panel antenna
- Full Spectrum Compliance for 1695-2690 MHz and 3400-3800 MHz frequencies
- The Low weight and Low profile of this panel antenna, makes this an ideal solution for Small Cell/C-RAN Densification deployments in difficult jurisdictional urban, suburban and rural environments
- Ordering options for multiple mounting brackets, including simple wall mounting or Dual-Axis adjustment bracket. Which makes it ideal for mounting on utility, lighting and traffic poles
- Fixed EDT of 4° for the 1695-2690 MHz ports and 0° EDT for 3400-3800 MHz ports
- Equipped with 4.3-10 connectors

### Overview

The CCI Dualband 65° x 65° array is an eight port Small Cell antenna, with four wide band ports covering 1695-2690 MHz and four wide band ports covering 3400-3800 MHz. The CCI 65° x 65° Small Cell antenna provides two independent sets of 4x4 Multiple-input-Multiple-output (MIMO) functionality across the 1695-2690 MHz and 3400-3800 MHz ports.

The CCI 65° x 65° Small Cell antenna is an ideal solution for Small Cell/C-RAN/o-DAS Densification deployments in difficult jurisdictional urban, suburban and rural where antenna size and count are restricted.

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

### Applications

- Small Cell/C-RAN/o-DAS in Urban, Suburban and other visually sensitive environments
- Ideal for Macro to Small Cell Coverage Transition Zones
- Outdoor Distributed Antenna Systems (oDAS), neutral host in venues, campuses and other outdoor coverage applications



# Antennas

## SPECIFICATIONS

### DualBand Small Cell Panel Antenna

SCA65F-EH1A

#### Electrical

Ports	4 x High Band Ports for 1695-2690 MHz					4 x High Band Ports for 3400-3800 MHz
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz	2496-2690 MHz	3400-3800 MHz
Gain <sup>1</sup>	10.9 dBi	11.0 dBi	11.2 dBi	11.3 dBi	11.5 dBi	7.8 dBi
Gain (Average) <sup>2</sup>	9.5 dBi	9.6 dBi	9.9 dBi	10.3 dBi	10.5 dBi	7.4 dBi
Azimuth Beamwidth (-3dB)	67°	69°	69°	70°	71°	73°
Elevation Beamwidth (-3dB)	47°	45°	43°	38°	34°	72°
Electrical Downtilt	4°	4°	4°	4°	4°	0°
Elevation Sidelobes (1st Upper)	< -18 dB	< -19 dB	< -18 dB	< -12 dB	< -11 dB	NA
Cross-Polar Discrimination (at Peak)	> 21 dB	> 19 dB	> 20 dB	> 19 dB	> 19 dB	> 19 dB
Front-to-Back Ratio @180°	> 35 dB	> 34 dB	> 35 dB	> 35 dB	> 35 dB	> 35 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 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	< 1.5:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	NA
Input Power Continuous Wave (CW)	120 watts	120 watts	120 watts	120 watts	120 watts	50 watts
Polarization	Dual Pol 45°	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	50 ohms
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground

<sup>1</sup>Peak gain across sub-bands.

<sup>2</sup>Electrical specifications follow document "Recommendation on Base Station Antenna Standards" (BASTA) V9.6.

#### Mechanical

Dimensions (LxWxD)	11.7x11.9x4.8 in (298x302x123 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	30 lbs (132 N) @ 100 mph (161 kph)
Side Wind Load	12 lbs (54 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	1.2 ft <sup>2</sup> (0.1 m <sup>2</sup> )
Weight *	5.3 lbs (2.4 kg)
Connector	8 x 4.3-10 female
Mounting Pole	2 to 5 in (5 to 12 cm)

\* Weight excludes mounting



# Antennas

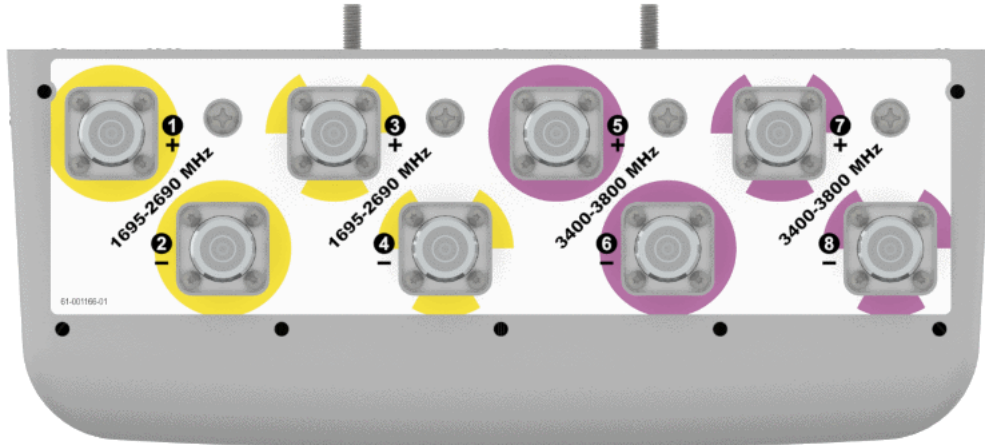
## SPECIFICATIONS

### DualBand Small Cell Panel Antenna

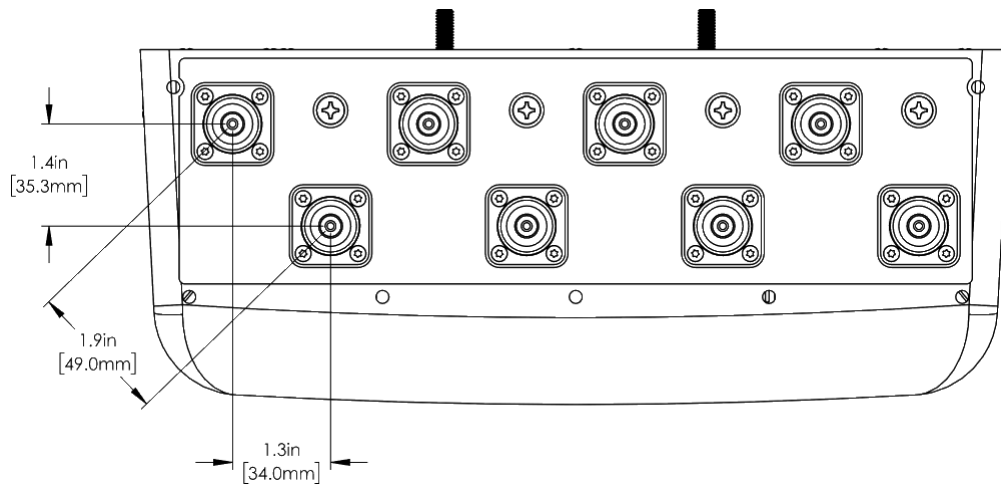
SCA65F-EH1A

#### Mechanical

Bottom View



Connector Spacing





# Antennas

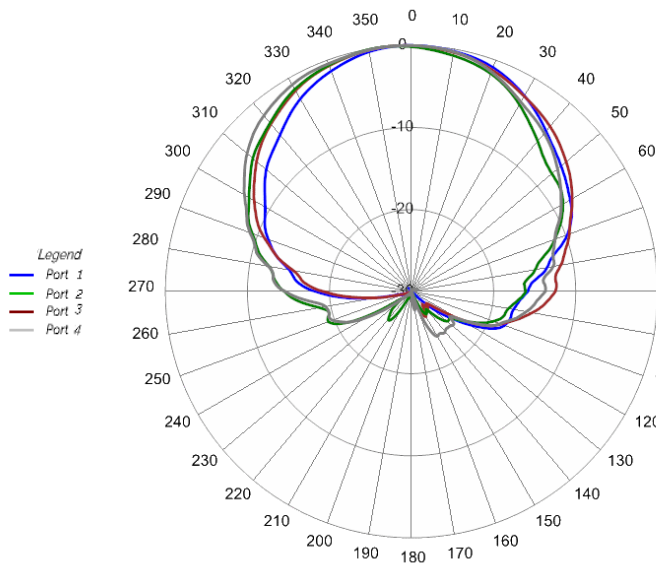
## SPECIFICATIONS

### DualBand Small Cell Panel Antenna

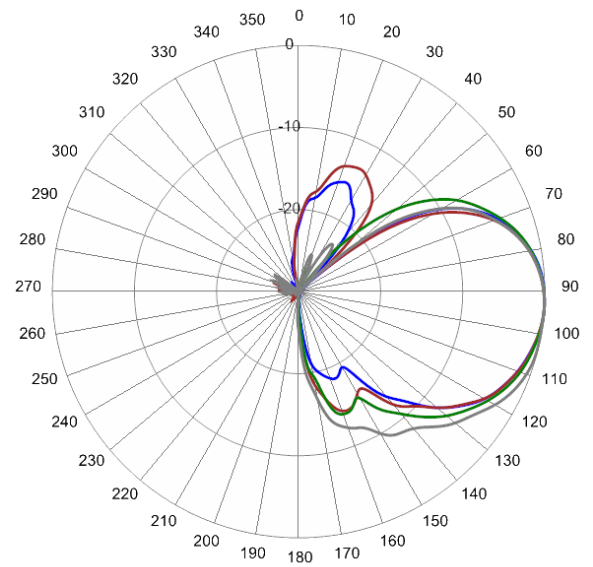
SCA65F-EH1A

#### Typical Antenna Patterns

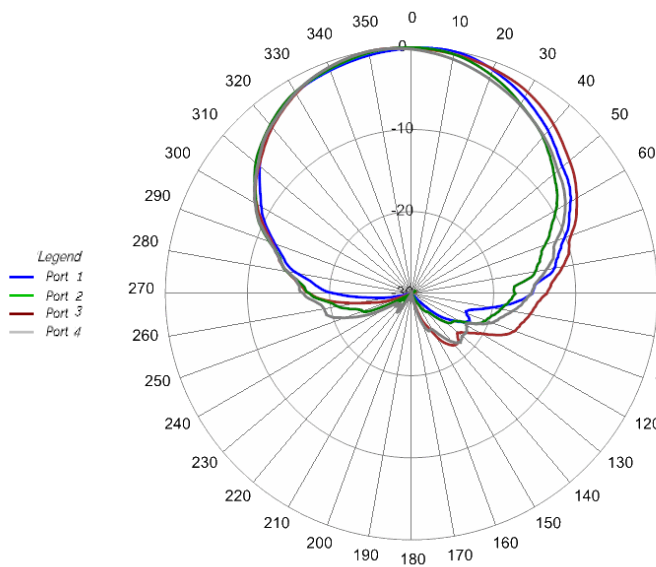
For detailed information on additional antenna patterns, contact customer support at [support@cciproducts.com](mailto:support@cciproducts.com)



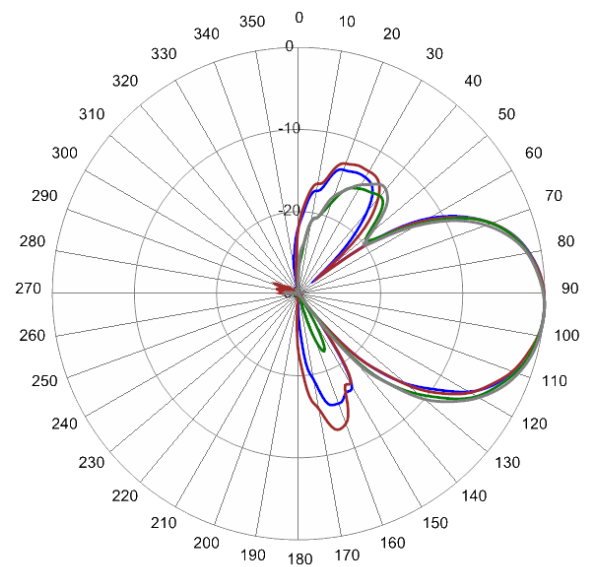
1910 MHz Azimuth



1910 MHz Elevation 4°



2300 MHz Azimuth



2300 MHz Elevation 4°



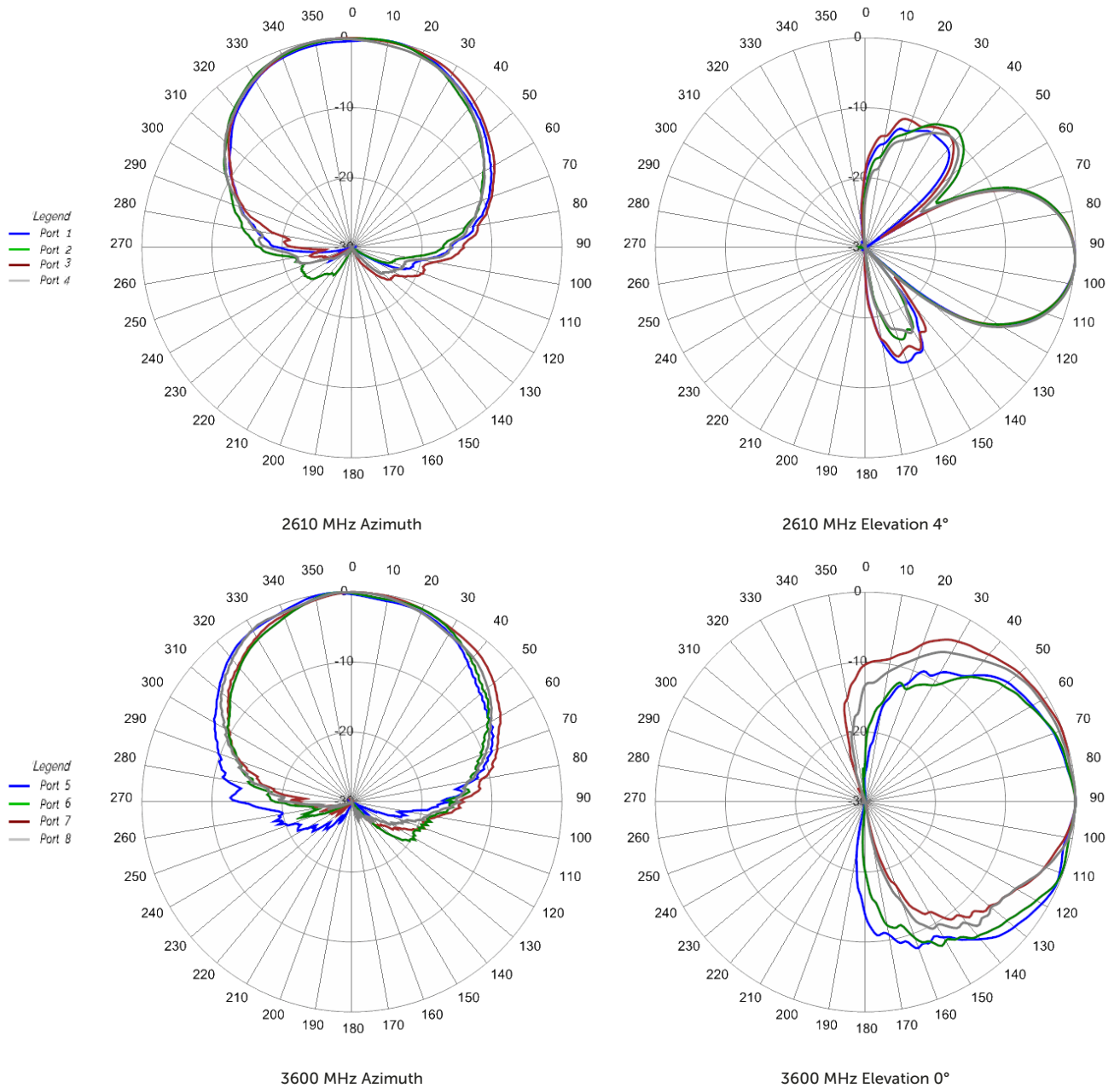
# Antennas

## SPECIFICATIONS

### DualBand Small Cell Panel Antenna

SCA65F-EH1A

#### Typical Antenna Patterns





# Antennas

ORDERING

## DualBand Small Cell Panel Antenna

SCA65F-EH1A

### Parts & Accessories

- 
- SCA65F-EH1AA-K** 1 foot (0.3 m) DualBand Panel antenna with 65° azimuth beamwidth and 4.3-10 female connectors with MBK-14 Dual Axis tilt mounting bracket

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  - SCA65F-EH1AA-K1** 1 foot (0.3 m) DualBand Panel antenna with 65° azimuth beamwidth and 4.3-10 female connectors with MBK-24 Dual Axis tilt pole mounting bracket

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  - SCA65F-EH1AA-K2** 1 foot (0.3 m) DualBand Panel antenna with 65° azimuth beamwidth and 4.3-10 female connectors with MBK-17 fixed tilt mounting bracket

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  - MBK-14** Dual Axis Tilt Antenna Mounting Bracket is designed for use with specific CCI small panel antennas, to attach to a suitable flat surface or pole mount using steel banding (not supplied)

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  - MBK-17** Fixed Tilt Antenna Mounting Bracket is designed for use with specific CCI small panel antennas, to attach to a suitable flat surface

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  - MBK-24** Dual Axis Tilt Antenna Mounting Bracket is designed for use with specific CCI small panel antennas, to attach to a suitable 2.0-4.5 inch OD (5-11 cm) pole
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# Antennas

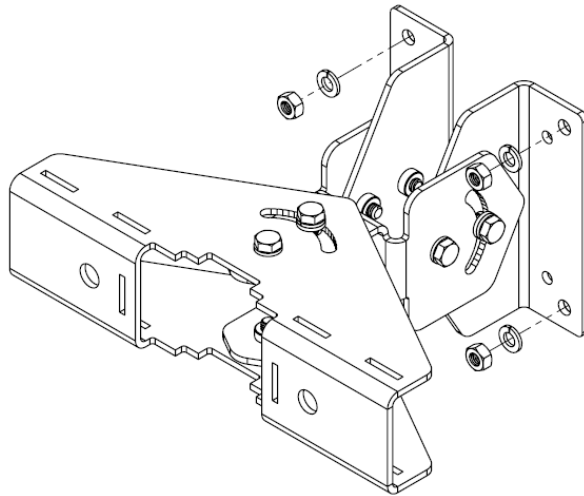
ACCESSORIES

## Mounting Bracket Kit

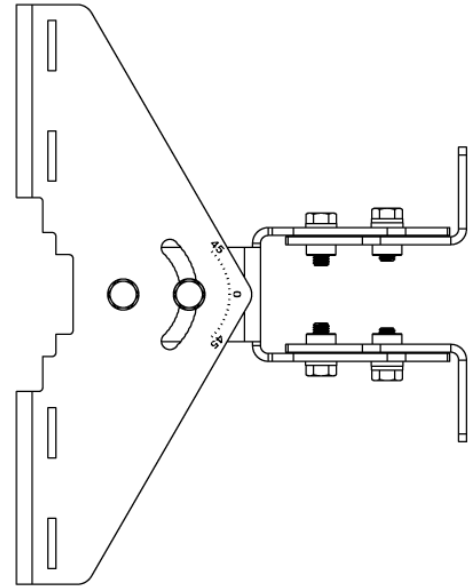
MBK-14

Mechanical

Weight 3.3 lbs (1.5 kg)



MBK-14 Adjustable Brackets



MBK-14 Adjustable Brackets Top View



# Antennas

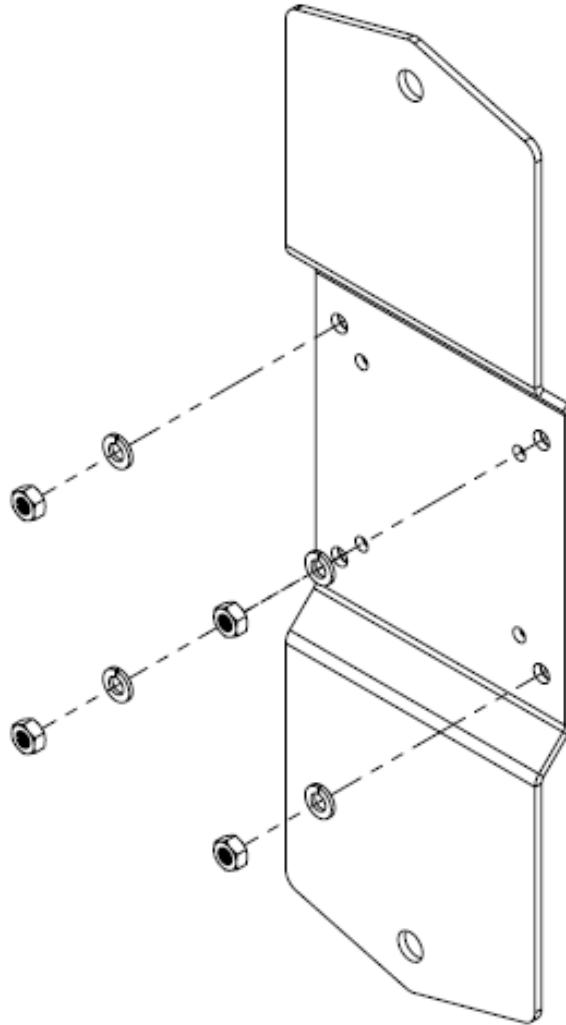
ACCESSORIES

Mounting Bracket Kit

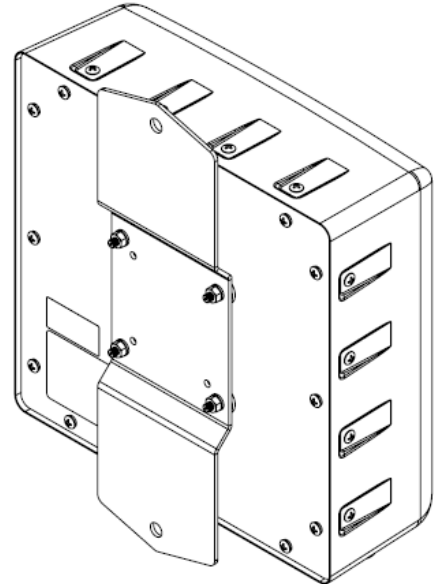
MBK-17

Mechanical

Weight 2.0 lbs (0.9 kg)



MBK-17



MBK-17 Installed to SCA65F-EJ1A





# Antennas

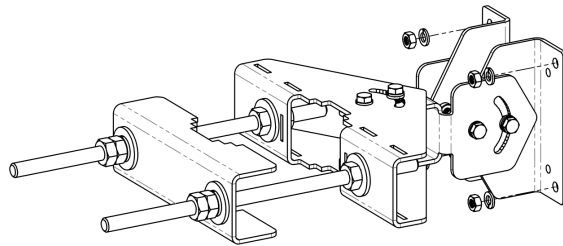
ACCESSORIES

Mounting Bracket Kit

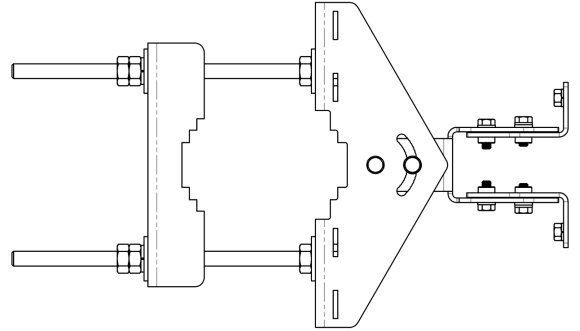
MBK-24

Mechanical

Weight 5.3 lbs (2.4 kg)



MBK-24 Adjustable Brackets



MBK-24 Adjustable Brackets Top View



# Antennas

## STANDARDS & CERTIFICATIONS

### DualBand Small Cell Panel Antenna

SCA65F-EH1A

#### 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



# CCI

## Communication Components Inc.

EXTENDING WIRELESS PERFORMANCE