

# 850/900 Bi-SECTOR™ ARRAY

**Model BSA-B65-19F004-02**



**850/900**

The CCI FET Series 850/900 Bi-Sector™ Array is an advanced phased array that supports two traditional sectors from a single antenna. Our unique patented bi-sector technology provides optimized overlap between pairs of asymmetric beams, lowers soft handover losses in UMTS/HSPA+ and CDMA/EVDO systems, and minimizes interference between sectors. Fast-roll off of each of the outer beams and high front-to-back ratios ensure reduced interference. Such an approach enhances data transfer rates within UMTS and EVDO network sectors and addresses “hotspots” in mobile wireless operator networks for GSM, CDMA, and UMTS technologies.

The single panel design of the Bi-Sector Array offers the opportunity to reduce antenna count and directly replaces an existing 65° antenna without mount changes and avoids costly leasing and zoning changes. The new coverage that matches the existing footprint minimizes the need for optimization and adjacent site changes, and allows for Bi-Sector Array sites to have significant CAPEX and OPEX cost savings.

All CCI antennas are manufactured under ISO 9001.

## Benefits

Dramatically increase site capacity through higher order sectorization

Avoid carrier-adds and building of new capacity sites

Patented asymmetrical beam shape maximizes coverage in a standard tri-sector cell plan

Boosts data throughput by lowering interference

## Features

- ◆ Single panel design supporting two beams without mount changes
- ◆ Asymmetric dual beams optimized to match existing cloverleaf (65°) deployments
- ◆ Dual +45° and -45° cross-polarization for Left and Right beams
- ◆ Medium-gain antenna with two ports per LH and RH beam (4 RF ports per panel)
- ◆ 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



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**Electrical Specifications**

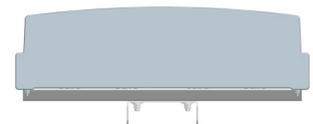
Frequency Range	824-896 MHz	870-960 MHz
Azimuth Beamwidth (-3dB)	33.0° Asymmetric	31.0° Asymmetric
Elevation Beamwidth (-3dB)	8.8°	8.1°
Elevation Sidelobes (1st Upper) (Typ.)	< -18dB	< -18dB
Gain	18.3 dBi (16.2 dBd)	19.2 dBi (17.1 dBd)
Polarization	±45° Slant	±45° Slant
VSWR	< 1.4:1	< 1.4:1
Front-to-Back Ratio	> 30dB	> 30dB
Cross-Polar Port to Port Isolation	> 30dB	> 30dB
Electrical Downtilt	4°	4°
Input Impedance	50 Ohms	50 Ohms
Input Power	250 Watts CW	250 Watts CW
Passive Intermodulation (2x20W)	≤ -150dBc	≤ -150dBc
Lightning Protection	DC Ground	DC Ground

**Mechanical Specifications**

Dimensions (LxWxD)	94.0 x 32 x 9 inches (2400 x 810 x 220 mm)
Survival Wind Speed	> 120 mph (> 193 km/hr)
Front Wind Load	532 lbs (2365 N) @ 100 mph (161 kph)
Side Wind Load	79 lbs (351 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	21.0 ft <sup>2</sup> (1.9 m <sup>2</sup> )
Weight (without Mounting)	119.0 lbs (54 kg)
Connector	4; 7-16 DIN female
Mounting Pole	2-5 inches (5-12 cm)

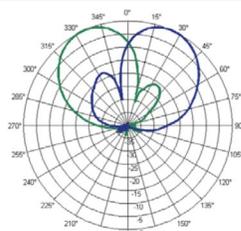


**Rear View**

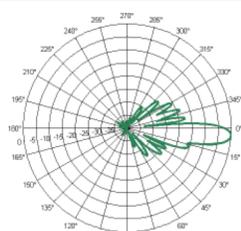


**Bottom View**

**Antenna Patterns\***



**Azimuth**



**Elevation 4°**

\*Typical antenna patterns at 835 MHz. For detail information on antenna pattern, please contact us at info@cciproducts.com. All specifications are subject to change without