

WIDEBAND BI-SECTOR™ ARRAY

Model BSA-W65-20V210-02



Wideband

The CCI VET Series Wideband Bi-Sector™ Array is an LTE ready advanced phased array that supports two high band sectors from a single antenna and provides capability for 1710/2170 MHz AWS and 1900 MHz PCS coverage in a single enclosure. Our unique patented bi-sector technology provides optimized overlap between pairs of asymmetric beams, lowers soft handover losses in LTE, 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/LTE and EVDO network sectors and addresses “hotspots” in mobile wireless operator networks for GSM, CDMA, UMTS and LTE technologies. The variable electrical down tilt (VET) capability allows independent adjustment of sub-beams for easier optimization.

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 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

- ◆ Slim and low weight 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
- ◆ Continuous wideband operation (1710-2170 MHz)
- ◆ Independent Electrical Tilt control for each beam

Applications

- ◆ Upgrade of data-throughput or capacity constrained sites
- ◆ Spectrum limited markets
- ◆ Deferral of CDMA/EVDO or UMTS//HSPA+ carrier adds



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Electrical Specifications

Frequency Range	1710 - 1880 MHz	1850 - 1990 MHz	1920 - 2170 MHz
Azimuth Beamwidth (-3dB)	31° Asymmetric	29° Asymmetric	28° Asymmetric
Elevation Beamwidth (-3dB)	8°	7.2°	6.5°
Elevation Sidelobes (1st Upper) (Typ.)	< -18dB	< -18dB	< -18dB
Gain	18.7dBi (16.6dBd)	19.2dBi (17.1dBd)	19.8dBi (17.7dBd)
Polarization	±45° Slant	±45° Slant	±45° Slant
VSWR	< 1.4:1	< 1.4:1	< 1.4:1
Front-to-Back Ratio (Typ.)	> 30dB	> 30dB	> 30dB
Isolation ¹	> 30dB	> 30dB	> 30dB
Electrical Downtilt	2° to 10°	2° to 10°	2° to 10°
Input Impedance	50 Ohms	50 Ohms	50 Ohms
Input Power	300 Watts CW	300 Watts CW	300 Watts CW
Passive Intermodulation (2x20W)	≤ -150dBc	≤ -150dBc	≤ -150dBc
Lightning Protection	DC Ground	DC Ground	DC Ground

Mechanical Specifications

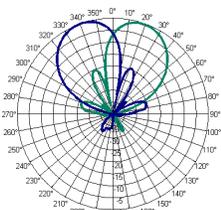
¹ Cross-Polar Port-to-Port Isolation	
Dimensions (LxWxD)	54 x 16 x 6 inches (1365 x 394 x 160 mm)
Survival Wind Speed	> 120 mph (> 193 km/hr)
Front Wind Load	164 lbs (730 N) @ 100 mph (161 kph)
Side Wind Load	37 lbs (166 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	5.8 ft ² (0.5 m ²)
Weight (without Mounting)	39.4 lbs (17.9 kg)
Connector	4; 7-16 DIN female
Mounting Pole	2-5 inches (5-12 cm)



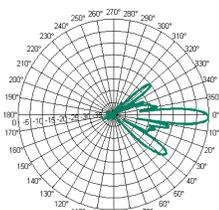
Rear View



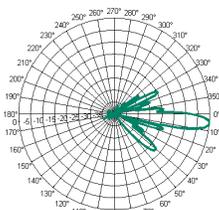
Bottom View



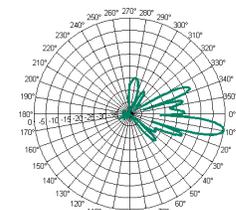
Azimuth



Elevation 2°



Elevation 6°



Elevation 10°

*Typical antenna patterns at 1920 MHz. For detail information on antenna pattern, please contact us at info@cciproducts.com. All specifications are subject to change with-