ePMP™ 1000 Sector Antenna

One of the principal considerations in a communications system is **antennas.** They have an enormous impact on the overall system performance of high-speed and high-capacity broadband communication networks.

At Cambium Networks, our antennas are engineered to address network and terrain challenges and are built to the highest level of quality and reliability. These specially designed antennas can be used in unsynchronized or GPS synchronized deployments. The wide variety of antenna options consists of:

- 5 GHz ePMP 1000 90 and 120 degree sector antennas
- 2.4 GHz ePMP 1000 90 degree sector antennas (used for 90 and 120 degree deployments)

All solutions are specifically designed for use with the ePMP platform. These antennas provide high front-to-back ratio required for optimized performance with maximized frequency reuse available with the ePMP radios.

As a result, connectivity is delivered to a larger subscriber base with fewer channels and less equipment, ultimately improving return on investment.

Sector Antenna

ePMP 1000 GPS Sync Radio Integrated with a Sector Antenna

Main Differentiators

» **MAXIMIZED SPECTRAL EFFICIENCY** is enabled by the **front-to-back** ratio in the ePMP 1000 antennas portfolio in combination with power control provided by APs. Together these enable frequency reuse for maximized spectral efficiency in congested areas and an increased number of subscribers with improved quality of service.

» **EASY INSTALLATION OPTIONS** allow for cost-effective swapping and adding of new equipment as site density increases and traffic loading peaks.

» **VALIDATED PERFORMANCE** ensured by rigorous system testing guarantees predictable performance for the whole network.

Powerful Features

The 5 GHz and 2.4 GHz **ePMP 1000 Sector Antennas** offer an ideal array of features - spectral efficiency, the capability to overcome environmental challenges and higher signal strengths.

2x2 Multiple Input and Multiple Output (MIMO gives the ePMP 1000 antennas the benefits of dual stream operation, provides interference mitigation by enabling the radios to select the best signal quality and allows for successful deployment of wireless networks in difficult environments.

Easy Configuration is supported by adjustable hardware and a simple one-step connection with the radio. As an added bonus for the 5 GHz antennas, a dedicated place is designed for a GPS antenna, providing more flexibility.

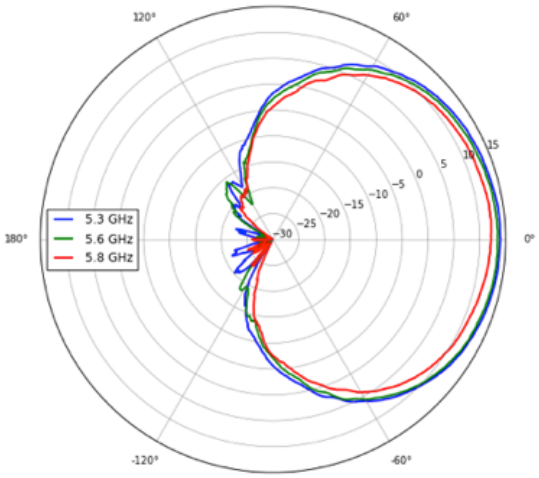
ePMP 1000 Antennas are **outdoor-rated.** Cambium Networks perform a rigorous set of environmental tests. We validate and guarantee the specifications and ensure their consistency with real life conditions.

Specifications

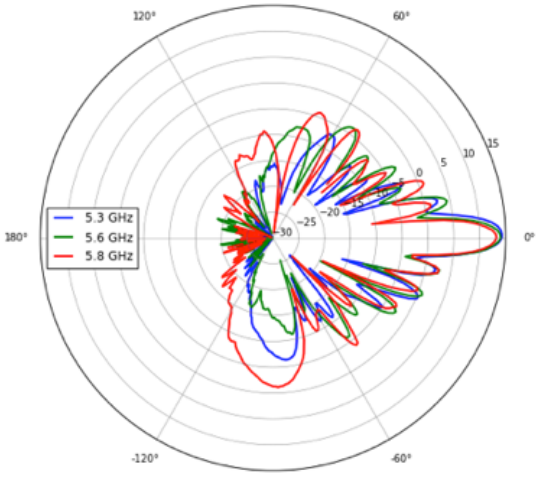
SPECIFICATIONS	C050900D003A 90 DEGREE SECTOR	C050900D002A 120 DEGREE SECTOR
FREQUENCY RANGE	5150 – 5970 MHz	
ANTENNA TYPE	ACCESS POINT SECTOR	
PEAK GAIN	15 dBi	14 dBi
VSWR	1.6:1 MAX	1.7:1 MAX
PORT TO PORT ISOLATION	25 dB	
6DB BEAMWIDTH-AZIMUTH	90°	120°
3DB BEAMWIDTH-AZIMUTH	65°	90°
3DB BEAMWIDTH-ELEVATION	8°	12°
POLARIZATION	Dual Linear, Horizontal / Vertical	
MAXIMUM INPUT POWER	5 W	
INPUT IMPEDANCE	50 Ohms	
FRONT-TO-BACK RATIO	>32 dB	
CROSS POLARIZATION	>18 dB	
MECHANICAL SIZE (MM)	827h x 161w x 59d (excl AP & bracket) 827h x 161w x 231d (incl AP & bracket)	
ANTENNA WEIGHT	3.1 kg (6.8 lb), w/o bracket kit	
MOUNTED ANT WEIGHT (W/ AP)	5.5 kg (12.1 lb)	
ANTENNA CONNECTOR	2 x male RP-SMA	
WIND SURVIVAL	145 km/h (90 mph)	
WIND LOADING (@216 KM/H)	FRONT: 318 N (72 LBF) SIDE: 160 N (36 LBF)	
POLE MOUNTING HARDWARE	QUICK RELEASE, 1.5" TO 4.5" DIA. POLE	
MECHANICAL DOWNTILT	-3° TO 12°	

5 GHz 120 Degree Sector Antenna Azimuth and Elevation Patterns

120 DEG SECTOR AZIMUTH GAIN (dBi) FOR ZERO ELEVATION

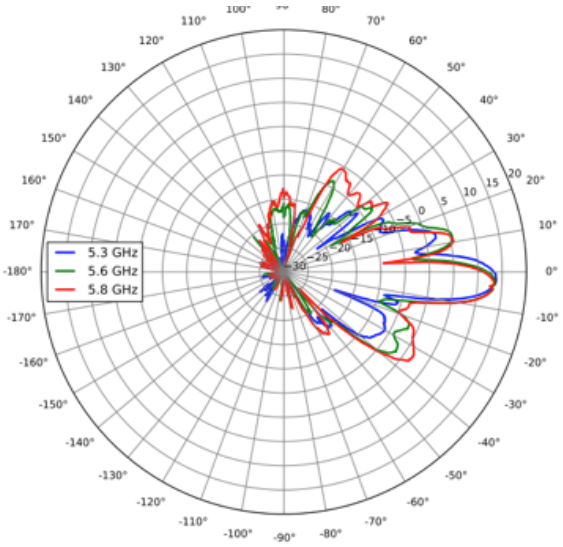


120 DEG SECTOR ELEVATION GAIN (dBi) FOR ZERO AZIMUTH

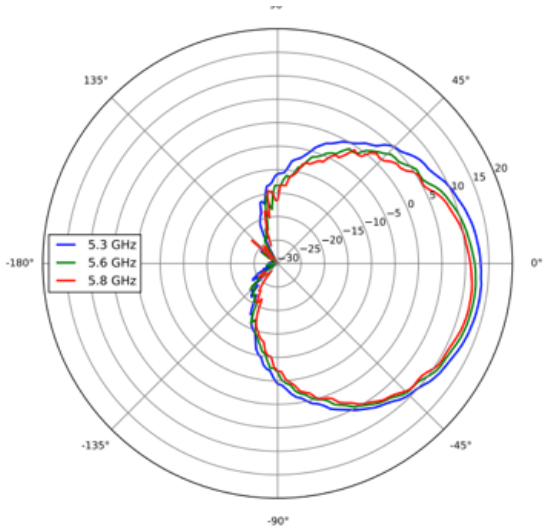


5 GHz 90 Degree Sector Antenna Azimuth and Elevation Patterns

90 DEG SECTOR ELEVATION GAIN (dBi) FOR ZERO AZIMUTH



90 DEG SECTOR AZIMUTH GAIN (dBi) FOR ZERO ELEVATION

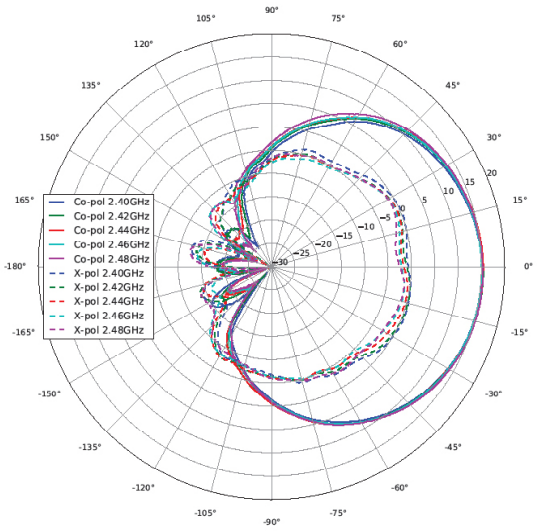


2.4 GHz 90 Degree Sector Antenna Specification Table

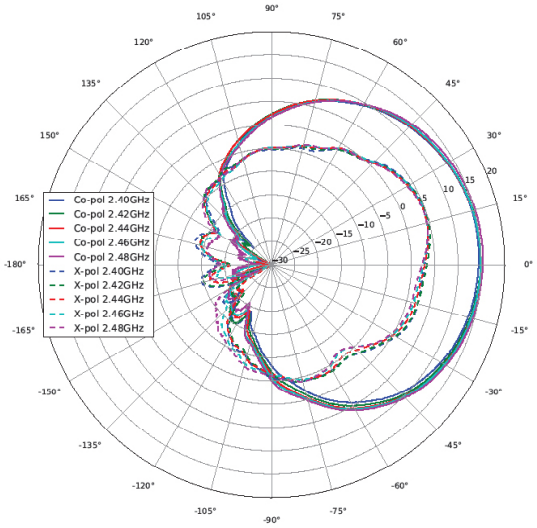
SPECIFICATIONS	
FREQUENCY RANGE	2300 – 2700 GHz
ANTENNA TYPE	Access Point
PEAK GAIN	15 dBi
VSWR	1.7 : 1
POLARIZATION	Dual Slant +/- 45 degrees
PORT TO PORT ISOLATION	20 dB
3DB BEAMWIDTH-AZIMUTH	90 degrees
3DB BEAMWIDTH-ELEVATION	11 degrees
MAXIMUM INPUT POWER	20 W
INPUT IMPEDANCE	50 Ohm
FRONT-TO-BACK RATIO	30 dB
MECHANICAL SIZE (mm)	800h x 225w x 67d (excl AP & bracket) 800h x 225w x 240d (incl AP & bracket)
ANTENNA WEIGHT	2.5 kg (excl AP & bracket)
MOUNTED ANT WEIGHT (w/ AP)	5.1 kg (incl AP & bracket)
ANTENNA CONNECTOR	2 X N-Type, Female
WIND SURVIVAL	200 km/hr
DIMENSIONS (H X W X D)	Supports 1" to 4" Dia. Pole

2.4 GHz 90 Degree Sector Antenna Azimuth Patterns

90 DEG SECTOR AZIMUTH GAIN (DBI) FOR ZERO ELEVATION, + 45 POLARIZATION

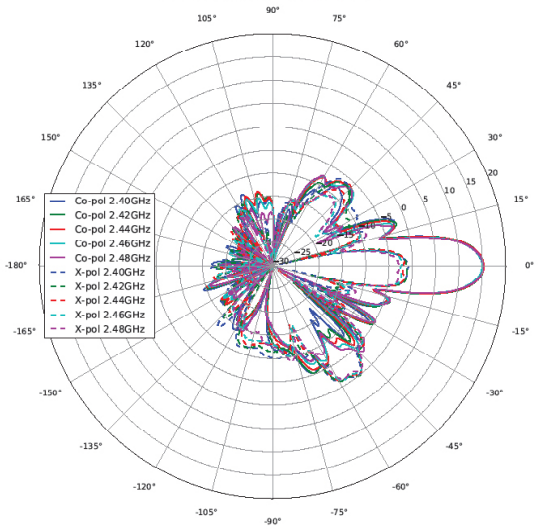


90 DEG SECTOR AZIMUTH GAIN (DBI) FOR ZERO ELEVATION + 45 POLARIZATION



2.4 GHz 90 Degree Sector Antenna Elevation Patterns

90 DEG SECTOR ELEVATION GAIN (DBI) FOR ZERO AZIMUTH, + 45 POLARIZATION



90 DEG SECTOR ELEVATION GAIN (DBI) FOR ZERO AZIMUTH, -45 POLARIZATION