

# PMP 450 5 GHz Access Point Antenna

A wireless broadband communication system has many components; each one contributes to the overall performance and ultimately affects operator revenues. Well-designed components that complement each other will improve overall network performance, increase the longevity of the system and optimize operators' profits.

One of the principal considerations in a communications system is antennas. Their impact is enormous - using the wrong antenna will degrade the overall performance of an otherwise well engineered system, resulting in customer dissatisfaction.

At Cambium Networks, our antennas are engineered to address most typical network and terrain challenges and built to the highest level quality and reliability. The 5 GHz Access Point 60 and 90 degree sector antennas are specifically designed for use with the 5 GHz PMP 450 platform of products. As a result of their consistent front-to-back ratio in combination with power control and high gain, these antennas deliver optimized performance, including maximized spectral efficiency and easy installation.



90 Degree Sector Antenna



60 Degree Sector Antenna

## Main Differentiators

» **MAXIMIZED SPECTRAL EFFICIENCY** enabled by the **front-to-back ratio** in the antenna portfolio in combination with **power control** provided by APs. This allows the signal from subscriber modules to arrive at the AP with the same receive power level, resulting in frequency reuse, maximized spectral efficiency in congested areas and increased subscribers with improved quality of service.

» **CONSISTENT PERFORMANCE** is empowered by the **null-fill** feature in the PMP 450 antennas. This capability insures the consistent coverage and performance for subscribers who are located very close and far below the AP. The balance of the energy distribution of antennas allows for a more uniform performance across the whole frequency range while guaranteeing a good signal quality for all subscribers.

» **EASY INSTALLATION** options offered by our antennas allow Cambium Networks' radios to simply collocate using a variety of mounting selections. As site density increases and traffic loading peaks, swapping and adding new equipment is cost-effective due to design compatibilities across product families.

## Powerful Features

The **5 GHz Access Point Antenna** offers an ideal array of features - spectral efficiency, higher gain than other solutions, a capability to overcome environmental challenges and improved signal strength. This antenna provides 5 GHz multi-band flexibility.

**2x2 Multiple Input and Multiple Output (MIMO)** gives 5 GHz Access Point Antennas the benefits of dual stream operation for most channel conditions, provides interference mitigation by selecting the best signal quality and allows for successful deployment of wireless networks in difficult environments.

**High gain directional** solution used by 5 GHz Access Point Antennas effectively focuses the main 17 dBi lobe while minimizing side-lobe leakage. This targeted transmission increases capacity over other types of antennas and decreases the interference from adjacent sources, while assuring the best signal quality for customers.

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

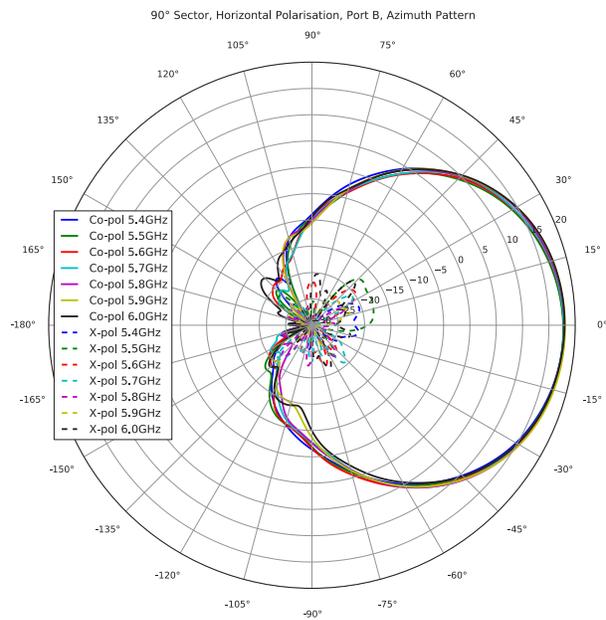
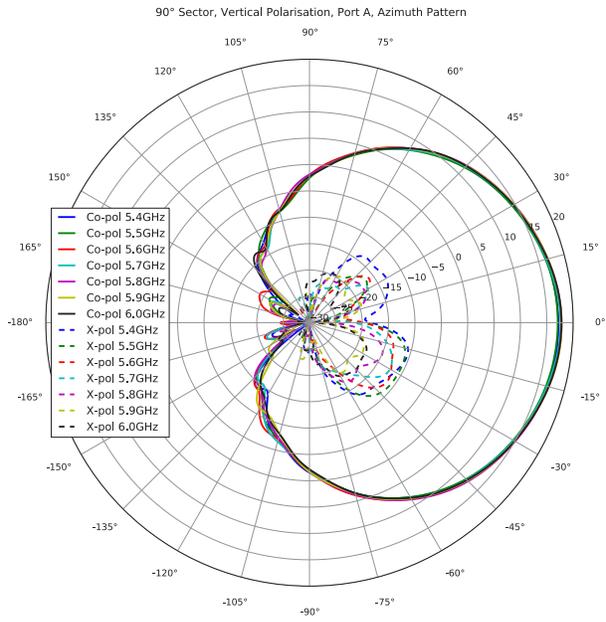
# Specifications

## SPECIFICATION SHEET: PMP 450 5 GHZ ACCESS POINT ANTENNA

SPECIFICATIONS	85009324001	85009325001
FREQUENCY RANGE	5.4-6.0 GHz	5.4-6.0 GHz
ANTENNA TYPE	Access Point Sector	Access Point Sector
GAIN	17 dBi +1 dBi /-1 dBi	17 dBi +/- 1 dBi
VSWR	1.5:1 max	1.5:1 max
PORT TO PORT ISOLATION	33 dB	30 dB
6dB BEAMWIDTH-AZIMUTH	90°	60°
3dB BEAMWIDTH-AZIMUTH	65°	45°
3dB BEAMWIDTH-ELEVATION	6°	8°
ELEVATION NULL FILL	Down to -23°	Down to -25°
1 <sup>ST</sup> NULL	-18dB min	-18dB min
2 <sup>ND</sup> NULL	-33dB min	-33dB min
3 <sup>RD</sup> NULL	-36dB min	-36dB min
AZIMUTH SIDELOBES	ETSI EN 302.326-3 SS2	ETSI EN 302.326-3 SS2
POLARIZATION	Dual Linear, Horizontal / Vertical	Dual Linear, Horizontal / Vertical
MAXIMUM INPUT POWER	30 W	30 W
INPUT IMPEDANCE	50 Ohms	50 Ohms
FRONT-TO-BACK RATIO	V-pol>32 dB, H-pol>35 dB	>35 dB
CROSS POLARIZATION	>28 dB	>25 dB
MECHANICAL SIZE (mm)	570h X 146w X 64d	468h X 146w X 64d
ANTENNA WEIGHT	2.9 kg (6.4 lb), w/o bracket kit	2.8 kg (6.2 lb), w/o bracket kit
MOUNTED ANT WEIGHT (w/ AP)	8.6 kg (19 lb)	8.4 kg (18.5 lb)
ANTENNA CONNECTOR	2 x N-Type Female, Straight	3 x Type N Female, Straight
WIND SURVIVAL	216 km/h (135 mph)	216 km/h (135 mph)
WIND LOADING (@216 km/h)	Front: 381 N (86 lbf) Side: 188 N (42 lbf)	Front: 318 N (72 lbf) Side: 160 N (36 lbf)
POLE MOUNTING HARDWARE	Quick Release, 1.5" TO 4.5" Dia. Pole	Quick Release, 1.5" TO 4.5" Dia. Pole
MECHANICAL DOWNTILT	0° TO 11°	0° TO 11°

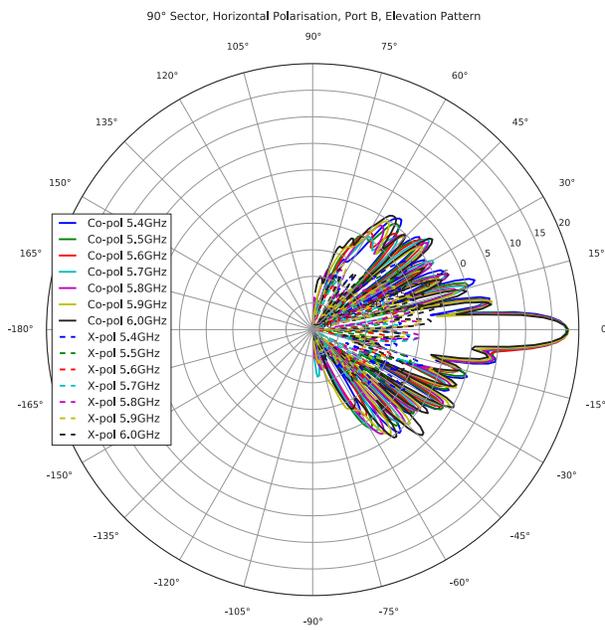
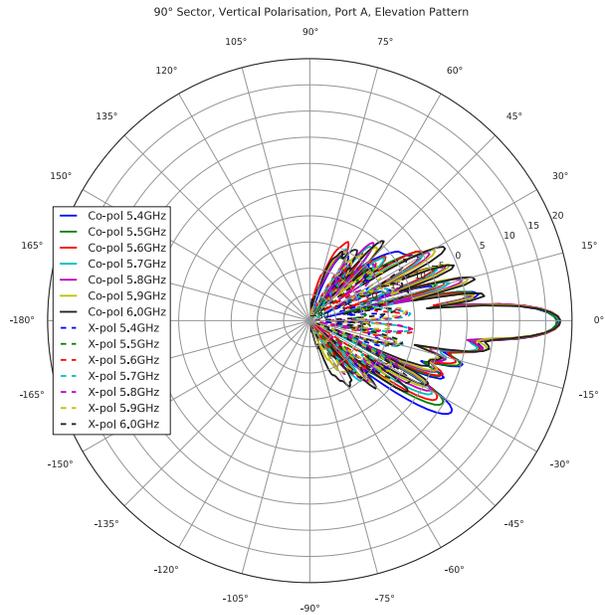
# 90 Degree Sector Antenna - 85009324001

## Azimuth Patterns



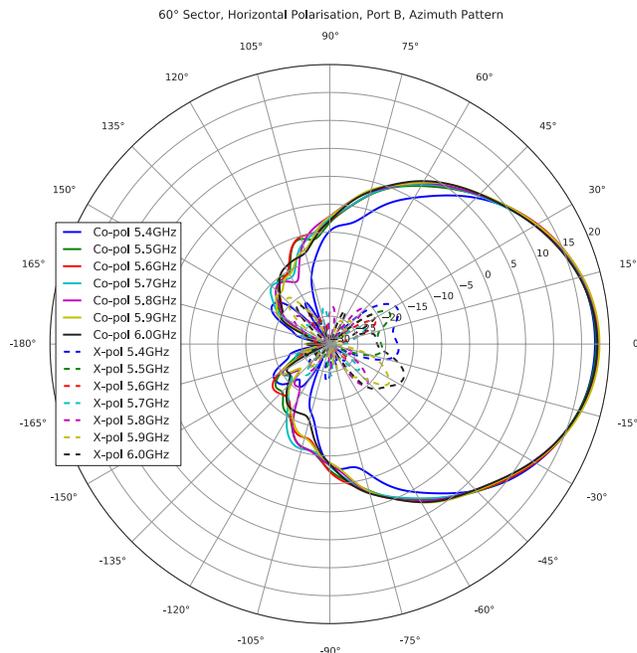
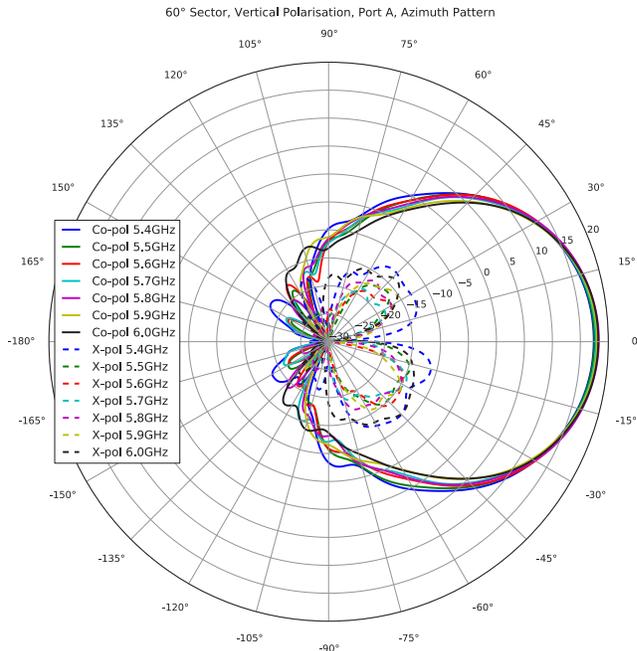
# 90 Degree Sector Antenna - 85009324001

## Elevation Patterns



# 60 Degree Sector Antenna - 85009325001

## Azimuth Patterns



# 60 Degree Sector Antenna - 85009325001

## Elevation Patterns

