PMP 450i Access Point

Cambium Networks industry-leading 450 platform includes the all new PMP 450i and PTP 450i radios. The 450i product platform is the most scalable industrial-grade wireless broadband solution available.

Key Features:

- **Ultra-wide band** radios support the entire band, whether in 5 GHz or 3 GHz. Advanced radio design improves transmit power and increases receive sensitivity.
- **Rugged metal enclosure** designed to meet IP-66 and IP-67 standards to withstand harsh environments. Optional ATEX/HAZLOC certified models available for hazardous deployments.
- **Dynamic Interference Filtering** to provide industry leading noise isolation for improved performance
- Updated FPGA and SoC architecture **triples the processing power** compared to PMP 450
- **Multifunction AUX port** allows for greater flexibility for deployment by adding a camera or other PoE directly.
- Options for **Integrated 90° sector antenna** optimized for frequency re-use (>35 dB F/B), high gain, null fill and predictable performance, or **Integrated 10° sector antenna** for highly directional sectors.
- Now capable of **up to 300 Mbps per sector** in a 40 MHz channel.

PRODUCT		RoW	US	EU	No Encryption	IC
5 GHz Model Numbers	Connectorized	C050045A001B	C050045A002B	C050045A003B	C050045A004B	C050045A015B
	Connectorized - Lite*	C050045AL01B	C050045AL02B	C050045AL03B	C050045AL04B	C050045AL15B
	Integrated 10° sector			C050045A049B		
	Integrated 90° sector	C050045A005B	C050045A006B	C050045A007B	C050045A008B	C050045A016B
	Integrated 90° sector - Lite*	C050045AL05B	C050045AL06B	C050045AL07B	C050045AL08B	C050045AL16B
3 GHz Model Numbers	Connectorized	C030045A001A	C030045A001A	C030045A001A	C030045A003A	C030045A001A
	Connectorized - Lite*	C030045AL01A	C030045AL01A	C030045AL01A	C030045AL03A	C030045AL01A
	Integrated 90° sector	C030045A001A	C030045A001A	C030045A001A	C030045A003A	C030045A001A
	Integrated 90° sector - Lite*	C030045AL02A	C030045AL02A	C030045AL02A	C030045AL04A	C030045AL02A

SPECTRUM		
Channel Spacing	Configurable on 2.5 MHz increments, 3 GHz customizable to 50 KHz	
Frequency Range	3 GHz : 3300 - 3900 MHz	5 GHz : 4900 - 5925 MHz
Channel Width	5 MHz, 7 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz or 40 MHz	5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz or 40 MHz

*Lite models limited to 20 Subscribers

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Specifications

INTERFACE

MAC (Media Access Control) Layer	Cambium Networks proprietary
Physical Layer	2x2 MIMO OFDM
Ethernet Interface	100/1000BaseT, full duplex, rate auto negotiated (802.3 compliant)
Protocols Used	IPv4, IPv6, UDP, TCP/IP, ICMP, Telnet, SNMP, HTTP, FTP
Network Management	IPv4/IPv6 (dual stack), HTTP, HTTPS, Telnet, FTP, SNMPv2c and v3, Cambium Networks cnMaestro™
MTU	1700 bytes
VLAN	802.1ad (DVLAN Q-inQ), 802.1Q with 802.1p priority, dynamic port VID

PERFORMANCE

Subscriber Per Sector	Up to 238 - *Lite models limited to 20 Subscribers, License Key (C000045K010A) available to remove this limit	
ARQ	Yes	
Modulation Levels (Adaptive)	MCS	Signal to Noise Required (SNR, in dB)
2X	QPSK	10
4X	16QAM	17
6X	64QAM	24
8X	256QAM	32
Maximum Deployment Range	Up to 40 miles (64 km)	
Latency	3 - 5 ms, typical	
GPS Synchroization	Yes, via Autosync (CMM5 or UGPS)	
Quality of Service	Diffserve QoS	

LINK BUDGET

Integrated Sector Antenna	90° Azimuth, 8° Elevation (3dB rolloff), 2° Electrical Downtilt, Dual polarity, or 10° Azimuth, 10° Elevation (3dB rolloff), Dual polarity
Antenna Gain	17 dBi ± 1 dBi integrated 90° sector, 23 dBi ± 1 dBi integrated 10° sector
Maximum Transmit Power	+28 dBm (MIMO, Combined H+V) (+25 dBm for 3 GHz) (may be limited by regulations)
Maximum EIRP	+43 dBm combined output (may be limited by regulations)

PHYSICAL		3 GHz	5 GHz
Antenna Connection		50 ohm, N-Type (Connectorized version only)	
Surge Suppression (LPU fitted)		EN61000-4-5: 1.2us/50us, 500 V voltage waveform Recommended external surge suppressor: Cambium Networks Model # C000000L033A	
Mean Time Between Failure		> 40 Years	
Environmental		IP67, IP66	
Temperature / Humidity		-40°C to +60°C (-40°F to +140°F), 0-100% condensing	
Weight	Connectorized	Approx. 2.0 kg (4.5 lbs)	Approx. 2.0 kg (4.5 lbs)
	Integrated	Approx. 7 kg (15.5 lbs)	Approx. 6.8 kg (15 lbs)
Wind Survival	Connectorized	322 km/h (200 mi/h)	322 km/h (200 mi/h)
	Integrated	322 km/h (200 mi/h)	322 km/h (200 mi/h)
Dimensions (HxWxD)	Connectorized	26.0 x 13.4 x 6.4 cm (10.3" x 5.3" x 3.3")	26.0 x 13.4 x 6.4 cm (10.3" x 5.3" x 3.3")
	90° Integrated	73.2 x 19.7 x 15 cm (28.8" x 7.8" x 5.9")	59.5 x 15.7 x 15.5 cm (23.4" x 6.2" x 6.1")
	10° Integrated		31.0 x 31.0 x 6.4 cm (12" x 12" x 2.5")
Power Consumption		15 W typical, 18 W max, 45 W max with Aux port PoE out enabled	
Input Voltage		48-59 V DC, 802.3at compatible	

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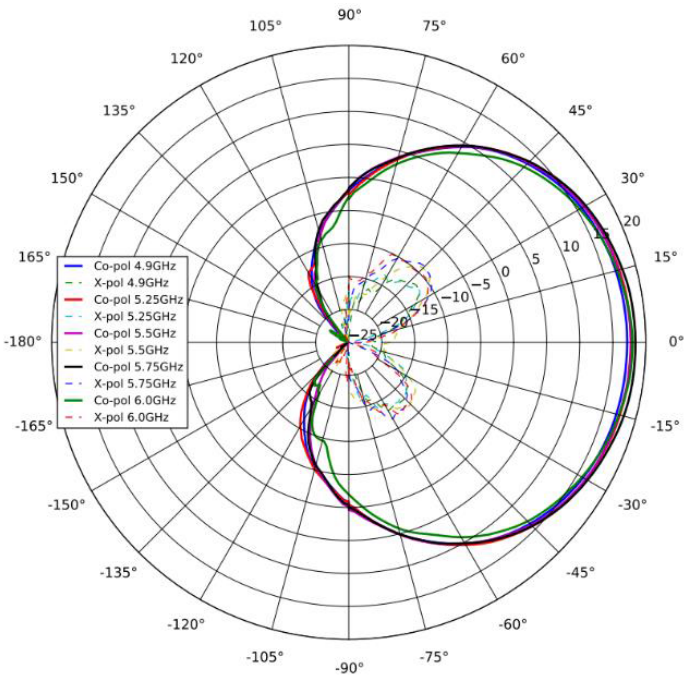
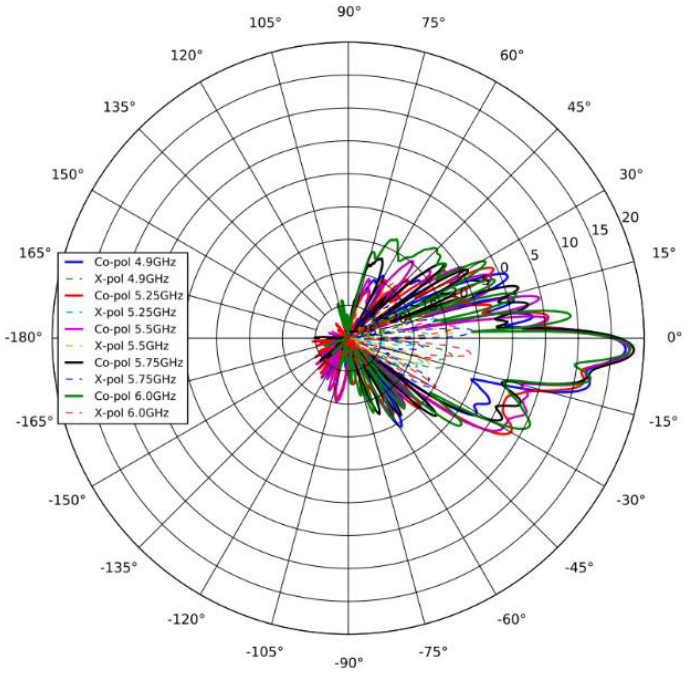
Specifications

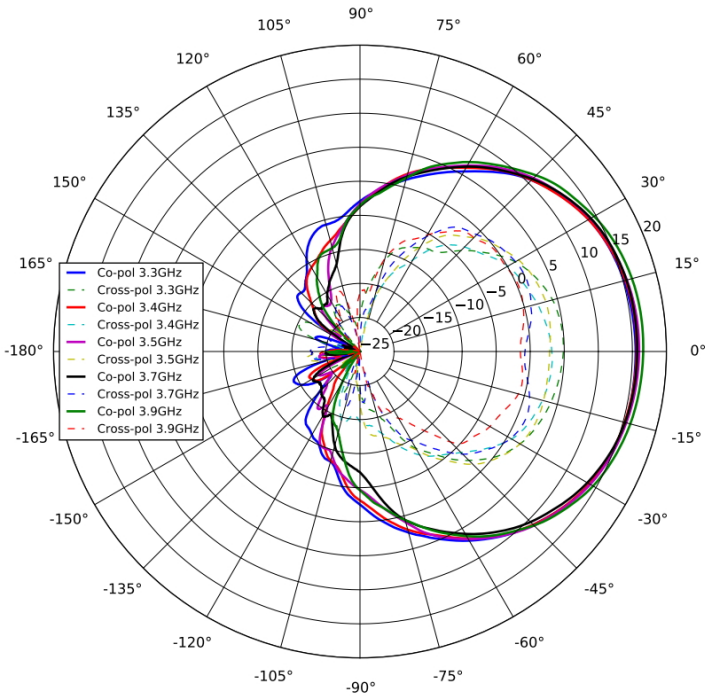
SECURITY	3 GHz	5 GHz
Encryption	FIPS-197 128-bit AES, 256-bit AES**	FIPS-197 128-bit AES, 256-bit AES**
CERTIFICATIONS		
Industry Canada	109W-0028 (3 GHz)	109AO-50450I (4.9, 5.2, 5.4, 5.8 GHz)
FCC ID	Z8H89FT0028 (3 GHz)	QWP-50450I (4.9, 5.1, 5.2, 5.4, 5.8 GHz)
CE	EN 302 326-2 v1.2.2 (3 GHz)	EN 301 893 v1.8.1 (5.4 GHz)
		EN 302 625 v1.1.1 (Broadband Disaster Relief, 4.9 GHz, 5.1 GHz)
		EN 302 502 v1.2.1 (5.8 GHz)

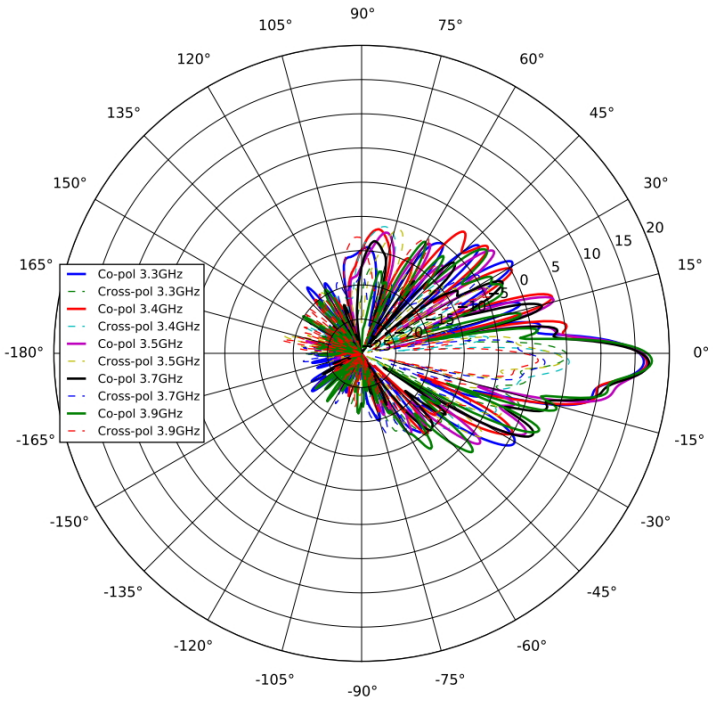
5 GHz ANTENNA PATTERN FOR 90° INTEGRATED SECTOR:





3 GHz ANTENNA PATTERN FOR 90° INTEGRATED SECTOR:





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