PMP 450 MicroPoP

Fixed Wireless Access Point

The Cambium Networks 450 platform adds another tool to more completely connect hard-to-reach subscribers with the affordable MicroPOP Access Point.

QUICK LOOK:

- **Ultra-wide band radios: 4.9 GHz to 5.925 GHz**
- **Capable of up to 300 Mbps aggregate in a 40 MHz channel**
- **Onboard GPS to provide synchronization with network**

KEY FEATURES

- Software-defined, purpose-built technology.
- Gigabit Ethernet Interface provides the maximum transfer rates to the device.
- Limited to 20 Subscribers and 2 miles range, but can be extended to 238 SMs and maximum range via license key.
- New System on a Chip (SoC) enhances Packet Processing Power more than 4x that of the original 450 hardware.
- Integrates seamlessly with existing 450 platform devices to extend coverage to obstructed or hard-to-reach areas, affordably.
- Centralized cloud management using **cnMaestro**™.
- Features fully scheduled deterministic TDD, with low and consistent latency to perform under load.
- Available with an omnidirectional or 90° sector antenna, or connectorized

PMP 450 MicroPoP Fixed Wireless Access Point

Product

	RoW	FCC	ISED	EU	No Encryption
Omni (9 dBi)	C050045A201A	C050045A202A	C050045A203A	C050045A204A	C050045A205A
Sector (13 dBi)	C050045A206A	C050045A207A	C050045A208A	C050045A209A	C050045A210A
Connectorized	C050045A211A	C050045A212A	C050045A213A	C050045A214A	C050045A215A

License Key (Global) C000045K201A

Spectrum

Channel Spacing	Configurable on 2.5 MHz increments
Frequency Range	4900 - 5925 MHz
Channel Width	5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz or 40 MHz

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

Security

Encryption	FIPS-197 128-bit AES, 256-bit AES *(Requires Optional License)*

PMP 450 MicroPoP Fixed Wireless Access Point

Performance

ARQ	Yes
Subscribers Per Sector	Up to 20 (Optional license key available to allow up to 238)

Modulation Levels (Adaptive)	MCS	Signal to Noise Required (SNR, in dB)
2x	QPSK	10
4x	16QAM	17
6x	64QAM	24
8x	256QAM	32

Ultimate Sensitivity	-94 dBm
Maximum Deployment Range	Up to 3.2 km (2 mi) - Optional license key to allow up to 64 km (40 mi)
Latency	3 - 5 ms, typical
GPS Synchronization	Yes, supported by embedded GPS module or Cambium Synch via PoE
Quality of Service	Diffserve QoS

Physical

	Omni (9 dBi)	Sector (13 dBi)	Connectorized
Surge Suppression	EN 61000-4-5: 10x700us, 4Kv, EN 61000-4-2: ESD 30kV contact / 30kV air		
Mean Time Between Failure	>40 Years	>40 Years	>40 Years
Environmental	IP67	IP67	IP67
Temperature / Humidity	-40°C to 60°C (-40°F to 140°F), 0-100% non-condensing	-40°C to 60°C (-40°F to 140°F), 0-100% condensing	-40°C to 60°C (-40°F to 140°F), 0-100% non-condensing
Weight	1.2 kg / 2.65 lbs (including mounting bracket)	2 kg / 4.41 lbs (including mounting bracket)	0.9 kg / 2 lbs (including mounting bracket)
Wind Survival	200 kph (124 mph)	200 kph (124 mph)	
Dimensions (H x W x D)	56 x 9 x 9 cm (22 x 3.5 x 3.5 in), mount standoff 11 cm (4.3 in)	31 x 17 x 10 cm (12 x 6.7 x 3.7 in), mount standoff 11 cm (4.3 in)	24 x 9 x 9 cm (9.5 x 1.5 x 3.5 in.)
Power Consumption	9W typical, 12W peak	9W typical, 12W peak	9W typical, 12W peak
Input Voltage	46-59V DC, 802.3af compatible	46-59V DC, 802.3af compatible	46-59V DC, 802.3af compatible

PMP 450 MicroPoP Fixed Wireless Access Point

Physical

	Omni (9 dBi)	Sector (13 dBi)
Integrated Antenna Peak Gain	9 dBi	13 dBi
3 dB Beamwidth - Azimuth	360°	90°
3 dB Beamwidth - Elevation	12°	10°
Polarization	Dual linear, H + V	Dual linear, H + V
Front-To-Back Isolation	N/A	>28 dB
Cross Polarization	15 dB	15 dB

Link Budget

Transmit Power Range	56 dB dynamic range (to EIRP limit by region) (1 dB step)
Maximum Transmit Power	+27 dBm (MIMO, combined V+H) (+22 dBm @ 256QAM)
Power Control	ATPC (Automatic Transmit Power Control) at system level, all Subscribers implement ATPC

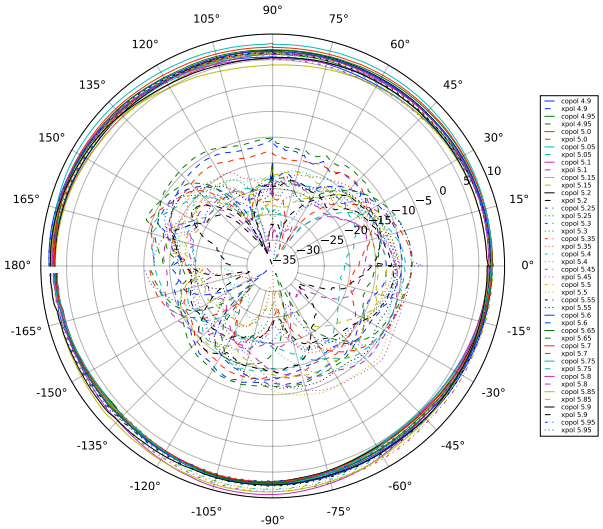
Certifications

ISED Canada	109W-0032
FCC ID	Z8H89FT0032
ETSI	EN 301 893 v2.1.1
	EN 301 502 v2.1.1

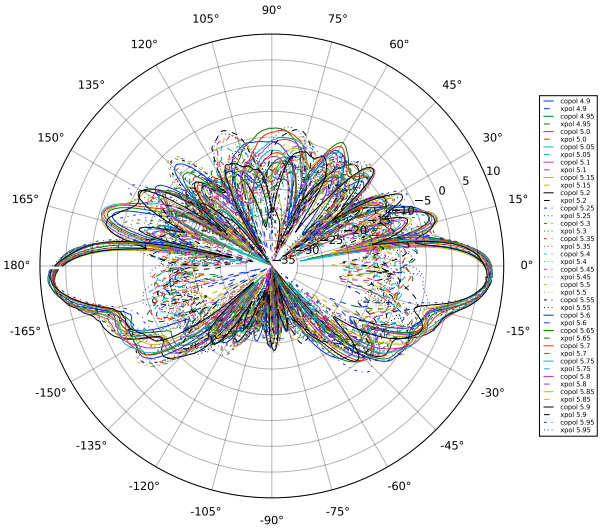
PMP 450 MicroPoP Fixed Wireless Access Point

Antenna Patterns

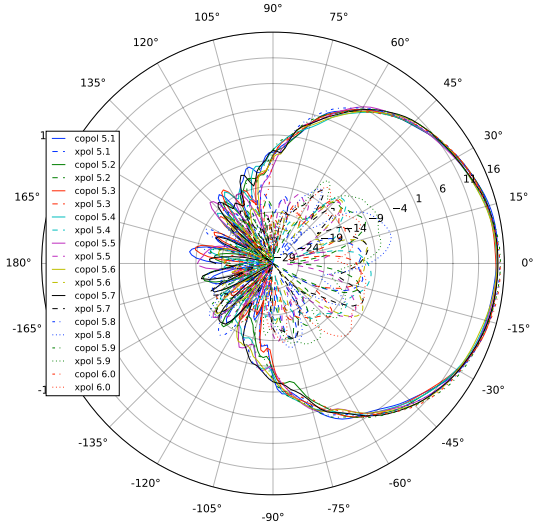
Omni Azimuth



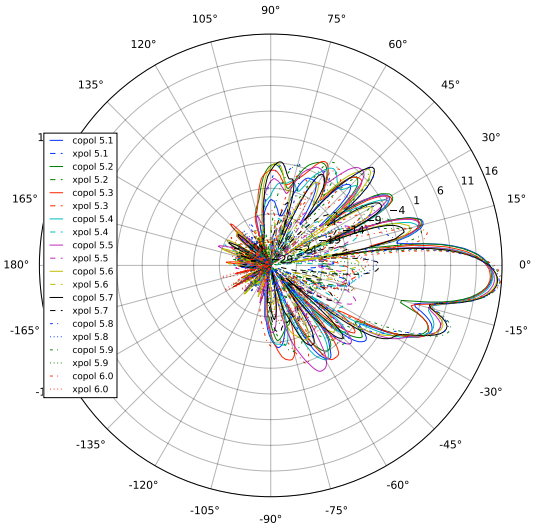
Omni Elevation



Sector Azimuth



Sector Elevation



ABOUT CAMBIUM NETWORKS

Cambium Networks empowers millions of people with wireless connectivity worldwide. Its wireless portfolio is used by commercial and government network operators as well as broadband service providers to connect people, places and things. With a single network architecture spanning fixed wireless and Wi-Fi, Cambium Networks enables operators to achieve maximum performance with minimal spectrum. End-to-end cloud management transforms networks into dynamic environments that evolve to meet changing needs with minimal physical human intervention. Cambium Networks empowers a growing ecosystem of partners who design and deliver gigabit wireless solutions that just work.

CambiumNetworks.com

03082021