3 GHz PMP 450m Access Point

Subscriber and Backhaul

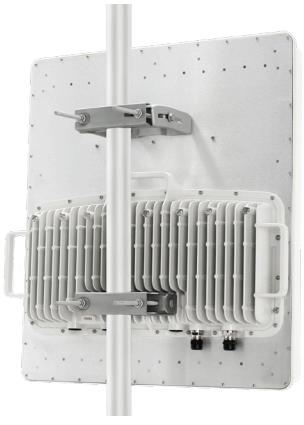
QUICK LOOK:

Cambium Networks industry-leading 450 platform adds Massive Multi-User MIMO capability with cnMedusa™ technology.

- **Throughput of over 450 Mbps in a 20 MHz channel; More than 800 Mbps in a 40 MHz channel**
- **MU-MIMO with spectral efficiency of more than 50 bps/Hz**
- **Features smart beamforming to reduce interference**

KEY FEATURES

- **cnMedusa**™ technology enhances sector capacity by combining a smart beamforming antenna array with multiple RF transmit and receive chains, effectively multiplying available capacity by more than three times.
- Protect your investment in the 450 platform equipment by continuing to utilize existing Subscriber Modules (all 450 platform subscribers work with the 450m and cnMedusa technology, including prior generation 430 modules)
- SFP port allows for greater deployment flexibility, and AUX port allows for connection of camera or other PoE directly.
- The Limited Version can reduce capital investment until additional capacity is actually required. A 30-day trial of MU-MIMO operation is included, and a simple license key can permanently enable MU-MIMO operation when needed.



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Product Model Numbers

	Global	No Encryption
Integrated 90° Sector	C030045A101A	C030045A104A
Limited Version	C030045A111A	C030045A114A

Spectrum

Channel Spacing	Customizable channel selection to 50 KHz raster
Frequency Range	3300 - 3900 MHz
Channel Width	5, 10, 15, 20, 30 and 40 MHz

Specifications

Interface

MAC (Media Access Control) Layer	Cambium Networks proprietary
Physical Layer	8 x 8 Multi-User MIMO OFDM
Ethernet Interface	100/1000BaseT, full duplex, rate auto negotiated (802.3 compliant), SFP support for 1 Gbps optical
Protocols Used	IPv4, UDP, TCP, IP, ICMP, Telnet, SNMP, HTTP, FTP
Network Management	IPv4/IPv6 (dual stack), HTTP, HTTPS, Telnet, FTP, SNMPv2c and v3, Cambium Networks cnMaestroTM
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 for attached Access Point)*

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Performance

Subscribers Per Sector	Up to 238
ARQ	Yes

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

Ultimate Sensitivity	-94 dBm
Maximum Deployment Range	Up to 64 km (40 miles)
Latency	10 ms, typical
GPS Synchronization	Yes, via Autosync (CMM5 or UGPS)
Quality of Service	Diffserve QoS

Antenna

Beam width - Azimuth	90° integrated sector (dual polarity, H+V, 3dB rolloff), 120° (6dB rolloff)
Beam width - Elevation	2° Electrical Downtilt, 8° Elevation Beamwidth and Null Fill down to -30°
Maximum EIRP	+52 dBm (or up to maximum allowed by regulation) - achieved by combining 16 dBi Antenna Gain and +36 dBm Max Tx Power

Physical

Antenna Connection	Integrated Sector Array
Surge Suppression (with LPU)	**MAIN and AUX ports:** EN61000-4-5: 10/700us, 4 kV voltage waveform, Recommended external surge suppressor: Model # C000065L007B **DC IN port:** EN61000-4-5: 10/700us, 4 kV voltage waveform, Recommended external surge suppressor: Model # C000000L114A
Mean Time Between Failure	> 40 years
Environmental	IP67, IP66
Temperature / Humidity	-40°C to 60°C (-40°F to 140°F), 100% non-condensing
Weight	Without Mounting Brackets: 20.4 kg (45 lbs) With Mounting Brackets: 22.6 kg (49.8 lbs)
Wind Survival	200 kph (124 mph)
Wind Loading - Front Facing	@144 kph / 90 mph: 613 N @177 kph / 110 mph: 927 N @200 kph / 124 mph: 1183 N
Dimensions (Diameter x Depth)	69 x 61 x 17.5 cm (27.2” x 24” x 7”)
Power Consumption	140 W typical, 150 W peak (up to 180 W max with AUX port PoE enabled)
Input Voltage	40 - 60 VDC
Mounting	Pole mount with included brackets (1.25” to 4” pole diameter)

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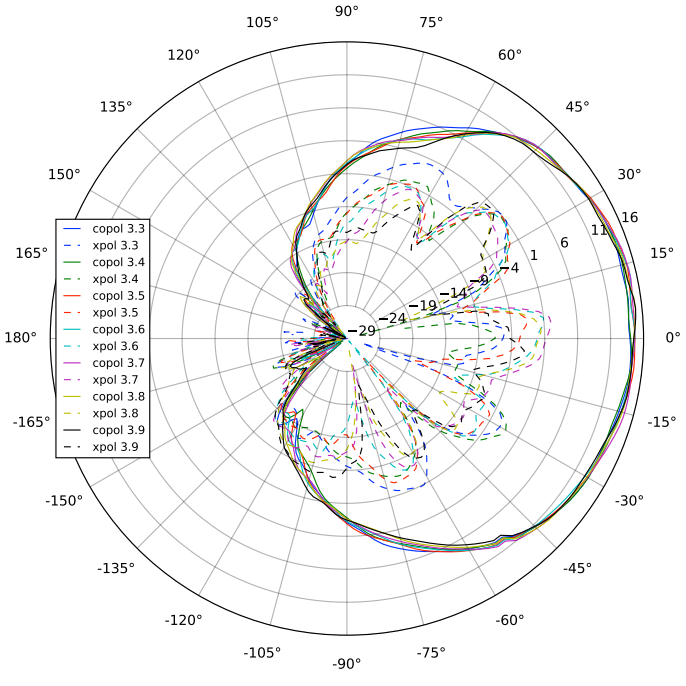
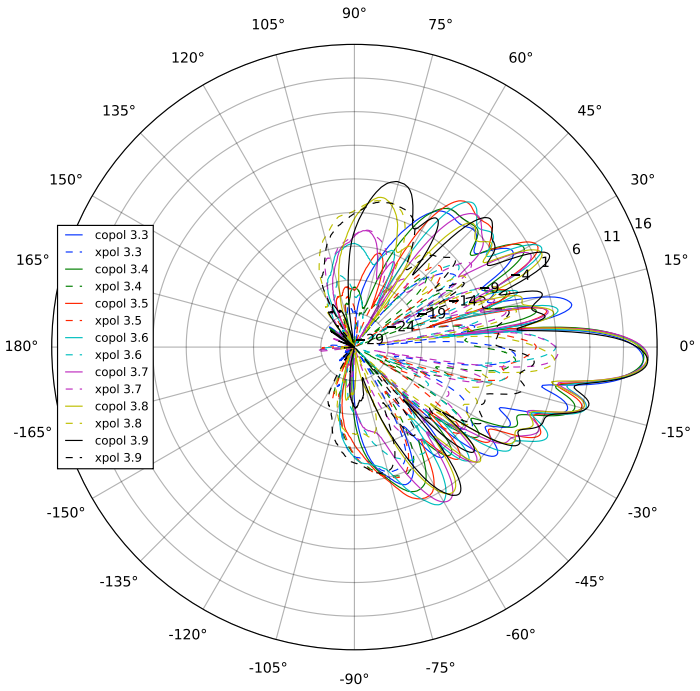
Certifications

ISED Canada	109A0-30450M (3 GHz)
FCC ID	QWP-30450M (3 GHz)
CE	EN 302 326-2 v1.2.2 (3 GHz)

3 GHz 450m Antenna Patterns (Sector Mode)



3 GHz Azimuth



3 GHz 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.

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