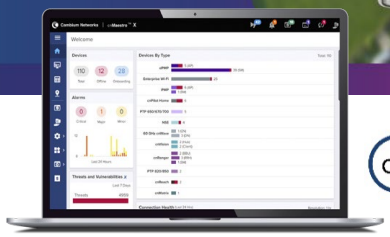
PMP 450i Fixed Wireless Backhaul

PMP 450i Backhaul Quick Look

- Most scalable, industrial-grade wireless broadband solution available
- Ultra-wide-band radios: 5 GHz or 3 GHz
- Rugged metal enclosure
- 2x2 OFDM MIMO radio capable of up to 300 Mbps per sector





cnMaestro

Ultra-Wide-Band Radios

Supports the entire band, whether 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.

Dynamic Interference Filtering

Provides 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.

Increased Throughput

Now capable of up to 300 Mbps per sector in a 40 MHz channel.

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Product

		ROW	US	EU	No Encryption	ISED
5 GHz Models	Connectorized	C050045B001C	C050045B003C	C050045B005C	C050045B007C	C050045B015C
	Integrated	C050045B002C	C050045B004C	C050045B006C	C050045B008C	C050045B016C
3 GHz Models	Connectorized	C030045B001B	C030045B001B	–	C030045B003B	C030045B001B
	Integrated	C030045B002B	C030045B002B	–	C030045B004B	C030045B002B

Spectrum

Channel Spacing	3 GHz: Customizable to 50 KHz	5 GHz: Configurable on 2.5 MHz increments
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

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	1,700 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)

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Performance

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 200 km (124 mi) depending on configuration
Latency	3–5 ms, typical
GPS Synchronization	Yes, via AutoSync (UGPS, CMM4, or CMM5)
Quality of Service	Diffserve QoS

Physical

Antenna Connection	50 ohm, N-type (connectorized version only)	
Surge Suppression (LPU Fitted)	EN61000-4-5: 1.2us/50us, 500V voltage waveform Recommended external surge suppressor: Cambium model C000000L033A	
Mean Time Between Failure	>40 Years	
Dust and Water Ingress Protection Rating	IP67, IP66	
Temperature/ Humidity	-40°C to +75°C (-40°F to +167°F), 0–100% condensing	
Weight	**Connectorized**	≈2.0 kg (4.5 lb)
	Integrated	≈2.5 kg (5.5 lb)
Wind Survival	322 km/h (200 mph)	
Vibration	NEMA TS2 Section 2.1.9 and Section 2.2.3	
Shock	NEMA TS2 Section 2.1.10 and Section 2.2.4	
External Icing	NEMA 250-2003 Section 5.6	
Dimensions (H x W x D)	**Connectorized**	26.0 x 13.4 x 6.4 cm (10.3 x 5.25 x 3.25 in)
	Integrated	31.0 x 31.0 x 6.4 cm (12 x 12 x 2.5 in)
Power Consumption	15W typical, 18W max, using aux port PoE for another device will increase power draw	
Input Voltage	48-59V DC, 802.3at compatible	
Mounting	Wall or pole mount with Cambium model N000045L002A	

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Link Budget

	3 GHz	5 GHz
Antenna Beam Width	17° azimuth for integrated antenna	10° azimuth for integrated antenna
Antenna Gain	+19 dBi dual slant integrated, or external	+23 dBi H+V integrated, or external
Maximum Transmit Power	+25 dBm (MIMO, combined H+V)	+28 dBm (MIMO, combined H+V) (may be limited by regulations)
Maximum EIRP	+43 dBm combined output (may be limited by regulations)	+50 dBm combined output (may be limited by regulations)
VSWR	1.5, reflection coefficient 0.2, reflected power 4%, return loss 14 dB	
Power Control	ATPC (automatic transmit power control) at system level, Backhaul slave implements ATPC (future software release)	

Certifications

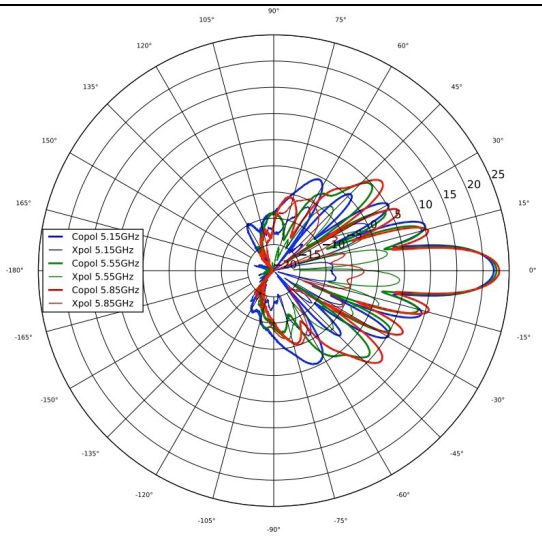
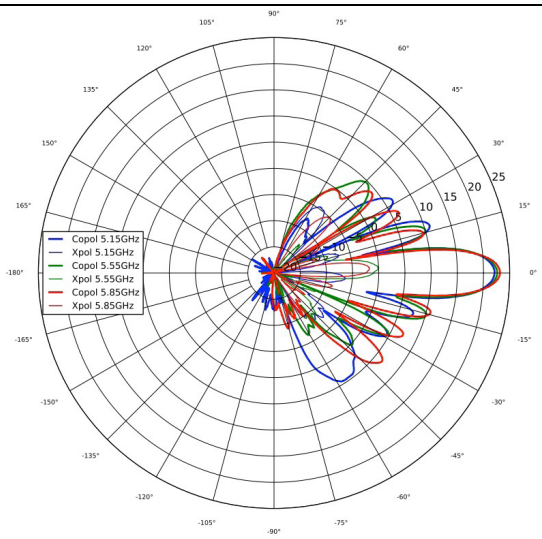
	3 GHz	5 GHz
ISED Canada	109W-0028	109AO-50450I
FCC ID	Z8H89FT0028	QWP-50450I
CE	EN 302 326-2 v1.2.2	EN 301 893 v2.1.1 EN 302 502 v2.1.1

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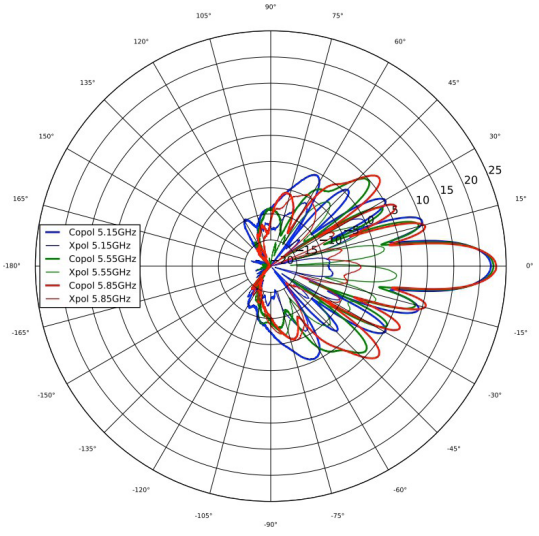
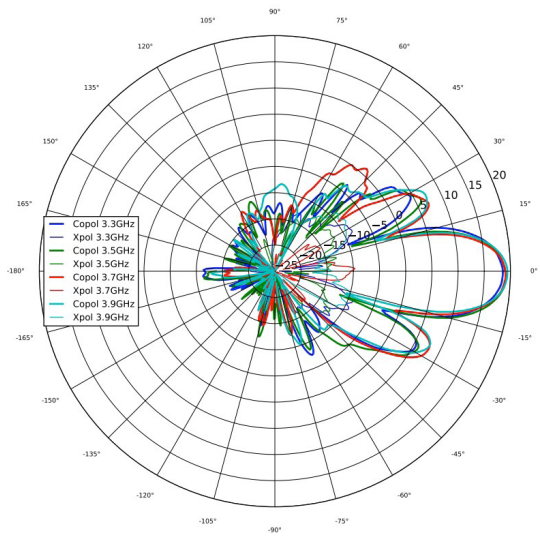
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5 GHz Antenna Patterns for Integrated PTP 450i

5 GHz Azimuth	5 GHz Elevation
	

3 GHz Antenna Patterns for Integrated PTP 450i

3 GHz Azimuth	3 GHz Elevation
	

ABOUT CAMBIUM NETWORKS

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences and device connectivity with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

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