PMP 450m Access Point

Cambium Networks industry-leading 450 platform adds Multi-User MIMO capability with *cn*Medusa™ technology.

Key Features:

- *cn*Medusa™ 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.

- Multi-User MIMO more effectively uses available spectrum by simultaneous transmissions to multiple subscribers, increasing spectral efficiency to more than 40 bps/Hz.

- Protect your investment in the 450 platform equipment by continuing to utilize existing Subscriber Modules (both 450 and 450i SMs work with the 450m and cnMedusa technology).

- Dramatically reduce the effect of interference with smart beamforming

- SFP port allows for greater deployment flexibility, and AUX port allows for connection of camera or other PoE directly.

PRODUCT

		RoW	US	EU	DES only	IC
Model Numbers	Integrated 90 degree sector	C050045A101A	C050045A102A	C050045A103A	C050045A104A	C050045A105A

SPECTRUM

Channel Spacing	Configurable to 2.5 MHz channel spacing
Frequency Range	5150-5925 MHz
Channel Width	10 MHz*, 20 MHz, and 40 MHz*

Specifications

INTERFACE

MAC (Media Access Control) Layer	Cambium Networks proprietary
Physical Layer	14x14 Multi-User MIMO OFDM
Ethernet Interface	100/1000BaseT, full duplex, rate auto negotiated (802.3 compliant)
Protocols Used	IPv4, UDP, TCP, IP, ICMP, Telnet, SNMP, HTTP, FTP
Network Management	HTTP, HTTPS, Telnet, FTP, SNMP v3
VLAN	802.1ad (DVLAN Q-inQ), 802.1Q with 802.1p priority, dynamic port VID

PERFORMANCE

Subscriber Per Sector	Up to 238	
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	10 ms, typical	
GPS Synchronization	Yes, via Autosync (CMM5 or UGPS)	
Quality of Service	Diffserv QoS	

LINK BUDGET

Antenna Beam Width	90° integrated sector (dual polarity, H+V)
Antenna Gain	+14 dBi
Maximum Transmit Power	+24 dBm combined

PHYSICAL

Antenna Connection	Integrated Sector Array	
Surge Suppression (with LPU)	EN61000-4-5: 1.2us/50us, 500 V voltage waveform Recommended external surge suppressor: Cambium Networks Model # C000065L007A	
Mean Time Between Failure	> 40 Years	
Environmental	IP67, IP66	
Temperature / Humidity	-40°C to +60°C (-40°F to +140°F), 0-95% non-condensing	
Weight	Integrated	Approx. 14.2 kg (31 bs)
Wind Loading - Front Facing	@ 90 mph / 144 kph	460 N
	@ 110 mph / 177 kph	700 N
Dimensions (HxWxD)	Integrated	52 x 65 x 11 cm (20.3" x 25.7" x 4.4")
Power Consumption	70 W typical, 80 W peak (up to 110 W max with AUX port PoE enabled)	
Input Voltage	42.5-59 V DC	
Mounting	Pole mount with included brackets	

SECURITY

Encryption	56-bit DES, FIPS-197 128-bit AES

CERTIFICATIONS

Industry Canada (ISEDC)	5.1*, 5.2*, 5.4*, 5.8 GHz
FCC ID	5.1*, 5.2*, 5.4*, 5.8 GHz
CE	EN 301 893 v1.8.1 (5.4GHz)
	EN 302 502 v1.2.1 (5.8 GHz)

* Indicates Future Software Release

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