

PMP 450i Subscriber Module

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



PRODUCT	3 GHz		5 GHz	
Model Numbers	Connectorized	C030045C001A	Connectorized	C050045C001B
	Integrated	C030045C002A	Integrated	C050045C002C

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

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), 80 2.1Q with 802.1p priority, dynamic port VID

PERFORMANCE

ARQ	Yes
Modulation Levels (Adaptive)	MCS
2X	QPSK
4X	16QAM
6X	64QAM
8X	256QAM
Maximum Deployment Range	Up to 40 miles (64 km)
Latency	3 - 5 ms, typical
GPS Synchronization	Yes, via Autosync (CMM3, CMM4)
Quality of Service	Diffserve QoS

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)
Power Control	ATPC (Automatic Transmit Power Control) at system level, all Subscribers implement ATPC	

PHYSICAL

Antenna Connection	50 ohm, N-Type (Connectorized version only)		
Surge Suppression	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	IP66, IP67		
Temperature / Humidity	-40°C to +75°C (-40°F to +167°F), 0- 100% condensing		
Weight	Connectorized	Approx. 2.0 kg (4.5 lbs)	
	Integrated	Approx. 2.5 kg (5.5 lbs)	
Wind Survival	Connectorized	322 km/h (200 mi/h)	Integrated 200 km/h (124 mi/h)
Dimensions (HxWxD)	Connectorized	26.0 x 13.4 x 6.4 cm (10.3" x 5.3" x 3.3")	
	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 compliant		
Mounting	Wall or Pole mount with Cambium Networks Model # N000045L002A		

SECURITY

Encryption	FIPS-197 128-bit AES , 256-bit AES*		
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Certifications

3 GHz

5 GHz

Industry Canada	109W-0028 (3 GHz)	109A0-50450I (4.9, 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)