



# PMP 450b Subscriber Module

Cambium Networks PMP 450 platform increases performance with the addition of the PMP 450b Subscriber Module.

## KEY FEATURES:

- **Ultra-wide band** radios support the entire band, from 4.9 to 5.925 GHz.
- **Gigabit Ethernet Interface** provides the maximum transfer rates to the device.
- **3.5 mm audio jack** allows direct connection of headphones without any adapters.
- New System on a Chip (SoC) enhances **Packet Processing Power** more than 4x that of the 450 SM.
- Capable of **>250 Mbps** aggregate in a 40 MHz channel.



## SPECIFICATIONS

PRODUCT	MID-GAIN (17 dBi)	HIGH GAIN (25 dBi)
Model Numbers	C050045C011A	C050045H012A (4-pack)
<b>SPECTRUM</b>		
Channel Spacing	Configurable on 0.5 MHz increments	
Frequency Range	4900 - 5925 MHz	
Channel Width	5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz, or 40 MHz	
<b>INTERFACE</b>		
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, UDP, TCP, IP, ICMP, Telnet, SNMP, HTTP, FTP	
Network Management	HTTP, HTTPS, Telnet, FTP, SNMP v2 and v3	
VLAN	802.1ad (DVLAN Q-in-Q), 802.1Q with 802.1p priority, dynamic port VID	
<b>SECURITY</b>		
Encryption	56-bit DES, FIPS-197 128-bit AES	

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<b>PERFORMANCE</b>		
PPS	45,000	
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 40 miles (64 km)	
Latency	3 - 5 ms, typical	
GPS Synchronization	Yes, synchronized by Access Point	
Quality of Service	Diffserve QoS	
<b>LINK BUDGET</b>		
Transmit Power Range	22 dB dynamic range (to EIRP limit by region) (1 dB step)	
Maximum Transmit Power	+27 dBm combined output (+24 dBm @ 256QAM)	
<b>ANTENNA</b>		
Integrated Antenna Peak Gain	17 dBi	25 dBi
3 dB Beamwidth - Azimuth	15°	7°
3 dB Beamwidth - Elevation	30°	7°
Polarization	Dual linear, H + V	Dual linear, H + V
Front-To-Back Isolation	>20 dB	>25 dB
Cross Polarization	15 dB	15 dB
<b>PHYSICAL</b>		
Antenna Connection	N/A	
Surge Suppression	EN61000-4-5: 1.2us/50us, 500 V voltage waveform	
Mean Time Between Failure	> 40 Years	
Environmental	IP 55	
Temperature / Humidity	-40°C to +60°C (-40°F to +140°F), 0-95% non-condensing	
Weight	0.6 kg (1.4 lb.) (includes mounting bracket)*	2.3 kg (5 lb.) (includes mounting bracket)*
Wind Survival	190 km/hour (118 mi/hour)*	190 km/hour (118 mi/hour)*
Dimensions (HxWxD) (including mount)	12.5 x 24.8 x 12 cm (4.9" x 9.8" x 4.7")	47 cm diameter x 28 cm (18.5" diameter x 11.2")*
Pole Diameter Range (w/ included mount)	2.5 to 4.1 cm (1" to 1.6") with included clamp Up to 5.7 cm (2.25") with larger clamp	6.4 - 7.6 cm (2.5" to 3")
Power Consumption	9 W nominal, 12 W peak	9 W nominal, 12 W peak
Input Voltage	20 - 32 V DC	20 - 32 V DC
<b>CERTIFICATIONS</b>		
Industry Canada	TBD	TBD
FCC ID	TBD	TBD
ETSI	EN 301 893 v1.8.1	EN 301 893 v1.8.1
	EN 302 502 v1.2.1	EN 302 502 v1.2.1

\*Final values TBD, and subject to change

# C050045C011A (MID-GAIN) ANTENNA PATTERNS

