ePMP™ 3000L Access Point

Cambium Networks' ePMP product line has set the standard for high performance, scalability and reliability in harsh interference environments all at a compelling price. The ePMP 3000L is the third generation access point (AP) that carries on the interference tolerance mechanisms with an emphasis on high-performance in low-density point to multipoint sectors. The ePMP 3000L is a 2X2 MIMO connectorized access point that can support a wide variety of deployments including 90/120 degree sectors, narrow-sector horns or even 360 degree omni coverage. In addition, the ePMP 3000L continues interference mitigation techniques with support of TDD synchronization using GPS and the robust software from the ePMP product line. The ePMP 3000L AP system consists of the ePMP 3000L AP, an optional 2X2 sector antenna and a wide variety of subscriber modules with varying form factors and link budgets.

The ePMP 3000L system boasts high packet per second performance, peak throughput of 600 Mbps and supports subscriber modules with up to 600 Mbps of peak throughput.

KEY ADVANTAGES:

- **MicroPOP Applications:** ePMP 3000L is ideally suited for areas with low density or small numbers of subscribers. With support for narrow-band sectors and omnis, coverage can be added exactly where needed.
- **Frequency Reuse:** Supports GPS synchronization and SM Transmit power control to allow for frequency re-use.
- **Unmatched Performance and Scalability:** With the efficient Cambium Networks MAC protocol and advanced air-fairness scheduler the ePMP 3000L supports high performance and low consistent latency to subscribers.

KEY SPECIFICATIONS:

- 2X2 MIMO support with peak throughput of 600 Mbps
- 256QAM-5/6, 80 MHz support
- Supports a wide frequency range: 4910 to 5950 MHz
- Frequency re-use with GPS sync and interference mitigation
- Supports up to 64 subscriber modules
- Connectorized for use with Cambium Networks 90/120 degree sector antenna. Also compatible with RF Elements Twistport(tm) Adaptor for ePMP
- Cloud or on-premises network management with cnMaestro

SPECIFICATIONS

PRODUCT	
Model/Part #	See table below for full set of Model and Part Numbers
SPECTRUM	
Channel Spacing	Configurable on 5 MHz increments
Frequency Range	4910 - 5970 MHz (exact frequencies as allowed by local regulations))
Channel Width	20 | 40 | 80 MHz
INTERFACE	
MAC (Media Access Control) Layer	Cambium Proprietary
Physical Layer	2X2 MIMO/OFDM
Ethernet Interfaced	100/1000BaseT, rate auto negotiated
Powering Methods Supported	29 V Cambium POE (included)
Protocols Used	IPv4/IPV6 , UDP, TCP, IP, ICMP, SNMPv2c, HTTPS, STP, SSH, IGMP Snooping
Network Management	HTTPS, SNMPv2c, SSH
VLAN	802.1Q with 802.1p priority
PERFORMANCE	
ARQ	Yes
Nominal Receive Sensitivity (w/FEC) @20 MHz Channel	MCS0 = -89 dBm to MCS8 (256 QAM-3/4) = -66 dBm (per chain)
Nominal Receive Sensitivity (w/FEC) @40 MHz Channel	MCS0 = -87 dBm to MCS9 (256QAM-5/6) = -64 dBm (per chain)
Nominal Receive Sensitivity (w/FEC) @80 MHz Channel	MCS0 = -84 dBm to MCS9 (256QAM-5/6) = -59 dBm (per chain)
Modulation Levels (Adaptive)	MCS0 (BPSK) to MCS 9 (256 QAM 5/6)
GPS Synchronization	Yes, via Internal GPS Connector for optional external GPS antenna (Model N000900L030A)
Quality of Service	Three level priority (Voice, High, Low) with packet classification by DSCP, COS, VLAN ID, IP & MAC Address, Broadcast, Multicast and Station Priority, MIR/CIR support
LINK BUDGET	
Antenna	90/120 Degree 2X2 Sector Antenna (C050900D021B) Available
Transmit Power Range	0 to +29 dBm (combined, to regional EIRP limit) (1 dB interval)
PHYSICAL	
Sector Antenna Connection	2 x 50 ohm, RP (Reverse Polarity) SMA Also compatible with RF Elements Twistport™ Adaptor for ePMP
GPS Antenna Connection	1 x 50 ohm, RP (Reverse Polarity) SMA; Optional external GPS Puck Antenna avaialble model N000900L030A
Surge Suppression	1 Joule Integrated. C000000L065A - 30V Gigabit surge suppressor recommended for optimal surge protection
Environmental	IP67 and IP68 Compliant
Temperature	-22°F to +140°F (-30°C to +60°C)
Power Consumption	12 Watts (Up to 15 Watts in extreme cold temperatures when heater is activated.)
Input Voltage	30 Volts Nominal (14V to 30V Range) (note that 14V minimum must be maintained at radio connector under all conditions including long cable lengths)
Weight	0.5 kg (1.1 lbs.) without bracket
Dimensions	84 x 223 x 32 mm (3.3 x 8.8 x 1.3 inches) without brackets

SPECIFICATIONS

SECURITY	
Encryption	128 bit AES (CCMP mode)
CERTIFICATIONS	
FCCID	Z8H-89FT0047
INDUSTRY CANADA	109W-0047
CE	EN 301 893 V2.1.1 (5.4 GHz), EN 302 502 V2.1.1 (5.8 GHz)

TABLE OF PART NUMBERS

PART NUMBER	DESCRIPTION
C058910A122A	ePMP 3000L 5 GHz Access Point Radio (FCC) (US cord)
C050910A124A	ePMP 3000L 5 GHz Access Point Radio (IC) (Canada/US cord)
C050910A223A	ePMP 3000L 5 GHz Access Point Radio (EU) (EU cord)
C050910A323A	ePMP 3000L 5 GHz Access Point Radio (EU) (UK cord)
C050910A021A	ePMP 3000L 5 GHz Access Point Radio (ROW) (no cord)
C050910A121A	ePMP 3000L 5 GHz Access Point Radio (ROW) (US cord)
C050910A221A	ePMP 3000L 5 GHz Access Point Radio (ROW) (EU cord)
C050910A321A	ePMP 3000L 5 GHz Access Point Radio (ROW) (UK cord)
C050910A421A	ePMP 3000L 5 GHz Access Point Radio (ROW) (India cord)
C050910A422A	ePMP 3000L 5 GHz Access Point Radio (India) (India Cord)
C050910A521A	ePMP 3000L 5 GHz Access Point Radio (ROW) (China cord)
C050910A621A	ePMP 3000L 5 GHz Access Point Radio (ROW) (Brazil cord)
C050910A721A	ePMP 3000L 5 GHz Access Point Radio (ROW) (Argentina cord)
C050910A821A	ePMP 3000L 5 GHz Access Point Radio (ROW) (ANZ cord)
C050910A921A	ePMP 3000L 5 GHz Access Point Radio (ROW) (South Africa cord)
C050910AZ21A	ePMP 3000L 5 GHz Access Point Radio (ROW) (No PSU)

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