

# ePMP™ MP 3000 MicroPOP Access Point



The ePMP™ MP 3000 is Cambium Networks' MicroPOP solution for WISP's and Enterprise network operators. The MicroPOP MP3000, part of the ePMP portfolio, solves the need for injecting additional capacity where it is needed most as well as extending network coverage in a cost-effective, light-weight manner. For example, a WISP can expand coverage to a new sub-division or area of a village that wasn't previously reachable by the core ePMP network. Additionally, a WISP or enterprise operator may need to inject additional capacity to a small campus or enclave of buildings. The MP 3000 along with ePMP Subscriber Modules can also serve as a distribution network for wi-fi access points.

The MicroPOP MP 3000 is based on 802.11ac Wave 2 technology and can interoperate with any combination of up to 64 of the ePMP Force 300 series of subscriber modules (including Force 300-13, -13L, -16, -19, -19R and -25) as well as the Force 180/190/200 with backwards compatibility. Capacities of up to 600 Mbps are achievable with a range typically of one mile or 1.5 kilometers. The MP 3000 features an integrated omni antenna in a ruggedized IP67 enclosure.

## MicroPOP APPLICATIONS:

- **Extend Coverage Areas:** deploy the MP 3000 in places unreachable by the main tower or to add adjacent coverage for new subscribers with lower overall density
- **Inject New Capacity:** deploy the MP 3000 to a set of customers demanding especially high capacity services
- **Backhaul for Outdoor Wi-Fi Access Points:** deploy the MP 3000 and ePMP Subscriber modules to create a hub-and-spoke backhaul for multiple wi-fi access points.

## 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
- Supports up to 64 subscriber modules
- Integrated 9 dBi Dual-Polarity Omni-directional antenna
- Cloud or on-premises network management with cnMaestro

NOTE: the MP 3000 does not support GPS synchronization and does not have an integrated real-time spectrum analyzer.

## SPECIFICATIONS

**PRODUCT**

Model/Part #	See table below for full set of Model and Part Numbers
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**SPECTRUM**

Channel Spacing	Configurable on 5 MHz increments
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Frequency Range	5150 - 5875 MHz
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Channel Width	20   40   80 MHz
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**INTERFACE**

MAC (Media Access Control) Layer	Cambium Proprietary
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Physical Layer	2X2 MIMO/OFDM
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Ethernet Interfaced	100/1000BaseT, rate auto negotiated
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Powering Methods Supported	802.3af or 802.3at Powered Device; 56VDC Passive PoE Injector (included)
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Protocols Used	IPv4/IPv6, UDP, TCP, IP, ICMP, SNMPv2c, HTTPS, STP, SSH, IGMP Snooping
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Network Management	HTTPS, SNMPv2c, SSH
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VLAN	802.1Q with 802.1p priority
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**PERFORMANCE**

ARQ	Yes
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Nominal Receive Sensitivity (w/FEC) @20 MHz Channel	MCS0 = -89 dBm to MCS8 (256 QAM-3/4) = -66 dBm (per chain)
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Nominal Receive Sensitivity (w/FEC) @40 MHz Channel	MCS0 = -87 dBm to MCS9 (256QAM-5/6) = -64 dBm (per chain)
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Nominal Receive Sensitivity (w/FEC) @80 MHz Channel	MCS0 = -84 dBm to MCS9 (256QAM-5/6) = -59 dBm (per chain)
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Modulation Levels (Adaptive)	MCS0 (BPSK) to MCS 9 (256 QAM 5/6)
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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* (CIR Support in future release)
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**LINK BUDGET**

Antenna	Integrated dual-polarity 9 dBi omni-directional antenna
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Transmit Power Range	0 to +29 dBm (combined, to regional EIRP limit) (1 dB interval)
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**PHYSICAL**

Surge Suppression	1 Joule Integrated. C000000L033A 56v Gigabit surge suppressor recommended for optimal surge protection.
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Environmental	IP67
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Temperature	-40F to +149F (-40C to +65C)
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Power Consumption	13 Watts (Up to 15 Watts in extreme cold temperatures when heater is activated.)
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Input Voltage	56 Volts Nominal (input range 41 to 59V)
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Weight	.98 kg (2.15 lbs.) without bracket
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Dimensions	73 x 289 x 210 mm (2.9 x 11.4 x 8.3 inches) without brackets
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## SPECIFICATIONS

**SECURITY**

Encryption	128 bit AES (CCMP mode)
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**CERTIFICATIONS**

FCCID	Z8H89FT0051
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INDUSTRY CANADA	109W-0051
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CE	See Cambium Website for Declaration of Conformity
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## TABLE OF PART NUMBERS

PART NUMBER	DESCRIPTION
C050910A031A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (no cord)
C050910A131A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (US cord)
C058910A134A	ePMP 5 GHz MP 3000 MicroPOP Radio (IC) (Canada/US cord)
C050910A231A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (EU cord)
C050910A233A	ePMP 5 GHz MP 3000 MicroPOP Radio (EU) (EU cord)
C050910A331A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (UK cord)
C050910A333A	ePMP 5 GHz MP 3000 MicroPOP Radio (EU) (UK cord)
C050910A431A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (India cord)
C050910A432A	ePMP 5 GHz MP 3000 MicroPOP Radio (India) (India Cord)
C050910A531A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (China cord)
C050910A631A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (Brazil cord)
C050910A731A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (Argentina cord)
C050910A831A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (ANZ cord)
C050910A931A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (South Africa cord)
C050910AZ31A	ePMP 5 GHz MP 3000 MicroPOP Radio (ROW) (No PSU)
C058910A132A	ePMP 5 GHz MP 3000 MicroPOP Radio (FCC) (US cord)