



New PMP SolutionsMatt Mangriotis

Cambium 450 Platform



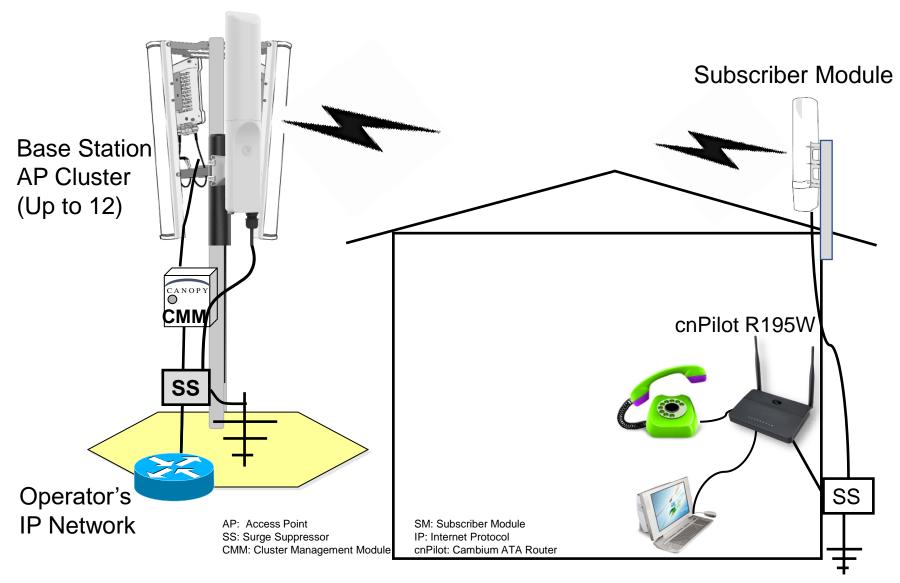
- Flagship PMP product family from Cambium Networks
 - Over 1 Gbps per sector possible
 - Continuous platform evolution and advanced radio design
 - Extreme site capacity, and spectral efficiency
- OFDM MIMO provides near Line-of-Sight (nLOS) and LOS
- Software defined radio design allows for rapid expansion of frequency bands, both licensed and unlicensed
- Utilizes GPS synching capability to maximize spectral efficiency and very low latency supporting VoIP and video



 Continual platform evolution and expansion: 450, 450i, 450m, 450b

Applications: PMP 450 Series Residential





PMP 450b



Two Form Factors:

Integrated mid-gain antenna (17 dBi) similar to Force 180 High Gain integrated antenna (24dBi), similar to Force 200

New FPGA / SoC architecture

Next-gen processor, Enhanced Packet Processing
Better support for wider channels → more throughput
Wideband support (4.9 – 5.925 GHz)

I/O changes

Single **Gigabit** Ethernet port Audio jack for alignment tone

Re-use of 30 VDC Power scheme

Same power supply as current 450 SM Polarity Agnostic – Both "Canopy" or "UBNT" 30 VDC

Prices (MSRP):

\$309 for mid-gain version \$359 for Integrated dish version (sold in 4-packs)





450b Connectorized



New FPGA / SoC architecture

- Next-gen processor, Enhanced Packet Processing
- Better support for wider channels → more throughput
- Wideband support (4.9 5.925 GHz)

I/O changes

- Single Gigabit Ethernet port
- Audio jack for alignment tone
- IP 67 ruggedized protection
- 2x RP-SMA connections for external antenna
- Will fit ePMP1000 twistport adaptor from RF Elements

Re-use of 30 VDC Power scheme

- Same power supply as current 450 SM
- Polarity Agnostic Both "Canopy" or "UBNT" 30 VDC
- MSRP: \$ 309
- Note: Connectorized MicroPoP has same form factor
 - Differences:
 - 48 VDC (PoE 802.3at) input vs. 30 VDC ("Canopy-style")
 - Onboard GPS
 - Price: \$999 MSRP



Target Release Q4, 2020











450 µPoP Hardware Plan



Power / Network

Gigabit Ethernet PoE Standard 802.3af/at PoE IN (± 48 VDC) (12W Max Power Draw)

RF Options

Integrated: Omni & 90/120° Sector Omni – 9 dBi Gain 90/120° Sector –13 dBi Gain, targeting 32 dB FB

Integrated GPS on all models

External GPS antenna port Supports sync over power method with cnPulse accessory

Physical default method

Push button on rear, long press variations to reboot / reset to defaults

MSRP \$999

Limitations

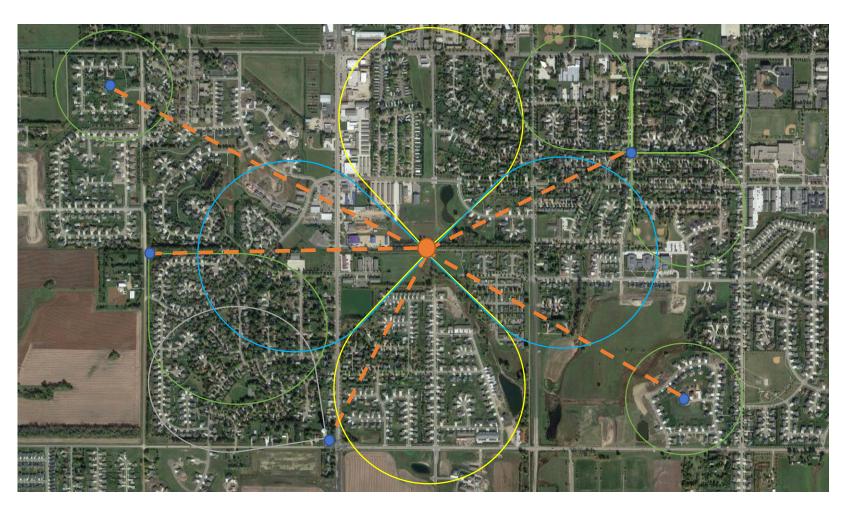
2 Miles Range / Up to 20 SMs connected Limits can be removed with License Key (MSRP of key \$1799)

Shipments begin mid-August, 2020



MicroPoP Deployment Examples





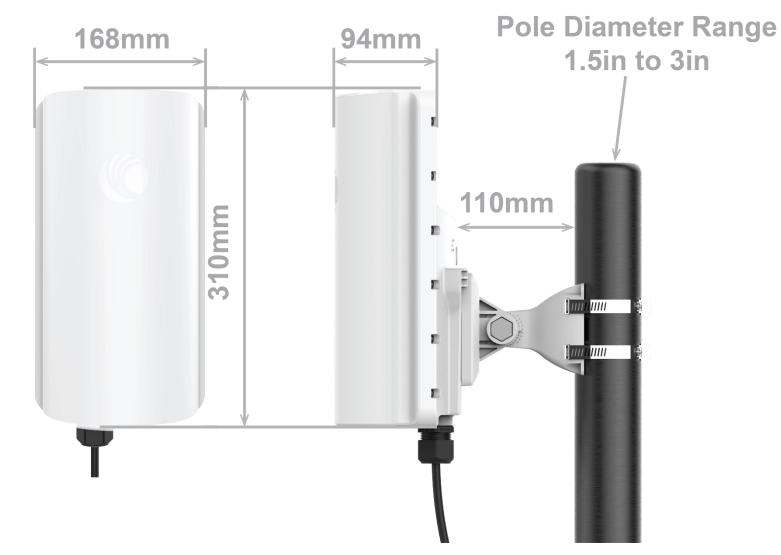
- Macro Tower
- MicroPoP Site
- Omni Coverage
- Sector Coverage
- Backhaul Link (PTP, cnWave, etc.)

450 MicroPoP Sector





LEDs & Reset



WEIGHT: 2 kg

450 MicroPoP Omni





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5 GHz 450 MicroPoP - MSRP Part Number List



| Part Number | Description | MSRP |
|--------------|---|----------|
| C050045A201A | 5 GHz 450 MicroPoP Omni - ROW | \$ 999 |
| C050045A202A | 5 GHz 450 MicroPoP Omni – FCC | \$ 999 |
| C050045A203A | 5 GHz 450 MicroPoP Omni - ISED | \$ 999 |
| C050045A204A | 5 GHz 450 MicroPoP Omni – EU | \$ 999 |
| C050045A205A | 5 GHz 450 MicroPoP Omni – No Encryption | \$ 999 |
| | | |
| C050045A206A | 5 GHz 450 MicroPoP Sector - 90 Degree - ROW | \$ 999 |
| C050045A207A | 5 GHz 450 MicroPoP Sector - 90 Degree – FCC | \$ 999 |
| C050045A208A | 5 GHz 450 MicroPoP Sector - 90 Degree - ISED | \$ 999 |
| C050045A209A | 5 GHz 450 MicroPoP Sector - 90 Degree – EU | \$ 999 |
| C050045A210A | 5 GHz 450 MicroPoP Sector - 90 Degree – No Encryption | \$ 999 |
| | | |
| C000045K201A | 450 MicroPoP Unlock Key | \$ 1,799 |

MicroPoP Accessories - MSRP Part Number List



| Part Number | Description | MSRP |
|--------------|--|-------|
| N000000L034A | POWER SUPPLY, 30W, 56V - Gbps support | \$ 25 |
| N000900L031A | CABLE, UL POWER SUPPLY CORD SET, 720mm, US | \$ 5 |
| N000900L032A | CABLE, UL POWER SUPPLY CORD SET, 720mm, EU | \$ 5 |
| N000900L033A | CABLE, UL POWER SUPPLY CORD SET, 720mm, UK | \$ 5 |
| | | |
| C000000L033A | Gigabit Surge Suppressor (56V) | \$ 50 |



Any Questions?

