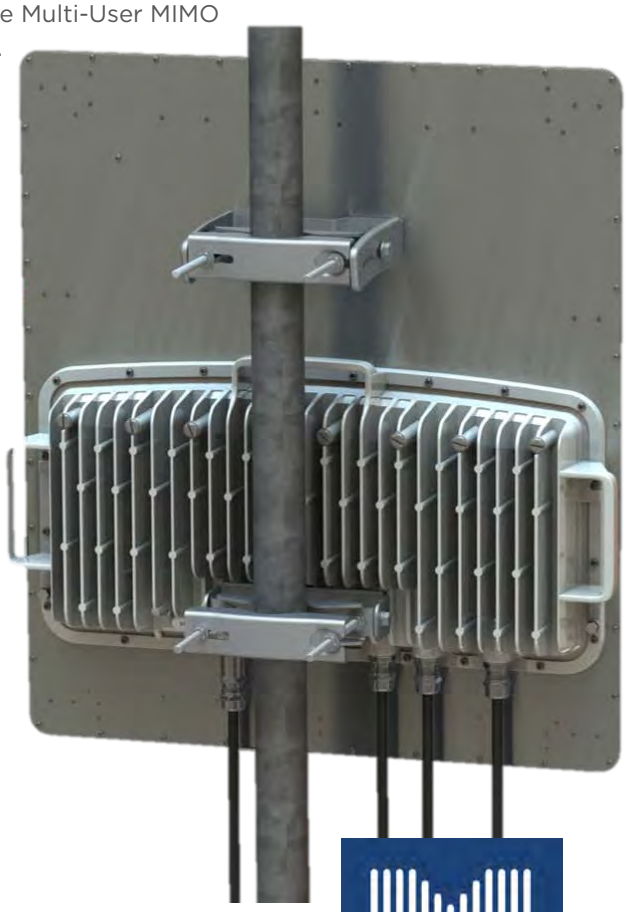
3 GHz PMP 450m Access Point

Cambium Networks industry-leading 450 platform adds Massive Multi-User MIMO capability with *cn*Medusa™ technology, now available at 3 GHz.



Key Features:

- ***cn*Medusa™ technology** enhances sector capacity by combining a smart beamforming antenna array with multiple RF transmit and receive chains, effectively multiplying available capacity by more than three times.
- Capable of throughput of **almost 500 Mbps** in a 20 MHz channel, and **up to a gigabit per second per sector** when using a 40 MHz channel.
- Multi-User MIMO uses available spectrum more efficiently by making simultaneous transmissions to multiple subscribers, increasing **spectral efficiency** to more than 50 bps/Hz.
- **Protects your investment** in the 450 platform equipment by continuing to utilize existing Subscriber Modules (all 450 platform subscribers work with the 450m and cnMedusa technology)
- Dramatically reduce the effect of interference in both Uplink and Downlink with **smart beamforming**
- **SFP** port allows for greater deployment flexibility, and AUX port allows for connection of camera or other PoE directly.
- The **Limited Version** can reduce capital investment until additional capacity is actually required. A 30-day trial of MU-MIMO operation is included, and a simple license key can permanently enable MU-MIMO operation when needed.

cnMedusa™

WISPA 2017 Product of the Year

PRODUCT

		Global Model	No Encryption
Model Numbers	Integrated 90 degree sector	C030045A101A	C030045A104A
	Limited Version	C030045A111A	C030045A114A

SPECTRUM

Channel Spacing	Customizable channel selection to 50 KHz raster
Frequency Range	3300 - 3900 MHz
Channel Width	5, 7, 10, 15, 20, 30 and 40 MHz

Specifications

INTERFACE

MAC (Media Access Control) Layer	Cambium Networks proprietary
Physical Layer	8x8 Multi-User MIMO OFDM
Ethernet Interface	100/1000BaseT, full duplex, rate auto negotiated (802.3 compliant), SFP support for 1 Gbps optical
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), 802.1Q with 802.1p priority, dynamic port VID

PERFORMANCE

Subscriber Per Sector	Up to 238	
ARQ	Yes	
Modulation Levels (Adaptive)	MCS	Signal to Noise Required (SNR, in dB)
2X	QPSK	10
4X	16QAM	17
6X	64QAM	24
8X	256QAM	32
Maximum Deployment Range	Up to 40 miles (64 km)	
Latency	10 ms, typical	
GPS Synchronization	Yes, via Autosync (UGPS)	
Quality of Service	Diffserv QoS	

LINK BUDGET

Antenna Beam Width (Azimuth)	90° integrated sector (3dB rolloff), 120° (6dB rolloff), (dual slant polarity, ±45°)
Antenna Beam Width (Elevation)	**2° Electrical Downtilt**, 8° Elevation (with Null Fill)
Maximum EIRP	+50 dBm (or up to maximum allowed by regulation)

PHYSICAL

Antenna Connection	Integrated Sector Array		
Surge Resilience with LPU	MAIN and AUX ports : DC IN port :	EN61000-4-5: 10/700us, 4 kV voltage waveform : TBD :	Recommended external surge suppressor: Model # C000065L007B Recommended external surge suppressor: Model # C000000L114A
Mean Time Between Failure	> 40 Years		
Environmental	IP67, IP66		
Temperature / Humidity	-40°C to +60°C (-40°F to +140°F) / 100% condensing		
Weight	Integrated	Approx. 19 kg (42 bs)	
Wind Survival	124 mph / 200 kph		
Wind Loading - Front Facing	@ 90 mph / 144 kph	376N	
	@ 110 mph / 177 kph	562 N	
	@ 124 mph / 200 kph	780 N	
Dimensions (HxWxD)	Integrated	70 x 61 x 17 cm (27.5" x 24" x 7")	
Power Consumption	140 W typical, 150 W peak (up to 180 W max with AUX port PoE enabled)		
Recommended Power Supply	C000000L054B - 54VDC, 240W		
Input Voltage	40 - 60 V DC		
Mounting	Pole mount with included brackets (1.25" to 4" pole diameter)		

Specifications

SECURITY	
Encryption	FIPS-197 128-bit AES, Optional 256-bit AES*

CERTIFICATIONS	
Industry Canada (ISED)	109A0-30450M (3 GHz)
FCC ID	QWP-30450M (3 GHz)
CE	EN 302 326-2 v1.2.2 (3 GHz)

* License Required