

# PTP 450i

Cambium Networks industry-leading 450 platform includes the all new PMP 450i and PTP 450i radios. The 450i product platform is the most scalable industrial-grade wireless broadband solution available.

## Key Features:

- **Ultra-wide band** radios support the entire band, whether in 5 GHz or 3 GHz. Advanced radio design improves transmit power and increases receive sensitivity.
- **Rugged metal enclosure** designed to meet IP-66 and IP-67 standards to withstand harsh environments. Optional ATEX/HAZLOC certified models available for hazardous deployments.
- **Dynamic Interference Filtering** to provide industry leading noise isolation for improved performance
- Updated FPGA and SoC architecture **triples the processing power** compared to PMP 450
- **Multifunction AUX port** allows for greater flexibility for deployment by adding a camera or other PoE directly.
- Now capable of **over 300 Mbps** throughput in a 40 MHz channel.



PRODUCT			RoW	US	EU	DES only
5 GHz Model Numbers	5 GHz	Connectorized	C050045B001B	C050045B003B	C050045B005B	C050045B007B
	5 GHz	Integrated	C050045B002B	C050045B004B	C050045B006B	C050045B008B
3 GHz Model Numbers	3 GHz	Connectorized	C030045B001A	C030045B001A		C030045B003A
	3 GHz	Integrated	C030045B002A	C030045B002A		C030045B004A

SPECTRUM		
Channel Spacing	3 GHz: Customizable to 50 KHz	5 GHz: Configurable on 2.5 MHz increments
Frequency Range	3 GHz: 3300 - 3900 MHz	5 GHz: 4900 - 5925 MHz
Channel Width	5 MHz, 7 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz or 40 MHz	5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz or 40 MHz

INTERFACE	
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, 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

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 200 kilometers (124 miles) depending on configuration		
Latency	3 - 5 ms, typical		
GPS Synchronization	Yes, via Autosync (UGPS, CMM4 or CMM5)		
Quality of Service	Diffserve QoS		

## LINK BUDGET

Antenna Beam Width	10° azimuth for integrated antenna		
Antenna Gain	3 GHz Integrated: +19 dBi dual slant	5 GHz Integrated: +23 dBi dual pol, H+V	
Transmit Power Range	40 dB dynamic range (to EIRP limit by region) (1 dB step)		
Maximum Transmit Power	+27 dBm combined output (+25 dBm combined for 3 GHz)		

## PHYSICAL

Antenna Connection	50 ohm, N-Type (Connectorized version only)		
Surge Suppression	EN61000-4-5: 1.2us/50us, 500 V voltage waveform Recommended external surge suppressor: Cambium Networks Model # C000000L033A		
Mean Time Between Failure	> 40 Years		
Environmental	IP67, IP66		
Temperature / Humidity	-40°C to +60°C (-40°F to +140°F), 0-100% condensing		
Weight	Connectorized	Approx. 2.0 kg (4.5 lbs)	
	Integrated	Approx. 2.5 kg (5.5 lbs)	
Wind Survival	190 km/hour (118 mi/hour)		
Dimensions (HxWxD)	Connectorized	26.0 x 13.4 x 6.4 cm (10.25" x 5.25" x 3.25")	
	Integrated	31.0 x 31.0 x 6.4 cm (12" x 12" x 2.5")	
Power Consumption	15 W typical, 19 W max, 45 W max with Aux port PoE out enable		
Input Voltage	48-59 V DC, 802.3at compliant		
Mounting	Wall or Pole mount with Cambium Networks Model # N000045L002A		

## SECURITY

Encryption	FIPS-197 128-bit AES , 256-bit AES*		
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## CERTIFICATIONS

Industry Canada	109W-0028 (3 GHz)	109A0-50450I (4.9, 5.2, 5.4, 5.8 GHz)
FCC ID	Z8H89FT0028 (3 GHz)	QWP-50450I (4.9, 5.1, 5.2, 5.4, 5.8 GHz)
CE		EN 301 893 v1.8.1 (5.4 GHz)
		EN 302 625 v1.1.1 (Broadband Disaster Relief, 4.9 GHz, 5.1 GHz)
		EN 302 502 v1.2.1 (5.8 GHz)