

# 3 GHz PMP 450 High Gain Integrated Subscriber Module

Cambium Networks industry-leading 450 platform now offers additional options for 3 GHz Subscriber Modules (SMs). The 450 platform is the most scalable industrial-grade wireless broadband solution available.

**Key Features:**

- Available for either 3.3 – 3.6 or 3.55 – 3.8 GHz frequency bands, this SM provides a **High Gain Integrated flat panel antenna** with 19 dBi, to complete long or difficult links.
- **Rugged metal enclosure** designed to meet IP-66 and IP-67 standards to withstand harsh environments.
- **NOTE: This device requires the 30 VDC power supply.**



## PRODUCT

Model Numbers	C035045C014A	3.3 – 3.6 GHz PMP 450 High Gain Directional Integrated Subscriber
	C036045C014A	3.55 – 3.8 GHz PMP 450 High Gain Directional Integrated Subscriber

## SPECTRUM

Channel Spacing	Configurable to 50 KHz
Frequency Range	3300 - 3600 MHz 3550 – 3800 MHz
Channel Width	5 MHz, 7 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	10/100BaseT, full duplex, rate auto negotiated (802.3 compliant)
Protocols Used	IPv4, UDP, TCP, IP, ICMP, Telnet, SNMP, HTTP, FTP
Network Management	HTTP, HTTPS, Telnet, FTP, SNMP v3
VLAN	802.1ad (DVLAN Q-inQ), 802.1Q with 802.1p priority, dynamic port VID

## PERFORMANCE

ARQ	Yes
Modulation Levels (Adaptive)	MCS
2X	QPSK
4X	16QAM
6X	64QAM
8X	256QAM
Signal to Noise Required (SNR, in dB)	
	10
	17
	24
	32
Maximum Deployment Range	Up to 40 miles (64 km)
Latency	3 - 5 ms, typical
GPS Synchronization	Yes, via Autosync (CMM3, CMM4, uGPS)
Quality of Service	Diffserve QoS

## LINK BUDGET

Antenna Beam Width	10° azimuth for 19 dBi integrated antenna
Antenna Gain	+19 dBi H+V, integrated
Transmit Power Range	40 dB dynamic range (to EIRP limit by region) (1 dB step)
Maximum Transmit Power	+25 dBm combined output

## PHYSICAL

Antenna Connection	Integrated
Surge Suppression	IEC 61000-4-2 (ESD) 15kV (AIR), 8kV (contact) IEC 61000-4-4 (EFT) 40A (5/50 ns) IEC 61000-4-5 (LIGHTNING) 100A (8/20 μs)
Mean Time Between Failure	> 40 Years
Environmental	IP66, IP67
Temperature / Humidity	-40°C to +60°C (-40°F to +140°F), 0-95% non-condensing
Weight	Approx. 2.5 kg (5.5 lbs)
Wind Survival	200 km/h (124 mi/h)
Dimensions (HxWxD)	31.0 x 31.0 x 6.4 cm (12" x 12" x 2.5")
Power Consumption	12 W typical, 15 W max
Input Voltage	20-32 V DC
Mounting	Wall or Pole mount with Cambium Networks Model # N000045L002A

## SECURITY

Encryption	56-bit DES, FIPS-197 128-bit AES
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## Certifications

Industry Canada	109W-0007 (3.5 GHz) 109W-0009 (3.65 GHz)
FCC ID	Z8H89FT0009 (3.65 GHz)
CE	EN 302 326-2 V1.2.2 (3 GHz) EN 302 326-3 V1.3.1 (3 GHz)