

# 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 or 20 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
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
------------	----------------------------------

## 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)

© 2015 Cambium Networks Ltd. All rights reserved.