

# ePMP™ 1000 GPS Sync Radio

## VERTICAL MARKETS AND SOLUTIONS

### WIRELESS SERVICE PROVIDERS (WISPS)

- Rural Connectivity
- Municipal Connectivity
- Remote Office Connectivity
- Primary or Redundant Connectivity

### ENTERPRISES

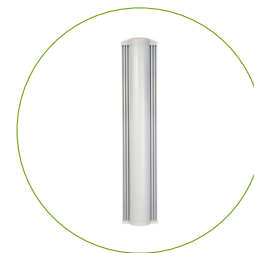
- Video Surveillance Backhaul
- Site Monitoring
- LAN Extension
- Leased Line Replacement

**Wireless service providers and enterprises need reliable, high-quality broadband connectivity that can be rapidly deployed and expanded.** The ePMP architecture provides highly scalable broadband access solution that will allow you to build and expand your network with a faster return on investment. Cambium Networks' radios deliver bandwidth-intensive services such as VoIP, video and data to end users in multiple vertical markets, with high performance and exceptional reliability.

Using the 5 GHz frequency spectrum, the new ePMP architecture is the most effective connectivity solution for reaching the under- and unconnected around the world.



ePMP 1000 GPS Sync Radio



Sector Antenna



ePMP 1000 GPS Sync Radio Integrated with a Sector Antenna

## Main Differentiators

- » **INNOVATIVE GPS SYNC TECHNOLOGY** enables unparalleled spectrum efficiency. This allows for the configuration of more subscribers in your network while preserving consistency and quality of service in spectrum-constrained environments. GPS Sync leads directly to CAPEX and OPEX reductions, resulting in lower installation costs and maintenance, allowing your business to concentrate on growth and profitability.
- » **QUALITY OF SERVICE (QoS)** allows you to confidently offer triple play services – VoIP (Voice over IP), video and data. Providing your customers with excellent service quality ensures their continued loyalty and transforms them into advocates, helping WISPs and enterprises expand their business.
- » **CAMBIUM NETWORKS' PROVEN RELIABILITY** has created an unsurpassed connectivity standard in many industries that depend on fixed wireless broadband. Our products undergo rigorous testing and are made from high-quality components.

## Powerful Features

Cambium Networks' ePMP 1000 GPS Sync Radio provides more than 200 Mbps of real user throughput. Using 2x2 MIMO-OFDM technologies, ePMP deployments achieve industry leading data rates.

Utilizing GPS sync, the ePMP is an ideal fit for networks that require capacity and reliability for superior QoS in remote and underserved areas. This integrated PTP and PMP solution features an efficient GPS synchronized operational mode that permits highly scalable frequency reuse.

When deployed with a sector antenna, the ePMP 1000 GPS Sync Radio can be configured as a GPS Synchronized Access Point serving ePMP Integrated Radios configured as Subscriber Modules. When deployed with a high gain point to point antenna, the ePMP GPS Sync Radio can be configured to be a GPS Synchronized Backhaul Master, forming a PTP link with another ePMP Radio module.

| PRODUCT  |  |
|--|--|
| SALES MODEL NUMBERS                                  | C058900A112A (US/FCC ), C050900A013A (EU), C050900A011A (Other)  |
| SPECTRUM   |  |
| CHANNEL SPACING                                      | Configurable on 5 MHz increments   |
| FREQUENCY RANGE                                      | 5150 – 5350 MHz, 5470 - 5875 MHz   |
| CHANNEL WIDTH  | 20 MHz or 40 MHz   |
| INTERFACE  |  |
| MAC (MEDIA ACCESS CONTROL) LAYER                     | Cambium Proprietary  |
| PHYSICAL LAYER                                       | 2x2 MIMO/OFDM  |
| ETHERNET INTERFACE                                   | 100/1000BaseT, rate auto negotiated (802.3af compliant)  |
| POWERING METHODS SUPPORTED                           | 30V PoE Supply (included), CMM3 & CMM4, 802.3af PoE Supply   |
| PROTOCOLS USED                                       | IPv4, UDP, TCP, IP, ICMP, SSH, SNMPv2c, HTTPs, FTP   |
| NETWORK MANAGEMENT                                   | HTTPs, SSH, FTP, SNMPv2c   |
| VLAN   | 802.1Q with 802.1p priority  |
| PERFORMANCE  |  |
| SUBSCRIBERS PER SECTOR                               | Up to 120  |
| ARQ  | Yes  |
| NOMINAL RECEIVE SENSITIVITY (W/ FEC) @ 20MHZ CHANNEL | MCS1 = -89 dBm to MCS15 = -66 dBm (per branch)   |
| NOMINAL RECEIVE SENSITIVITY (W/ FEC) @ 40MHZ CHANNEL | MCS1 = -86 dBm to MCS15 = -63 dBm (per branch)   |
| MAXIMUM DEPLOYMENT RANGE @ 20 MHz CHANNEL            | Up to 13 miles (up to 20 km)   |
| MODULATION LEVELS (ADAPTIVE)                         | MCS1 (QPSK 1/2) to MCS15 (64QAM 5/6)   |
| LATENCY (nominal, roundtrip)                         | 17 ms  |
| GPS SYNCHRONIZATION                                  | Yes, via Internal GPS, CMM3, or CMM4   |
| QUALITY OF SERVICE                                   | Three level priority (Voice, High, Low) with packet classification by DSCP, COS, VLAN ID, IP & MAC Addr, Broadcast, Multicast and Station Priority |
| LINK BUDGET  |  |
| ANTENNA Options                                      | Antennas for 90° or 120° sectors are available   |
| TRANSMIT POWER RANGE                                 | -17 to +30 dBm (combined, to regional EIRP limit) (1 dB interval)  |
| ANTENNA GAIN   | 15 dBi (90° sector)  |
| MAXIMUM TRANSMIT POWER                               | 30 dBm combined (5.8 GHz Band)   |
| PHYSICAL   |  |
| ANTENNA CONNECTION                                   | 50 ohm, RP (Reverse Polarity) SMA  |
| SURGE SUPPRESSION                                    | 1 Joule Integrated   |
| ENVIRONMENTAL  | IP55   |
| TEMPERATURE  | -30°C to +55°C (-22°F to +131°F)   |
| WEIGHT   | 4.5 kg (10 lbs) with antenna<br>0.52 kg (1.1 lbs) without antenna  |
| WIND SURVIVAL  | 190 km/hour (118 mi/hour) with antenna   |
| DIMENSIONS (H x W x D)                               | Radio: 26.9 x 11 x 7.7 cm (10.6 x 4.3 x 3.0 in)<br>Antenna (excl brackets): 80.4 x 16 x 6.3 cm (31.7 x 6.3 x 2.5 in)                               |
| POWER CONSUMPTION (over 100m CAT5 cable)             | 10 W Maximum, 7.5 W Typical  |
| INPUT VOLTAGE  | 23 to 56 V   |
| SECURITY   |  |
| ENCRYPTION   | 128-bit AES (CCMP mode)  |
| CERTIFICATIONS                                       |  |
| FCCID  | Z8H89FT0006  |
| INDUSTRY CANADA CERT                                 | 109W-0006  |
| CE   | EN 302 502 v1.2.1<br>EN 301 893 v1.7.1   |