

# ePMP™ 2000

## So long, interference

Cambium Networks' ePMP 2000 takes interference-tolerant, high performance, and reliable wireless broadband to a new level with innovative technology and proven, deployed-worldwide equipment, keeping you and your customers happy for an affordable price.

## One thing in the wireless world is for sure: interference.

Many network operators have invested and set up networks in clean, uncontested channels only to see their performance degrade over time as other networks have sprung up around them.

Whether on-channel or off-channel, interference is a limiting factor for many real-world service providers, restraining their business. Even if your spectrum is clean now, consider what it could look like in the near future.

ePMP 2000 is built from the ground up to provide high performance, reliably, in real-world interference-heavy environments. Powered by innovative Hypure™ technology, ePMP 2000 incorporates Smart Beamforming and Intelligent Filtering to help you deliver the services your customers expect in the face of heavy interference.

With the feature-rich ePMP foundation including frequency reuse enabled by GPS Synchronization, eFortify™, 120 active subscribers per access point and 200+ Mbps of real-world achievable throughput, ePMP 2000 is designed, built and tested to reliably connect people, places, and things.

### EXAMPLE USE CASES

#### WIRELESS SERVICE PROVIDERS (WISPs)

- Rural connectivity
- Municipal connectivity
- Enterprise and campus connectivity

#### ENTERPRISE

- Wireless video surveillance networks
- Industrial and mining applications
- LAN extension

### ePMP PRODUCT PORTFOLIO



ePMP 2000  
Access Point with  
Intelligent Filtering



ePMP 2000  
Smart Antenna



ePMP  
Force 180



ePMP  
Force 200



ePMP  
Sector Antenna



ePMP 1000 Access  
Point with Sync



# End-to-End Performance

ePMP encompasses a comprehensive range of subscriber modules, access points, and sector antennas to make sure your network performs at its best, from end-to-end.

## TOP LINE SPECIFICATIONS

- ✓ Reliable, consistent performance in real-world conditions
- ✓ 5, 10, 20, and 40 MHz channel bandwidths
- ✓ 200+ Mbps of real-world throughput
- ✓ Up to 120 active subscribers per access point
- ✓ Secure over-the-air communications (128-bit AES encryption)
- ✓ Industry leading frequency reuse via GPS Synchronization
- ✓ Configurable QoS for voice, video, and data
- ✓ Up to 64km deployment range
- ✓ Point-to-point and point-to-multipoint options (*software configurable*)
- ✓ End-to-end cloud management with *cnMaestro™*

## Why ePMP?

### CONSISTENT PERFORMANCE

With industry-leading tolerance to handle outside interference, Automatic Transmit Power Control to control self-interference, and a proven worldwide ePMP MAC scheduling algorithm, ePMP provides consistent performance, no matter how many subscribers are connected. And thanks to Air Fairness, when one subscriber is performing poorly, it doesn't drag the rest down.

### FREQUENCY REUSE

Take that precious spectrum and multiply it across your network. With frequency reuse enabled by GPS Synchronization, ePMP scales to more customers with less spectrum, letting you expand your business while keeping your customers happy. Deployed worldwide and proven over years, it's the secret ingredient to a scalable network.

### RETURN ON INVESTMENT

Many operators find when they deploy a network, as it expands over time, they have to redesign it with new equipment once the number of subscribers reaches a certain point, ruining their return on investment plans. With ePMP, affordable doesn't mean cheap; build your network to last, from the start.

### APPLICATION FLEXIBILITY

Configurable Quality of Service for voice, video, and data lets you offer the services your customers want at the level of service they need. Combined with adaptable modes of configuration that let you support many combinations of bandwidth allocation and latency, a network built on ePMP can handle any application.

### SECURITY

Wireless networks are insecure, right? Well, they don't have to be. With 128-bit AES encryption for all data transmitted across the wireless link, L2 and L3 firewall functionality, and secure management interfaces, ePMP won't be the weak link in your security chain.

### RELIABILITY

By combining highly reliable software, hardware and protocols, ePMP is designed to provide the best service possible for your customers for the long term. Industrial design and industrial-grade components mean your network stays up.





# Hypure

## What is Hypure™?

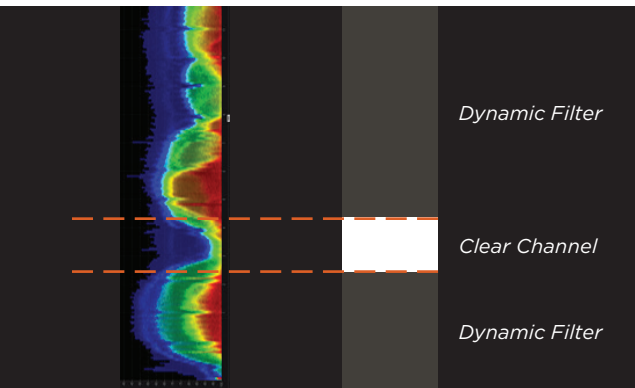
ePMP 2000 uses innovative Hypure technology from Cambium Networks. It's comprised of Smart Beamforming and Intelligent Filtering.



### SMART BEAMFORMING

With the optional ePMP 2000 Smart Antenna, Smart Beamforming virtually eliminates the impact of uplink co-channel interference. This has a dramatic effect on the network capacity, with up to 8x uplink throughput increases over ePMP 1000 in real-world conditions. By improving the uplink capacity, overall network performance is substantially increased.

Smart Beamforming dynamically creates a narrow, targeted beam to each subscriber, blocking out interference from other sources.



### INTELLIGENT FILTERING

Built into the ePMP 2000 Access Point, Intelligent Filtering offers up to 20% uplink throughput increases over ePMP 1000 in real-world conditions. By blocking out adjacent channel interference, your network can focus on the signals it wants to hear rather than being distracted by all the noise around them.

Intelligent Filtering creates a dynamic filter, which wraps around the channel in use, shielding it from others.

## THE CAMBIUM DIFFERENCE

- **Spectral Efficiency** – Provide the highest amount of information transfer in the least amount of scarce spectrum with industry award-winning throughput.
- **Non-Line-of-Sight and Line-of-Sight Performance** – Optimize total network performance by selecting the technology that provides the highest performance in diverse terrain by tailoring the network to meet the needs of each specific location.
- **Security** – Maintain system availability and minimize cyber threats with a rich set of features to encrypt the traffic, secure the management, and audit the changes in the communications network.
- **Scalability** – Connect up to thousands of individual locations with a synchronized network that enable RF frequencies to be re-used throughout the network to provide the highest level of connectivity in the least total amount of spectrum.
- **Reliability** – Deploy wireless broadband with confidence that it will work right the first time and continue to work 24/7 over the long haul.
- **Total Cost of Ownership** – Minimize the total cost of network ownership with one IP-based wireless network composed of licensed and unlicensed backhaul and access components that can be rapidly deployed and perform reliably with minimum maintenance cost.
- **Sustainability** – Solutions designed to operate for years from a supplier with a proven track record of stability and sustainable product evolution.

## ABOUT CAMBIUM NETWORKS

Cambium Networks is a leading global provider of wireless broadband solutions that connect the unconnected. Through its extensive portfolio of reliable, scalable, and secure WiFi and wireless broadband point-to-point (PTP) and point-to-multipoint (PMP) platforms managed by cloud-based software, Cambium Networks makes it possible for all service providers; enterprises; governmental and military agencies; oil, gas, and utility companies; Internet service providers; and public safety networks to build powerful communications networks, reach users from

200 kilometers across mountain tops down to the last meter to their devices, and intelligently manage their infrastructure through end-to-end network visibility and actionable analytics. Headquartered outside Chicago and with R&D centers in the U.S., Ashburton, U.K., and Bangalore, India, Cambium Networks sells through a range of trusted global distributors.

For more information, visit:

[www.cambiumnetworks.com](http://www.cambiumnetworks.com) and  
<http://www.connectingtheunconnected.org>.



### Cambium Networks, Ltd.

3800 Golf Road, Suite 360  
Rolling Meadows, IL 6008

Cambium Networks and the Cambium Networks logo are trademarks of Cambium Networks, Ltd.

Copyright © 2016 Cambium Networks, Ltd.