![Cambium Networks logo] **Cambium Networks**™
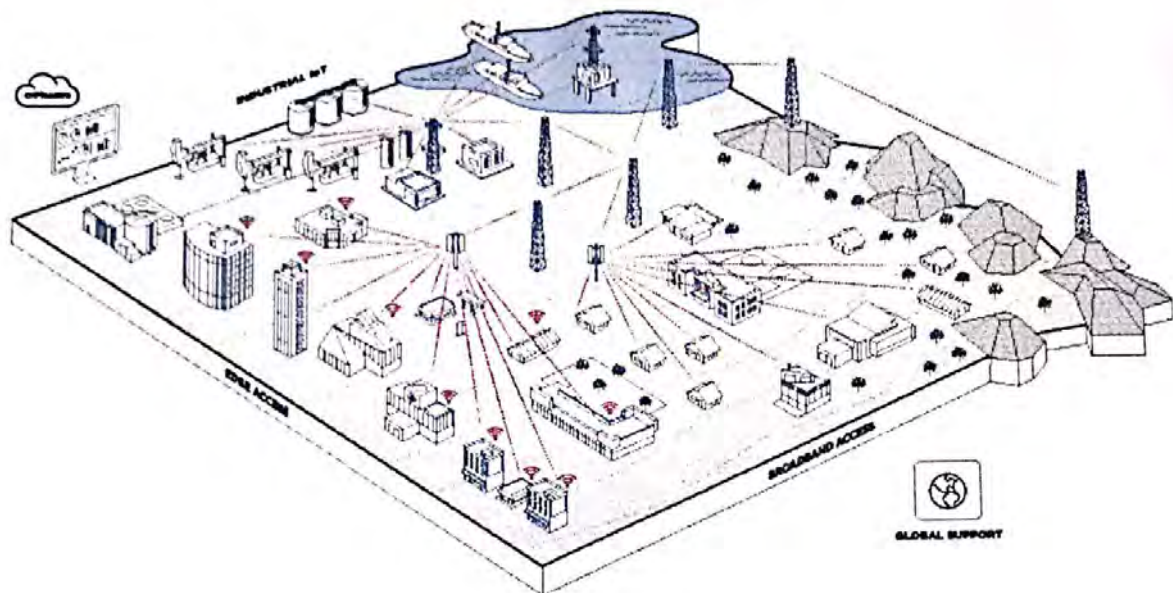
ePMP™ 3000

UP TO 5X PERFORMANCE
WITH GEN 3 TECHNOLOGY

Wireless Internet Service Provider Connectivity Solutions

Cambium Networks is a leading global provider of wireless broadband solutions that make it possible for operators to build sustainable businesses by connecting the under-connected and unconnected communities of the world.

Our industry-leading portfolio of reliable, scalable and secure Wi-Fi and wireless broadband point-to-point (PTP) and point-to-multipoint (PMP) platforms offer communications solutions that make it feasible and economical to unite the world and build a truly global society that leaves no one behind. At Cambium Networks, connecting people, places and things is our vision.

Design the network to meet your business needs. Extend coverage and capacity as requirements evolve.


ePMP 3000 Overview

In continuing tradition of affordable performance without compromise, the ePMP3000 Access point and subscriber portfolio brings the combined feature set of ePMP1000/2000 and adds industry leading throughput with the ePMP3000. Featuring a 4X4 Access Point and sector antenna, the ePMP3000 combines self interference mitigating GPS sync solution with interference mitigation from ePMP2000 and combines it with Multi User Mimo. Supporting an auxiliary SFP port, 80MHz channel bandwidth and 256QAM modulation the ePMP3000 can provide up to 5x the performance as compared to previous generation of products.
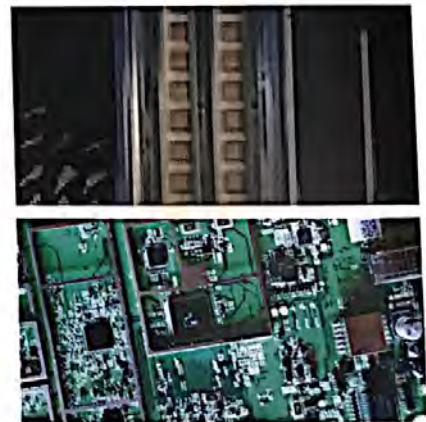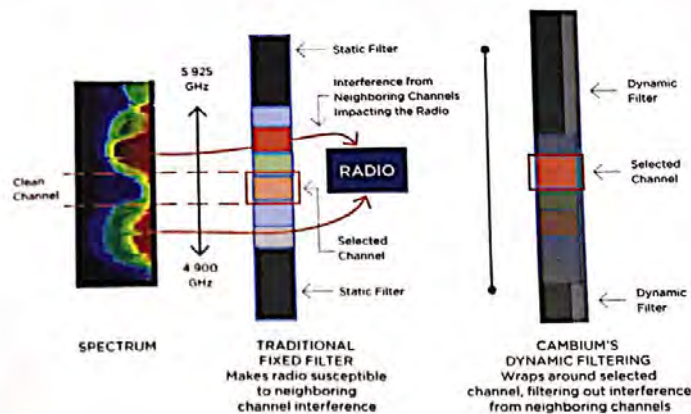

Key Features

MULTI USER MIMO

Achieving higher throughput in the downlink is often solved by achieving higher modulation or wider channels. In both cases, the environment and interference prevents achieving higher modulations or operating in wider channel bandwidths. ePMP 3000 employs Multi User Mimo technology (MUMIMO) to simultaneously transmit to two subscribers in the downlink and thus doubling the throughput in the downlink.
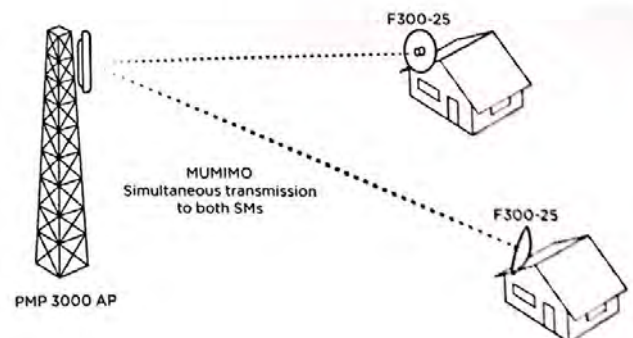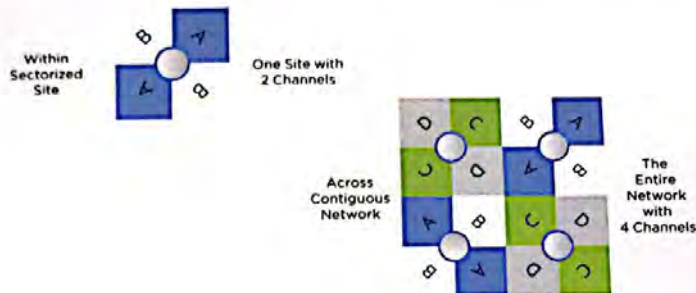
INTELLIGENT FILTERING

Noise is always a concern, and as more transmitters are deployed, will continue to be a critical factor in operation. While almost all radios have some type of filtering, many use static filters that block out only noise from outside of the radios total operating spectrum. While this provides a clear channel for operation, these systems with fixed filters still allow noise from neighboring channels to affect system performance. Cambium Networks solutions use dynamic filtering with a static filter to block noise from outside of the operating spectrum but also a dynamic filter to block out interference from adjacent channels. As the system changes to another channel, the system automatically blocks out noise from adjacent channels to improve signal quality.

SPECTRUM

TRADITIONAL FIXED FILTER
Makes radio susceptible to neighboring channel interference

CAMBIUM'S DYNAMIC FILTERING
Wraps around selected channel, filtering out interference from neighboring channels

FREQUENCY RE-USE

Frequency is limited. There will never be any more of it. By re-using frequencies when deployed in back-to-back configuration, a network operator can effectively use the same frequency twice to connect users. In large deployments, a network operator can connect thousands of users by re-using the same frequencies across the field service area. This technology maximizes the use of available frequency and can provide access to thousands of users in a small amount of spectrum.

Within Sectorized Site

One Site with 2 Channels

Across Contiguous Network

The Entire Network with 4 Channels

GPS SYNCHRONIZATION

When networks become more dense, self interference becomes an issue. GPS synchronization coordinates the entire network, reduces self interference, and keeps network performance high as more subscribers are added.
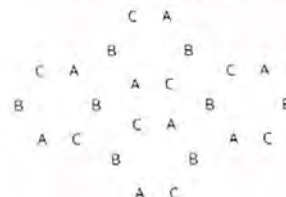

All APs transmit at the same time

All APs receive at the same time

This Reduces Self Interference and Enables Networks to be Co-Located

SMART BEAMFORMING AND BEAM STEERING

As more emitters are deployed in the service area, it is important to mitigate noise and interference in order to provide reliable high speed connectivity. The ePMP 3000 Access Point works in conjunction with the optional Beam Steering antenna to create narrow beams in the uplink to improve signal to noise ratio. Placed at the access point on a tower, the smart antenna will create tighter beams to connect with subscribers while nulling out radiation from unwanted emitters in the field.

Noise
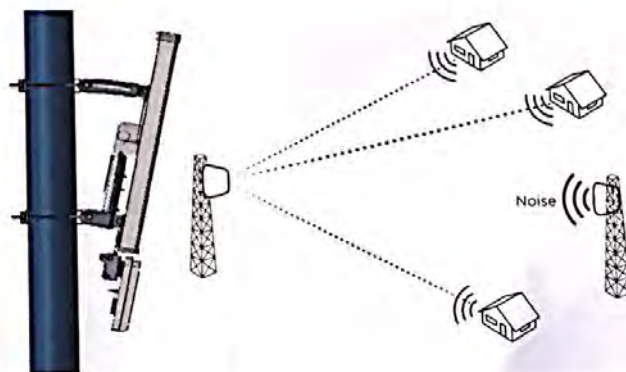
AIR FAIRNESS

ePMP employs a sophisticated priority-based, air fairness, starvation avoidance algorithm for allocating RF resources to SMs. The allocations are based on airtime instead of throughput and so we avoid the situation where SMs in poor RF conditions take up an excessive amount of time and therefore available capacity.
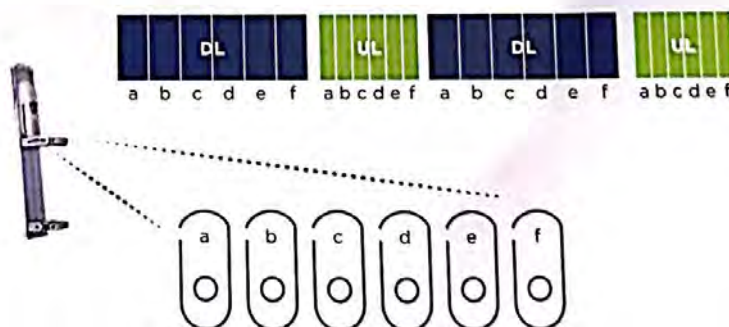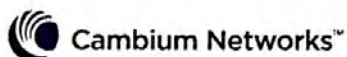

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ABOUT CAMBIUM NETWORKS

Cambium Networks is a leading global provider of wireless connectivity solutions that strengthen connections between people, places and things. Specializing in providing an end-to-end wireless fabric of reliable, scalable, secure, cloud-managed platforms that perform under demanding conditions, Cambium Networks empowers service providers and enterprise, industrial and government network operators to build intelligent edge connectivity. Cambium Networks' commitment to continuous innovation and social responsibility in wireless access is demonstrated in the millions of radios deployed in thousands of networks that benefit communities around the world. Headquartered outside Chicago and with R&D centers in the U.S., U.K. and India, Cambium Networks sells through a range of trusted global distributors.

For more information, visit:

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