


EXTREME ENVIRONMENTS

A remote U.S. Coast Guard PTP site in Alaska can be reached only by helicopter. With propane the only power option, the PTP communications equipment must combine exceptional reliability with ultra-low power needs.


SIMULCAST CONDITIONS

In its protection of political candidates, Homeland Security agents need instant communications in high-traffic, simulcast environments from a PTP system that offers robust LMR radio backhaul with low latency and high availability.


RECEIVER SENSITIVITY

Customs and Border Patrol agents set up remote PTP network sites near known smuggling lanes. With no power grid access, the system needs exceptional receiver sensitivity for solar power operation and to create a smaller footprint for covert operations.

LMR BACKHAUL SPECIALIST FIRST CLASS

During a narcotics raid. At a campaign rally. In a Forward Operating Base (FOB) in the mountains of Afghanistan or on the Mexico-Arizona border. Wherever the mission is critical, two-way LMR radios are the backbone of communications. And to be most effective, LMR radios need the support of backhaul networks that are as tough and reliable as they are.

THE CAMBIUM PTP 800

At Cambium Networks, we've designed our Point-to-Point (PTP) solutions to be as efficient and effective as the professionals that use them. Our powerful PTP 800 system is proven to deliver the high performance LMR backhaul that armed forces and federal agencies rely on in challenging, fast-evolving situations when national security and lives are on the line.

HIGH DATA RATES, LOW LATENCY

The PTP 800 offers ultra-low latency in mission critical situations when any delay can be hazardous. With exceptionally low latency of 140 usec, the PTP 800 solution optimizes clarity while minimizing crosstalk. In terms of throughput, it offers exceptionally high performance of up to 300 Mbps full duplex, and up to 600 Mbps full duplex using 2+0 link aggregation. Equally important, the PTP 800

provides streamlined integration with ASTRO and other LMR systems.

MISSION CRITICAL SECURITY

Our PTP 800 offers robust, multi-layered information security. FIPS 140-2 submission to NIST (Block 4 as of 4/20/12), FIPS-197, 128/256-bit AES encryption, HTTP/TSL, SNMP v3 and multi-user/multi-level access with complex passwords. All these combine to create a system where secure access, management and transmission are assured. In addition, the PTP 800 is tested to rigorous ruggedness standards, ensuring durability and reliability even in the most extreme weather and RF conditions.

LOW POWER CONSUMPTION

LMR equipment often needs to be situated where there is little or no access to the traditional power grid — such as a remote desert mountaintop or desolate frozen tundra — or in areas where there is intermittent, unpredictable power availability. With a maximum draw of just 71 watts, the PTP 800 excels in low power environments, making solar energy, propane generators and other alternative power sources effective options.

**ABOUT
CAMBIUM NETWORKS**

Cambium Networks, formerly part of Motorola Solutions, is an independent company providing world-class wireless broadband and microwave solutions for military, government, municipal and enterprise customers around the world. Cambium Networks currently has more than 3.5 million products deployed and provides reliable, secure, cost-effective connectivity in thousands of networks in over 150 countries.



BACKHAUL TO TRUST WHEN LIVES AND NATIONAL SECURITY ARE AT STAKE

The Cambium PTP 800 is a powerful, affordable Point-to-Point broadband network that efficiently answers the need for reliable, high-performance LMR backhaul for mission critical, high security environments. What makes the PTP so effective and trustworthy?

ASTRO UEM INTEGRATION. The PTP 800 is actively integrated into the ASTRO system's Unified Event Manager (UEM) as a native component, which allows the ASTRO system to monitor and manage PTP links. Unlike many providers, we make our MIBs (Management Information Base) available, allowing you to use an industry standard SNMP network management system to manage the radios.

ADAPTIVE CODING AND MODULATION. With adaptive coding and modulation capabilities, PTP 800 radios are able to speed up or slow down to adapt to RF challenges, while still being able to maintain the lowest bit-error rate and highest throughput.

1+1 HOT STANDBY. To further optimize reliability, the PTP 800 offers the ability to provide 1+1 hot standby between primary and backup link components. Should any network component fail, the matching component will automatically kick into service in less than 50 milliseconds, making communications issues completely transparent to users.

2+0 LINK AGGREGATION. Through its ability to run two links in parallel, the PTP 800 enables you to effectively create a single large pipe that's capable of doubling maximum system throughput from 300 to 600 Mbps.

FREQUENCY VARIANTS. The PTP 800 system supplies NTIA-approved dedicated 7 and 8 GHz spectrum solutions for DoD and Federal Civilian/Law Enforcement Agencies for backhaul and connectivity applications. The platform is also available in commercial frequencies ranging from 6 to 38 GHz FCC/ETSI usage.

SPECTRUM EFFICIENCY. The system is designed with exceptional spectrum efficiency, allowing the PTP 800 to deliver a high data rate while using minimum spectrum and helping to mitigate against interference.

PORT FLEXIBILITY. The PTP 800 provides a number of key interfaces including an out-of-band management port, a gigabit Ethernet port and a fiber port. T1 and T3 TDM options are also available.

SYSTEM GAIN. The PTP 800 solution offers high transmission power and receiver sensitivity which deliver the high system gain that allows you to transmit farther and faster.

PROTECTED SWITCHING SYSTEM. The PTP 800 enables you to set up a protected switching system consisting of multiple sites connected in a ring. If one link fails, the network adjusts automatically with traffic using other links to ensure fail-safe communications.

THE PTP 800 BACKHAUL SWITCH

The PTP 800 is designed to work with the versatile and powerful Cambium PTP 800 Backhaul Switch. The switch allows you to use Ethernet and T1 Lines at the same time to help increase performance, interlace flexibility, availability and redundancy, and to enable 1+1 hot standby and 2+0 link aggregation capabilities.

To learn more about how Cambium Networks' PTP 800 delivers reliable, high-performance LMR backhaul solutions, contact your Cambium Networks representative, or visit us on the web at www.cambiumnetworks.com.

