

# MHO NETWORKS BOLSTERS ITS GROWTH STRATEGY WITH BROADBAND



With the addition of Cambium PTP 800 Licensed Ethernet Microwave Solutions, MHO Networks is able to deliver flexible, high-throughput broadband to meet the demands of a new set of enterprise subscribers.

## SITUATION

Providing services in Denver, CO and Orange County, California, MHO Networks is a 21 year-old, all-wireless Internet Service Provider that migrated from being a local computer reseller to a full-fledged wireless ISP (WISP) by the late 1990s. A Cambium partner and one of the first providers to deliver wireless broadband to the fast-growing communities around Denver, MHO's customer profile had traditionally consisted of residential and small-to-medium commercial subscribers. Seeing a new opportunity, MHO recently began targeting the large-enterprise space, whose big-pipe requirements included more "upper tier" applications such as Voice-over-IP (VoIP) and high definition (HD) video. MHO needed a reliable and cost-effective growth strategy to serve this demanding subscriber set while continuing to take their own business to new levels.

## SOLUTION

MHO's existing infrastructure comprised a combination of Cambium Point-to-Multipoint (PMP) and Point-to-Point (PTP) systems. The PMP radios supported residential access, whereas the PTP solutions served more than one function to support MHO's backbone. The PTP radios were used to backhaul data from the PMP residential access points and

to deliver dedicated access for enterprise customers with greater bandwidth requirements than the PMP system could deliver.

With a requirement to add even more core capacity to service large enterprise customers, MHO decided to enhance its existing wireless network with Cambium PTP 800 Licensed Ethernet Microwave Solutions. "There comes a time when you look at your clients' growing needs and realize it makes sense to add the higher capacity afforded by licensed microwave radios to support that growth," said Michael Kriech, Vice President at MHO Networks. "That's what prompted us to purchase the PTP 800 links."

With the PTP 800 system, MHO could deliver greater throughput and capacity and meet the needs of larger commercial customers with bandwidth-hungry applications. In addition, they were eager to deploy a solution that provided the radio frequency (RF) exclusivity that is intrinsic to traditional licensed microwave technology. Another motivating factor in the 800 purchase was MHO's familiarity with Cambium's intuitive and user-friendly PTP graphical user interface (GUI) which would greatly reduce their learning curve and management man-hours.

## CUSTOMER PROFILE

### MHO NETWORKS

Denver, Colorado

- 21 year-old WISP
- Service provider to residential and commercial subscribers
- Serving greater Denver area and Orange County, California

### Cambium Products

- PTP 100, 500 and 600 Solutions
- PTP 800 Licensed Microwave
- PMP 130

### Benefits

- On-going business agility
- Reliable connectivity in challenging climate and terrain
- Meet future subscriber demands for added throughput

**“Cambium solutions allow us to deliver service-on-demand, which means if a customer with a 50 Mbps circuit needs to turn it up to 100 Mbps for a week, MHO can accommodate that requirement almost immediately.”**

– Michael Kriech, Vice President, MHO Networks.



**Cambium Products**  
PTP 100, 500 and 600 Series  
PTP 800 Licensed Microwave  
PMP 130

### **THE ONLY CONSTANT IS CHANGE**

For service providers like MHO to maintain a competitive edge in today's market, they must be able to respond quickly to constantly evolving customer requirements. As a result, flexibility is a key factor in their success. “Our competitors are changing, and our customers are asking for new services. The only constant in the market right now is change,” said MHO's Kriech. The breadth and versatility of the PTP wireless portfolio allows MHO the flexibility to respond to such fluctuating requirements.

### **EARNING CUSTOMER LOYALTY**

To keep customers, MHO recognizes that they must provide sufficient network capacity to meet the ever-increasing demand for bandwidth. When an enterprise needs big-pipe connectivity, MHO can't wait the six to eight weeks quoted by traditional copper or fiber providers. If they want to win the business, they need to deliver a reliable, high-capacity communication solution in days rather than weeks. That's just what happened when one enterprise customer needed more bandwidth fast. The agility of Cambium's wireless network solutions allowed MHO to sign the customer on a Friday and deliver a fully-functional 50 Mbps service by the following Monday. Such expedience creates happy customers, and supports a competitive edge that can position them for long-term success.

As with the addition of the PTP licensed microwave radios, Cambium's portfolio continues to expand, offering service providers more and more capabilities. As MHO's customer

base expands and demand for increasingly complex communication services escalates, the ability to cost-effectively scale-up their offerings becomes crucial.

### **CLIMB EVERY MOUNTAIN**

The Denver community deals with inclement precipitation and is surrounded by the rough terrain of the Rockies. As a result, the robust features of Cambium's PTP solutions were exactly what MHO needed to service one of their most important enterprise subscribers at the time, a company called ip5280.

When ip5280, a provider of Internet-based telephony to the Denver area, needed, high-throughput connectivity to support sophisticated VoIP and HD applications, they sought a service that was robust enough to function well in Denver's adverse conditions. MHO won their business with ruggedized PTP radios which are engineered to withstand the harshest climates and perform despite highly volatile conditions.

As their relationship with MHO progressed, ip5280 added clients to the MHO wireless network. The high-throughput wireless service was an easy sell to their clients. Ease of installation and great technical support enabled them to win new business and get the new clients going quickly. Subsequently, ip5280 was able to add a very large downtown-Denver client due to the outstanding reliability and low latency of the MHO network. The provider had no complications and is a very satisfied MHO customer.



**“As a trusted provider, MHO has allowed us to enjoy rapid provisioning and a high level of service even as our bandwidth requirements change, especially for our hi-def videoconferencing products. Service has been exemplary, and uptime has been exceptional. This has allowed us to connect with people all over the world.”**

– Daniel Kim, Director of IT, WBS Connect, a global technology services company and MHO customer that provides VoIP and high-definition videoconferencing solutions to businesses worldwide

#### **COST-EFFECTIVE TRANSITION TO LICENSED CONNECTIVITY**

The breadth of the Cambium PTP and PMP portfolio allows MHO Networks to create a dynamic infrastructure – one that can accommodate their growing capacity requirements while forging a natural migration path toward long-term expansion. With a comprehensive wireless network that includes PMP access points and subscriber modules, PTP 500 and 600 Series Wireless Ethernet Bridges and PTP 800 Licensed Microwave solutions, MHO has been able to expand its infrastructure capacity to capitalize on a wide range of customer opportunities. “A key benefit is that we can pay for the increased capacity as we grow, and upgrade capacity as needed while protecting our initial infrastructure investment,” said Kriech.

The fact that Cambium can deliver both licensed and unlicensed radios allows MHO to rapidly add network capacity, while allowing for an easy integration of the PTP 800 exclusive licensed solutions. The radios are quick and easy to deploy, user-friendly, and optimized to reduce installation and management man-hours.

#### **RESULT**

MHO Networks depends on Cambium’s wireless technology to achieve ongoing business agility. This empowers MHO to affordably grow its business by delivering reliable connectivity services with low latency, high throughput and excellent availability, despite Denver’s sometimes unforgiving climate. The addition of the PTP 800 licensed microwave systems, in tandem with an existing, efficient Cambium wireless architecture, will help MHO take advantage of future revenue opportunities and satisfy its customers’ continual demands for greater throughput.

#### **CAMBIUM PTP 800 SERIES SOLUTIONS**

PTP 800 Licensed Ethernet Microwave Solutions are IP-optimized, high-capacity wireless broadband radios designed to efficiently and affordably transport the data, voice and video traffic that high-bandwidth applications require while initiating a smooth migration to tomorrow’s all-IP-based network.