

# High-Speed Hospitality on the Range



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- DARYL BENSON,  
SENIOR NETWORK  
ENGINEER,  
MONTANA SKY

## Overview

### MONTANASKY NETWORKS (MONTANASKY.NET)

is an Internet Service Provider in the central United States that offers DSL, cable, fiber, and wireless broadband connectivity to business and residential customers. They also provide a full suite of services including: server hosting, virtualization, storage, and offsite backup support. They also provide IT Consulting for small to medium size businesses and PC support and repair to business and residential customers. With their broad range of experience, they are often called in to solve complex connectivity issues.



## Challenge

### PEOPLE LOOKING TO “GET AWAY FROM IT ALL” ON VACATION CHOOSE THE POPULAR

Glacier National Park in Montana to enjoy the pristine vistas and wide open spaces. Of course, when they vacation, people still want to be connected via the internet. “The KOA campground in West Glacier had been supporting their 300 guests with a 3 Mbps bonded DSL service delivered over a Wi-Fi system with limited coverage,” said Shawn Kimmet, Director of Outside Wireless, MontanaSky. “They called us in to see what could be done to offer faster Wi-Fi for their guests.”



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The network for customers has to support a wide variety of clients. “This is mostly a guest access network, so it supports whatever technology users want to access over the internet,” said Kimmet. “The actual administration of the campground has various management services they run including a merchandise store, small café, maintenance office and shops, and administrative offices.”

Client satisfaction was the ultimate goal at the campground. Service had always been sketchy at the KOA, mostly because of their underserved rural location, and they needed to make a significant change.

## Requirements

**THE CAMPGROUND REQUIRED A SIGNIFICANT INCREASE OF BANDWIDTH, THEY WERE UNSURE OF EXACT** bandwidth requirements they would need. “The customer wanted to cover their entire operating outdoor campground campus with connectivity,” said Daryl Benson, Senior Network Engineer, MontanaSky. “The cost analysis of deploying an enhancement to their existing Wi-Fi solution was prohibitive. Their goal was clear, they wanted every visitor to their campground to have sufficient connectivity to utilize most internet services and be able to offer reliable Wi-Fi at a reasonable cost.”

## Solution

**“WIRELESS CONNECTIVITY PROVIDES A NETWORK THAT PROVIDES** high-speed performance,” said Daryl Benson, Senior Network Engineer, MontanaSky. “The system was able to be installed in a matter of hours per module, and at a price point that fits the business.”

Montana sky chose an all wireless solution from Cambium Networks, including PTP 650 backhaul, an ePMP™ distribution, and a cnPilot™ outdoor Wi-Fi access network – all managed by the cnMaestro™ management system.



With a Point-to-point (PTP) backhaul link providing up to 450 Mbps of throughput to the park, the campground managers chose to start out with offering 100 Mbps. Given the previous 3 Mbps speeds, network performance jumped dramatically.

MontanaSky deployed the point-to-multipoint (PMP) distribution and Wi-Fi access network on telescoping flag poles to simplify installation. “It took about 2.5 hours for each of the 13 locations throughout the park,” said Benson. “The ability of the e500s to power the Force 180 subscriber modules facilitated the deployment significantly, allowing for a single cable up the pole.”

## WIRELESS BACKHAUL

PTP 650 Unlicensed Backhaul Solution	
Frequency	4.9 to 6.05 GHz
Throughput	450 Mbps



## WIRELESS DISTRIBUTION

eMPM 2000 Distribution Network Solution	
Frequency	5 GHz
Throughput	100 Mbps in a 20 MHz channel
Hypure Technology	Smart Beamforming and Intelligent Filtering for interference mitigation



eMPM Force 180 Subscriber Module	
Frequency	5 GHz
Throughput	100 Mbps in a 20 MHz channel
Hypure Technology	Smart Beamforming and Intelligent Filtering for interference mitigation



## WI-FI ACCESS

cnPilot Indoor Enterprise Wi-Fi Access Point Portfolio					
Model	Standard	Frequency	SSID	Max Users	Technology
e600	802.11ac wave 2	2.4 & 5 GHz	16	512	4x4 MU-MIMO
e410	802.11ac wave 2	2.4 & 5 GHz	16	256	2x2 MU-MIMO
e400	802.11ac	2.4 & 5 GHz	16	256	2x2 MIMO



cnPilot e500 Outdoor Wi-Fi Access Point					
Model	Standard	Frequency	SSID	Max Users	MIMO
e500	802.11ac	Omni Dual Band 2.4 & 5 GHz	16	256	2x2
e501S	802.11ac	120° Sector Dual Band 2.4 & 5 GHz	16	256	2x2



## Results

“WITH THE CNMAESTRO MANAGEMENT SYSTEM, WE ARE ABLE TO monitor the network 24/7, and the customer can focus on the daily work of running the campground,” said Kimmet. “Today we see a current count of 423 devices with a lease time of 4 hours. The system provides the coverage and the capacity that the campground needed.”

Each user on the network can now leverage 20-40 Mbps anywhere in the environment, and customers are satisfied with the experience.

