



Buckeye Mountain Leverages Cambium Technology into Rapid Deploy Solutions for Ports and Rail Yards



“When we installed 60 GHz cnWave™ fixed wireless infrastructure in San Juan, we achieved 960 Mbps throughput at the V1000 node.”

STEVE HILL,
DIRECTOR OF WIRELESS ENGINEERING,
BUCKEYE MOUNTAIN

RAPID DEPLOY TECHNICAL DETAILS

- Eliminates the cost and time of trenching power and network connectivity
- Removes the need to construct high tower assets
- Provides reliable high-speed connectivity
- Creates an outdoor wireless network without the need for any existing infrastructure

Overview

PORTS AND RAIL YARDS NEED actionable information to handle cargo quickly and efficiently without the cost of trenching fiber or power to connect Wi-Fi. With thousands of containers handled on ships and trains each day, Wi-Fi coverage at all points in a facility improves operations while reducing cost – but trenching fiber to backhaul the Wi-Fi could cause an unacceptable delay in operations. Buckeye Mountain, a communications system integrator in the United States, has leveraged fixed wireless and outdoor Wi-Fi solutions from Cambium Networks into their Rapid Deploy solutions, a portfolio of solutions for rail, maritime and intermodal facilities, to connect vehicle-mounted terminals, support video surveillance and connect tablets.



The Solution

USING EMBEDDED TECHNOLOGY from Cambium Networks, the suite of Rapid Deploy solutions:

- Eliminates the cost and time of trenching power and network connectivity
- Removes the need to construct high tower assets
- Provides reliable high-speed Wi-Fi connectivity

“Rapid Deploy was developed for our customers to implement outdoor wireless networks quickly and cost effectively,” said Matthew Hunter, Sales and Operations Principal, Buckeye Mountain. “Its flexibility, quick implementation and lack of infrastructure requirements eliminate the need for civil work. Our Rapid Deploy product family minimizes installation cost time.”

The solution is designed to successfully provide reliable connectivity in the most demanding outdoor environments very quickly and economically. Cambium Networks devices, which consume minimal electricity, enable the solar-powered solution to function. The patented solution can be quickly relocated with minimal effort to provide ultimate flexibility in providing wireless coverage where needed.

Buckeye Mountain provides a unique suite of products and services to address the challenging demands of outdoor large-scale networks for railways and ports. The system leverages Cambium Networks' point-to-point, point-to-multipoint, Wi-Fi, narrowband and CBRS wireless technologies.

INTERMODAL RAIL FACILITY

- **Challenge:**
 - Existing Wi-Fi mesh was not reliable and had very poor performance
- **Solution:**
 - RapidOne solar-powered solution
- **Value Delivered:**
 - Deployed in days
 - Reduced infrastructure costs
 - Performance exceeded customer expectations
- **Next Step:**
 - Converted two additional facilities

MARITIME PORT FACILITY

- **Challenge:**
 - Mobile cellular service did not perform adequately when containers were stacked
- **Solution:**
 - Rapid Deploy system installed
- **Value Delivered:**
 - Higher data throughput
 - Coverage across entire facility
 - Consistently reliable performance
- **Next Step:**
 - Expanded to four additional ports
 - Equipped two container ships

INTERMODAL RAIL FACILITY

- **Challenge:**
 - Existing narrowband technology and poor cellular coverage did not meet information needs
- **Solution:**
 - RapidFixed deployed at 9 intermodal facilities in months
- **Value Delivered:**
 - Higher throughput and performance
 - Centralized monitoring and management of 9 facilities
- **Next Step:**
 - Expanding to cover all facilities by 2022

Complete Solution

BUCKEYE MOUNTAIN'S RAPID DEPLOY SOLUTION provides a total end-to-end solution that can be purchased by the transportation facility or operated as a service. The solution includes:

- **Design services** with network planning, spectrum analysis, site surveys, predictive studies and heatmapping to demonstrate coverage
- **Installation services** with safety certified installers, with eRailSafe certifications and TWIC credentials
- **Remote management** to monitor and analyze clients, throughput and performance over time
- **24/7 support**

ABOUT CAMBIUM NETWORKS

Cambium Networks delivers wireless communications that work for businesses, communities and cities worldwide. Millions of our radios are deployed to connect people, places and things with a unified wireless fabric that spans multiple standards and frequencies of fixed wireless and Wi-Fi, all managed centrally via the cloud. Our multi-gigabit wireless fabric offers a compelling value proposition over traditional fiber and alternative wireless solutions. We work with our Cambium certified ConnectedPartners to deliver purpose-built networks for service provider, enterprise, industrial, and government connectivity solutions in urban, suburban, and rural environments, with wireless that just works.

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