

# First in Class Wi-Fi for Class 1 Freight Rail Operator

“Freight companies dedicate considerable human and technological resources to providing service you can count on, and Cambium Networks is proud to provide high performing solutions that meet those needs.”

- JONATHAN SHAWHART,  
BUSINESS DEVELOPMENT  
- INDUSTRIAL MARKETS,  
CAMBIUM NETWORKS

## Overview

### CLASS 1 NORTH AMERICAN FREIGHT RAIL COMPANY

recently selected Cambium Networks to upgrade its legacy Wi-Fi platform when the high cost of network ownership led it to explore alternatives that would offer the ability to expand its network with equipment that can reliably operate in harsh conditions and provide a user friendly management system. The Cambium portfolio of wireless connectivity solutions made it the unlicensed communications vendor of choice.



## Challenge

**EVERY FREIGHT OPERATOR STRIVES TO MINIMIZE OPERATING COST** without compromising the service level of its network operations. The business benefits of having Wi-Fi connectivity were clear, but the cost of Wi-Fi equipment, controller and license fees was constraining this company’s ability to provide connectivity where it was needed. For example, it had Wi-Fi in its offices and station houses, but not at refueling stations – locations more essential for operational safety and efficiency.

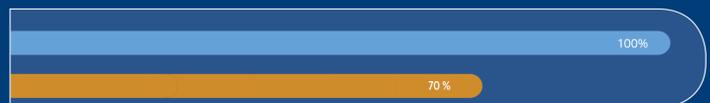
### WHY CHOOSE CAMBIUM NETWORKS

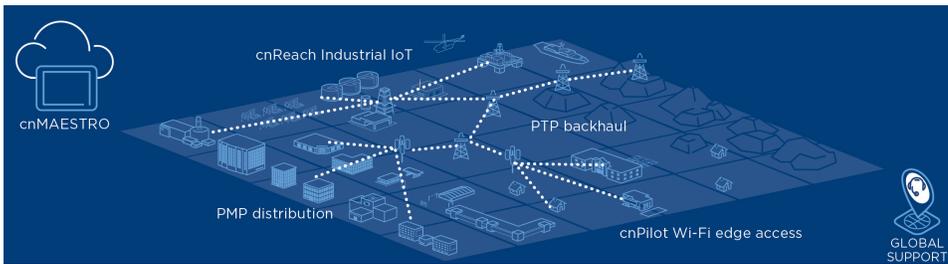
- Flexible solutions that scale to replace or upgrade existing Wi-Fi infrastructure.
- Affordable quality solutions that fit business objectives and keep total cost of ownership low.
- Robust hardware that withstands environmental impact protects investment – cnPilot™ covers the entire operation from office to train yard.

30%  
Reduction  
in Wi-Fi  
AP Costs

BEFORE

AFTER





## INDUSTRIAL WI-FI BEST PRACTICES FOR FREIGHT RAIL

- Keep personnel safe and deliveries on time with reliable, scalable solutions with remote management and advanced troubleshooting capabilities.
- Don't replace, upgrade! Protect your investments by choosing equipment that interoperates with existing networking infrastructure.

Ongoing hardware maintenance costs from field failures and lightning strikes was becoming prohibitively expensive. However, outdoor Wi-Fi access was non-negotiable; train yards and facilities need connectivity for the tablets, laptops, and other devices of operations and maintenance personnel.

The disruptive hardware cost of the cnPilot™ enterprise Wi-Fi solution made it an attractive alternative to the operator's previous installation, and satisfied requirements for the infrastructure upgrade; the new network addition needed to integrate seamlessly into the existing network architecture, have a rugged industrial specification to operate in harsh climates, and provide a user friendly controller supporting 802.11ac Wave 2 for both indoor and outdoor systems.

## Solution

**THE FREIGHT OPERATOR'S UPGRADED DEPLOYMENT FEATURES** nearly 200 cnPilot enterprise indoor and outdoor access points for Wi-Fi in train yards, refueling stations, offices, and station houses across the network, all managed by cnMaestro™ end-to-end cloud-based network controller.

## Results

**THE UPGRADE HAS REDUCED THE OPERATOR'S HARDWARE EXPENSES** by about 30% and eliminated annual licensing fees, making total cost of ownership the key factor in choosing Cambium Networks Wi-Fi solutions. The company will continue to refresh the outdoor Wi-Fi access points with Cambium Networks and expand the deployments of indoor access points moving forward.

