

Midco and Clearfield® Soared Above Challenge of Topping Tall Structures with Wireless Backhaul Solutions

Background

Founded in 1931, Midco is the leading provider of internet and networking, voice, data center, cable TV, home security and advertising services in the Midwest. Midco's networks handle vast amounts of traffic of any type.

"We were really pleased with the results of this project. The speed of this complicated deployment was remarkable...it only took 2 hours. Fortunately, the Clearfield products had the scalability and flexibility to do what we wanted, even with an unusual installation."
— Jeremy Billings, GM-Regional Engineering at Midco

Challenge

As fixed wireless connections became a greater necessity for their customers, Midco needed to find ways to create higher bandwidth point-to-point wireless backhaul connections in their network. Feeding this higher bandwidth to the top tall structures created a problem for network planners. Midco found a way around the challenge by bringing fiber from the base to the top of tall structures such as grain elevators, grain legs and water towers to serve as signal hand-off sites to link places that could not be reached with fiber in a traditional way. Additionally, Midco needed a solution that could withstand harsh natural elements, including thunderstorms, blizzards and high winds.

"Nothing out there really tackled this problem," said Jeremy Billings, GM-Regional Engineering at Midco. "So I turned to Clearfield to get a specific solution developed. Working with the Clearfield team on innovative deployments, we delivered some great results."



Midco's wireless backhaul challenge was to get creative and find ways to quickly and effectively deliver fiber from the base to the top of tall structures not set up or designed for deploying wireless equipment.

Solution



Clearfield's YOURx Flex Box with Clearview Blue Cassette, FieldShield FLATdrop and fiber jumpers installed on top of a grain elevator.

The Clearfield YOURx™ Flex Box, Clearview® Blue Cassette, FieldShield® FLATdrop and fiber jumpers solved Midco's unique wireless backhaul challenge. The YOURx Flex Box arrived at Midco with a 300' FieldShield FLATdrop pigtail. The pigtail end was first installed in a 2" conduit that ran from the top of the tall structure to the location where the outside plant (OSP) cable terminated. Splicing to the pigtail was done on the ground in an equipment cabinet with a splice tray.

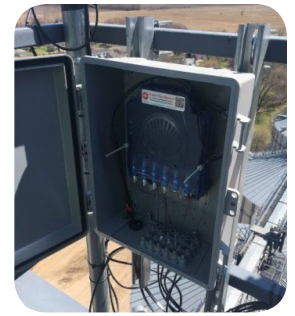
At the top of the structure, the Flex Box was mounted on a rail. Inside the Flex Box, a 24-fiber LC/UPC Clearview Blue Cassette terminated the 300' FieldShield FLATdrop going to the splice point on the ground.

From the Flex Box, the duplex assembly...LC/UPC (cassette) to LC/UPC (radio)...was installed on the structure to the individual radios; one cable per radio. The radio side of the assembly used a specially designed protective sleeve and a collar to ensure network integrity.

“Clearfield and I wanted to get the fiber from the top of a tall structure to the bottom in about 15 minutes, which seemed laughably fast to other people,” said Billings. “It was done in 5 minutes. Saving that kind of time saved money too.”

The wireless backhaul solution for Midco differed from a traditional solution because Clearfield:

- Listened to Midco’s needs, including working with components such as radios that were not specifically designed for fiber.
- Collaborated with Midco, producing custom pieces such as protective sleeves.
- Delivered a unique solution that was built for the future. Midco got 24 fibers to the top of tall structures with one cable. Often, 12 fibers are used to start. Now they have 12 more available fibers without running another cable.



Clearfield's YOURx Flex Box - a secure, flexible and scalable solution within a single wall box.

Results

“We were really pleased with the results of this project. The speed of this complicated deployment was remarkable...it only took 2 hours. Fortunately, the Clearfield products had the scalability and flexibility to do what we wanted, even with an unusual installation,” said Billings.

Midco has installed over 15 of these solutions and plans to install many more.

“The flexibility of this fiber-fed wireless solution was so ideal. Now, we can take one Flex Box loaded with fiber and customize it on-site if needed,” said Billings.

About Midco

Founded in 1931, Midco is the leading provider of internet and networking, voice, data center, cable TV, phone, home security and advertising services in the Midwest. More than 385,000 residential and business customers count on Midco services in 342 communities in Kansas, Minnesota, North Dakota, South Dakota and Wisconsin. Visit Midco.com to learn more about Midco and how the company gives back to the communities it serves.

About Clearfield, Inc.

Clearfield, Inc. (NASDAQ: CLFD) designs, manufactures and distributes fiber optic management, protection and delivery products for communications networks. Our “fiber to anywhere” platform serves the unique requirements of leading incumbent local exchange carriers (traditional carriers), competitive local exchange carriers (alternative carriers), and MSO/cable TV companies, while also catering to the broadband needs of the utility/municipality, enterprise, data center and military markets. Headquartered in Minneapolis, MN, Clearfield deploys more than a million fiber ports each year. For more information, visit <https://www.seeclearfield.com> or @ClearfieldFiber