

# Fiber Solutions Help Latin America's Data Centers Scale

**Clearfield's robust fiber management and delivery ecosystem enables flexible, high-density, and secure interconnections in demanding inside plant environments**



## Background

Across Mexico and Latin America, data center and telecom operators are facing pressure to deliver robust, scalable, and high-performance network infrastructure. Meeting these demands requires reliable, super-fast fiber optic connectivity between inside plant and outside plant environments.

As a leading provider of fiber optic technologies, Clearfield offers wide-ranging solutions. These include high-density interconnections between servers, switches, and WAN interfaces. That's why numerous sites across the region work with Clearfield to build scalable, reliable, and carrier-ready infrastructure.

## Challenges

Organizations across Mexico and Latin America face significant hurdles as they scale connectivity inside facilities and data centers. Establishing connections between inside plant and outside plant can prove disruptive if not carefully managed.

Data centers also need to implement high-density solutions capable of handling multiple MPO connections in limited rack space. Otherwise, they face the common challenge of "cable pile up." This occurs when the growing number of fiber optic jumpers between active equipment and distribution ports become so crowded in cable trays and raceways that they cause network errors or failure.

Scalability is another critical concern. As networks grow, companies must balance upfront capital investments with ongoing operating expenses. Managing connectivity for multiple carriers requires centralized integration points that ensure security and high availability without unnecessary complexity.

## Solutions

To address these challenges, Clearfield helps central office and data center operators implement a comprehensive fiber connectivity ecosystem that meets their unique needs. Inside the facility, [FieldSmart® Fiber Crossover Multi-Purpose \(FxMP\) Patch Panels](#) and fiber jumpers from Clearfield provide secure, reliable connectivity between internal systems. Plug-and-play MPO distribution cables reduce installation time, minimize errors, and solve the pervasive issue of cable pile up.

At the top of the rack, Clearfield's high-density 1U panels with mirror topology connections enhance redundancy and simplify maintenance. Modular [Clearview® Blue fiber cassettes](#) with MPO connections give operators the ability to add capacity incrementally. This "pay-as-you-grow" approach allows data centers to align capital investments with actual usage, transferring costs into OPEX as networks scale.

In the Meet-Me Room (MMR), [FieldSmart Fiber Crossover High Density \(FxHD\) Distribution System](#) frames aggregate connections efficiently, supporting up to 2,016 ports in a single deployment. The modular design and installation options minimize space requirements while maintaining flexibility. These cross-connects provided a consistent vendor solution across inside plant, top of rack, and WAN sections, reducing operational complexity while securing demarcation between multiple carriers.

Finally, the data centers used Clearfield splice cassettes, wall boxes, and passive cabinets to centralize WAN integration. This design shifted some infrastructure investment directly to the carriers, creating a more efficient economic model.

## Results

The Clearfield ecosystem delivered measurable benefits across each site. Operators reduced installation and configuration times thanks to plug-and-play solutions, accelerating deployment without disrupting operations. In addition, modular Clearview cassettes created a straightforward path to scale capacity.

High-density panel designs optimized rack and MMR space, while mitigating common data center headaches related to cable pile up. Clearfield's MPO jumpers and MPO-equipped cassettes shrink cable pile up by up to 75% through easy-to-use, multi-fiber cable assemblies with up to 24 fibers per jumper.

Consolidation of SKUs significantly reduced operational complexity. This streamlined inventory management and lowered the technical learning curve for staff. The ability to securely separate carriers ensured both redundancy and high availability, while improving overall WAN security.

By aligning capital investment with incremental operational costs, Clearfield enabled clients to expand their networks to match business needs. The result is a scalable, flexible, and future-proof connectivity foundation that supports Latin America's rapidly evolving data center and telecom ecosystem.



***Clearfield's FieldSmart Fiber Crossover Multi-Purpose (FxMP) Patch Panels provided a high-density, plug-and-play solution to solve common cabling challenges in the data centers.***

## **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 [www.SeeClearfield.com](http://www.SeeClearfield.com) or @ClearfieldFiber.*