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Clearfield Announces FieldShield, a New Pushable Fiber Delivery and Protection System That Reduces the Cost of Broadband Deployment

Innovative Small Footprint System Speeds Installation and Delivers Fiber to Environments Previously Not Viable

MINNEAPOLIS, March 7, 2013 (GLOBE NEWSWIRE) --Clearfield, Inc. (Nasdaq:CLFD), the specialist in fiber management and connectivity platforms for communications providers, today announced the FieldShield Fiber Delivery and Protection System. FieldShield is an innovative, strong and flexible platform that offers a space saving footprint across all deployment environments to support aerial, direct bury and data center last mile optical fiber needs. The result is a minimally intrusive system that speeds installation and delivers fiber to environments previously not viable. FieldShield components can be used stand alone, with existing conduit equipment or in collaboration with newer, less disruptive technologies to bring fiber wherever and whenever it is needed.

Components of the FieldShield System include:

- FieldShield Ruggedized Microduct
- FieldShield Pushable Fiber
- FieldShield Pushable Fiber Connectors
- FieldShield Assist

Benefits of the FieldShield System include:

- Least intrusive solution on the market providing easy, fast and cost-effective installation
- Space saving footprint that works with existing and exhausted conduit or new micro-trenching technologies to reach environments not previously possible
- Significant savings on installation resources and costs
- Strong crush resistant and flexible fiber jacket to deliver maximum fiber protection

"Fiber deployments have for a long time centered around large count fiber, however today's environment demands a smaller less intrusive solution that can scale," said Cheri Beranek, Clearfield President and CEO. "FieldShield is a new paradigm in the delivery and protection of fiber as it solves the challenges of how to immediately and cost effectively deploy fiber while leaving a path for future growth."

FieldShield Microduct

By reducing duct size to 10mm and smaller, FieldShield Microduct opens unlimited

opportunities to deploying and protecting fiber within the network. Installed as an empty microduct or pre-loaded with fiber, FieldShield Microduct can easily be placed through existing conduit, buried in the ground or deployed in an aerial environment (either strand-mount or up-the-tower). FieldShield Microduct is suitable for withstanding the rigors of all types of ground implementations, such as open trenching, vibratory plowing, micro-trenching, directional boring, or slot cutting. A smooth inner wall and slip lining provide minimal resistance, allowing FieldShield Pushable Optical Fiber Assemblies to be easily pushed or pulled through the transport duct. Serving as the optical fiber raceway for all "last mile" needs.

FieldShield is constructed in three tough polymer models depending on application requirements.

- Direct Buried (Toneable and Non-Toneable)
- Aerial (Figure-8)
- Plenum

"Our installation of Clearfield's FieldShield Microduct went smoothly," says Nonda Harris general manager of GeoPath. "The FieldShield duct proved to be flexible and durable when deploying it into the streets of Chicago."

Due to the column strength of the FieldShield Microduct, the occupied duct that was thought to be exhausted can almost always accommodate a FieldShield installation. During installation, the FieldShield Microduct can be deployed as a rod directly within the larger duct.

"Column strength is a key characteristic of FieldShield Microduct. It was a primary objective within our design to provide a product that had the strength *and* flexibility to open up occupied duct to new fiber," explains Johnny Hill, chief operating officer for Clearfield. "But equally important is the crush strength for direct bury applications. It's the combination of the two that provides the flexibility for challenging route paths."

FieldShield Pushable Optical Fiber

The FieldShield Microduct provides the pathway to quickly deliver the crush-resistant FieldShield Optical Fiber Cable. Handled in much the same manner as a bend-insensitive patchcord, one to 24 fibers are housed in a rugged 3mm or 4mm jacket that is crush-resistant yet flexible -- without the risk of kinking or creating unacceptable light conditions.

FieldShield Pushable Optical Fiber is a flexible optical cable made from crush resistant PBT. Manufactured with bend-insensitive fiber, FieldShield Pushable Optical Fiber is strong enough to be stapled to walls and offers a built-in, bend limiting function to prevent damage to fiber during installation. Available in bulk reels, factory terminated or pre-placed in the FieldShield Microduct of your choice, FieldShield offers total installation flexibility. Terminated with a FieldShield Pushable Fiber Connector, the polymer properties unique to FieldShield Pushable Optical Fiber allow the assembly to be pushed or pulled through the FieldShield Microduct.

FieldShield Pushable Fiber Connectors

Terminating a FieldShield Pushable Fiber Connector onto the FieldShield Fiber Cable allows it to be pulled or pushed through the FieldShield Microduct. Developed in collaboration with Senko, these field-proven SC and LC connectors are terminated and partially assembled at the factory. The connector easily passes through the Microduct's 6.0mm bore with the outer housing quickly and easily assembled by the technician in the field. This factory pre-connectorized approach enables lower installation costs by reducing costly labor in the field and presents a reliable and consistent termination. All FieldShield assemblies are guaranteed to Clearfield's FiberDeep performance level.

FieldShield Assist

In environments where traditional pulling techniques are possible, Clearfield recommends the placement of fiber with the use of an integrated pull string that comes standard in all FieldShield Microduct. In other environments, due to the Microduct's rugged but low coefficient of friction properties, FieldShield Fiber Cable can simply be pushed into place. FieldShield Fiber Cable can be pushed by hand up to 100 feet, and for longer distances, Clearfield has developed the FieldShield Assist. Using this hand-held, drill-powered tool, FieldShield Fiber Cable can be pushed into environments, such as an occupied or congested duct, that was previously considered impassible. Eliminating potential catastrophic damage due to buckling or folding of the fiber optic cable, this tool houses an integrated clutch that engages when resistance reaches a threshold that could damage the cable. A glare-resistant, integrated counter provides the installer with accurate and instant feedback on the distances pushed. As a result, fiber cable can be pushed 500 feet within OSP-rated duct and when pushing in plenum duct for an inside plant environment, fiber cable can be pushed as far as 300 feet.

"Clearfield really has remained true to their promise of keeping it simple," explains Mike Charles, VP- Telecommunications Division for ElectriCom. "We connected the Assist directly to the power drills we were already using."

FieldSmart Fiber Management and CraftSmart Fiber Enclosures

FieldShield Fiber has been designed to push directly into the Clearview Cassette. As a result, any element of the FieldSmart fiber management architecture and CraftSmart line of fiber enclosures can be used to complete the solution, allowing broadband providers to terminate, manage, and protect fiber assets wherever they are coming from or going to. FieldShield represents the latest innovation in installation, management and maintenance of fiber deployments. Maximizing existing investments, FieldShield makes it possible for fast, easy and affordable fiber deployment. Protection has never been simpler or more reliable. Used in conjunction with the Clearfield's FieldSmart fiber management for the central office, outside plant and access network, FieldShield protects fiber through every distribution point of the network.

Additional Information and Availability

Additional information, including datasheets and a demonstration video, is available at http://www.clearfieldconnection.com/product-platform/fieldshield.php. The FieldShield Pushable Fiber Platform, including all components, is currently shipping.

About Clearfield, Inc.

Clearfield, Inc. (Nasdaq:CLFD) designs, manufactures and distributes fiber optic management, protection and delivery products for the communications networks of leading ILECS, CLECs, MSO/cable TV companies and mobile broadband providers. We help service providers solve the Fiber Puzzle, which is how to reduce high costs associated with deploying, managing, protecting and scaling a fiber optic network to deliver the mobile, residential and business services customers want. Based on the patented Clearview™ Cassette, our unique single-architected, modular fiber management platform is designed to lower the cost of broadband deployment and maintenance by consolidating, protecting and distributing incoming and outgoing fiber circuits and enable our customers to scale their operations as their subscriber revenues increase. Headquartered in Plymouth, MN, Clearfield deploys millions of fiber ports each year throughout North America and beyond.

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