

Data Centers Enable the 6G and AI Revolution

The fusion of 6G and Artificial Intelligence (AI) heralds a new era. Experts agree that the data center market shows no signs of slowing down. The demand for data storage and processing, both on and off-campus, is propelling the expansion of multi-tenant and hyperscale data centers to unprecedented scales.

The imperative for ultra-high-density networking solutions demands not just capacity but also resilience. Redundancies are woven into the fabric of modern data center infrastructure, ensuring uninterrupted connectivity and seamless operations.

With a user-centric approach and a foundation grounded in network scalability, modularity, and reliability, SEL Data Center Solutions stand as a beacon in the evolving digital landscape. Going beyond the conventional, we offer a harmonious blend of standard and custom products.

As the demands on data centers intensify, let SEL, a trailblazer with a legacy spanning over a century, consistently delivering cutting-edge solutions, technologies, and products to some of the world's foremost companies, find a solution that uniquely fits your needs.

Ultra-High Fiber Count Data Centers Explained

In the relentless pursuit of data-driven excellence, ultra-high fiber count data centers have emerged as the backbone of the digital landscape. With a **minimum configuration of 5,000 servers housed in 500 racks**, these giants necessitate the **deployment of approximately 3.24 million optical fibers**, with an accompanying **demand for around 6.48 million terminations**. Ultra-high fiber count (UHFC) data centers represent a strategic response to the escalating demands of the digital age.

Global Data Center Support

Our Commitment: End-to-End Excellence



SEL is not just a supplier; we are your strategic partner in navigating the ever-evolving data center landscape. From network planning to design and integration, SEL offers a comprehensive suite of solutions tailored to the unique challenges posed by data centers.



Over 390 subsidiaries and affiliates in more than 40 countries allowing us to **support our customers no mater the location.**

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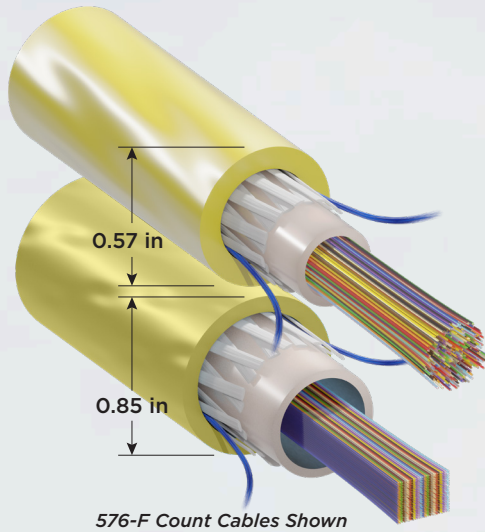
ULTRA-HIGH DENSITY NETWORKING SOLUTIONS FOR DATA CENTERS

Designed with your Needs in Mind

NEXT GENERATION THINKING™

Details Matter

When it comes to data center (DC) construction, details matter. From extensive equipment procurement lists to specific requirements of the network, every component, from cables to cabinets, requires careful consideration. Within the complex maze of DC requirements, challenges and missteps impact a project's trajectory, translating into the difference between timely completion and costly delays. SEL has partnered with the biggest names in the industry to develop next-generation thinking solutions and products to help you maximize individual storage and processing requirements.



Why Pliable Ribbon Cables? More Density. SEL's Freeform Ribbon™ Cables

- Allow for up-to 6912-F into existing 1.5" ducts
- Increases drum cable length by up to 50%
- Increases tray capacity up-to-2x compared to same fiber count using flat ribbon cables

Freeform Ribbon™ Conventional OSP Slotted Core Cables

- Up to 6912-F
- All-dielectric design (no grounding)
- 12-F, splice-ready ribbon groupings



TN Fiber Optic Splice Closures

- Suitable for High-Fiber Count 12-F Ribbon Cables
- IP68 Rated
- Available in Butt-Style or In-Line-Style Configurations

- ### Vertical Hyperscale eXchange (3K-V-HSX)
- Fiber Capacity of 3456-F (8 x 432-F Trays)
 - Wall-mountable
 - Compact size

Cable Breakout Kits for Ribbons

- Easy to Install & Use
- Intuitive Tubes & Color Coding
- Tubing length of 1 m

Rack-Mounted Splice Enclosure

- Built-in Cable Slack & Routing for Easy Access
- Fiber Capacity: 1,728 Mass Fusion Splices (4 trays x 432-F/tray)
- Sliding Splice Trays

Freeform Ribbon™ Central Tube Cables

- Up to 1728-F
- Available as I/O, Indoor, Riser, LSZH Riser, Plenum, (and Armored)
- 12-f, splice-ready ribbon groupings

Why Mass Fusion Splicing Matters

The average fusion splice time is two minutes; the industry **average labor cost** ranges between **\$60 and \$120 per hour**.

Mass fusion splicing delivers notable benefits in terms of both time and cost efficiency. The financial implications of both are significant. This technique not only minimizes the time spent on individual splices but also allows for the simultaneous splicing of multiple fibers, further optimizing productivity.



Empty or Pre-Terminated Patch Panels

- 1RU, 2RU, 3RU, 4RU, 6RU
- LGX & HD options



PrecisionFlex® FOX Splice Cassettes

- LGX footprint splice cassette 24 LC duplex outputs
- Removable mounting flanges/ears (for front or back installation)
- Factory assembled and tested

PrecisionFlex® LGX Cassettes

- Up to 3 MPO/MTP input ports and 24 LC duplex outputs
- Available in a range of configurations
- Factory-assembled and tested

Cable Assemblies

- Available in exact-length configurations
- Variations include I/O, Indoor, Armored, Riser, Plenum, LSZH, and No Jacket
- Available in Simplex, Duplex, Interconnect, and Trunk Configurations

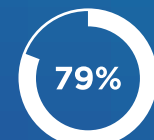


Less Deployment Stress, Less Deployment Time

SEL's line of innovative cable deployment tools offers out-of-the-box cable management without the hassle of trunk cable and jumper unraveling. Simplified installation and maintenance processes leads to reduced operational costs and quicker deployment of network infrastructure.



50% REDUCTION
in Labor



Up to
79% IMPROVEMENT
in Installation Time

-This schematic represents one solution for an Ultra-High Density Multi-tenant Data Center
-3rd party and internally achieved results

PrecisionFlex® High Density MPO Panel, Cassette and MPO to MPO Jumper

- LC Adapters Feature a Tilt-Up Mechanism
- 144-Fiber Connection per 1RU
- 12-Fiber (Quad LC x 3 Rows) Modular Cassette x 12pcs Horizontal Arrangements



SumiMap stands is a revolutionary management platform providing clarity in fiber optic cable networks. With its powerful combination of Computer-Aided Design (CAD) and database capabilities, SumiMap empowers organizations to gain critical insights into their data center infrastructure. The platform extends its capabilities to visualize and document assets, connections, and various components within the network, providing a comprehensive tool for effective management.