AFL HYPERSCALE®

Rapid Cabling
Infrastructure
Solution Guide

Rapid Cabling Infrastructure

AFL Hyperscale Rapid Cabling Infrastructure (RCI) is a comprehensive copper and optical fiber structured cabling solution developed to meet any network cabling deployment methodology. Whether cabling your data center, adding colocation cage space,
or upgrading your horizontal infrastructure – RCI is your solution.

Our solutions are engineered to perform in all customer environments that require optical fiber to support up to 100 Gbps and emerging Ethernet speeds, InfiniBand™, Fiber Channel, PONS, and other network protocols utilizing low profile, high-density structured cabling optical fiber solutions.

Comprised of specifically engineered, high-performance cabling components, RCI solutions deliver cost-effective, high-performing, and repeatable connectivity. Ultimately providing scalable, tested, ready-to-install infrastructure that minimizes risk, saves installation time, and delivers.
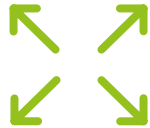
Speed

Using our unparalleled expertise and detailed engineering process, our RCI solutions offer an indisputable speed-to-market advantage.

Flexibility

Working with our Solution Engineers, you can customize cable length, stagger, end connectivity, and labeling in line with your specific project.

Scalability

The flexible nature of RCI solutions offers scalability for your network infrastructure. You provide us with your requirements and we manage the subtle nuances, volume, and logistics required to make it happen.

Cable Management

Our engineering process enables us to predict where congestion may occur. We then manage breakout locations, cable staggering, and routing to mitigate field installation issues.

Risk Aversion

RCI solutions cut labor time by 50%, in turn reducing labor costs. Having fewer technicians on site also alleviates security risks and challenges associated with installations.

Applications

Any two connection points in your network, and in virtually any network architecture, can take advantage of RCI solutions. If you're using copper or optical fiber cable to connect any devices, we can design and build an RCI solution for you. Rack-to-rack, cabinet-to-cabinet, building-to-building, port-to-port, and intra-cabinet, RCI has an engineered solution for your application.

Leaf-and-Spine Fabric

Our solutions support the TIA-942 Standard for data centers and augment its recommendations. Connecting fully meshed leaf-spine architecture requires serious strand count and bandwidth. Standard, off-the-shelf products do not provide the flexibility required when considering both bandwidth and pathway space. RCI solutions provide the ultimate design flexibility. We can assist you with breakout applications, fiber management, and pathway utilization to meet your port and scalability requirements – and do it all in a way that saves time and money while offering repeatability, reducing risk, and increasing deployment time speed.
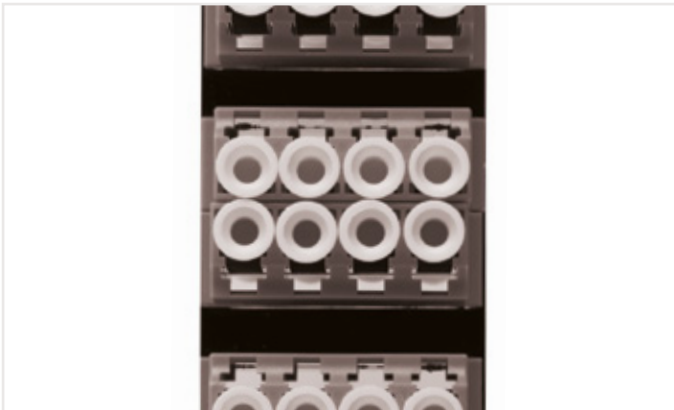
Switch Harnesses

Beyond backbone harnesses connecting PoDs and major network connection points, our solutions get down to the finer details of inter/intra-rack cabling. Providing stand-alone copper and fiber patching solutions, including Active Optical Cables (AOC) and Direct Attach Cables (DAC), or using hybrid copper and fiber harnesses, we can intelligently connect your switches and servers.

Major labor savings are achieved at this level considering the average time it takes a typical network technician to cable a rack. Not only are our solutions intuitively and efficiently packaged to reduce labor time and waste, they are also labeled and boxed with rack location information, port level source and destination labeling, and even color coding. Yes, we thought of it all.

Intra-Cabinet Harnesses

For large-scale, "cookie-cutter" deployments, a server cabinet harness customized to your unique applications can provide a quick, clutter-free installation. Ideal for data center deployments with pre-built cabinets and repeatable configurations.

Specification

All RCI products are engineered using proven patented processes and built utilizing state-of-the-art manufacturing facilities across the globe. When working with AFL Hyperscale, your project will be assigned a team of engineers to guide you through the development of your solution and ensure accurate and on-time delivery for your project. There are a number of factors to consider when engineering your solution so let our expert engineers lead the way. We provide the engineering and the solutions to handle any network architecture and most building environments. From concept to delivery and installation, we'll roll up our sleeves and be there every step of the way.
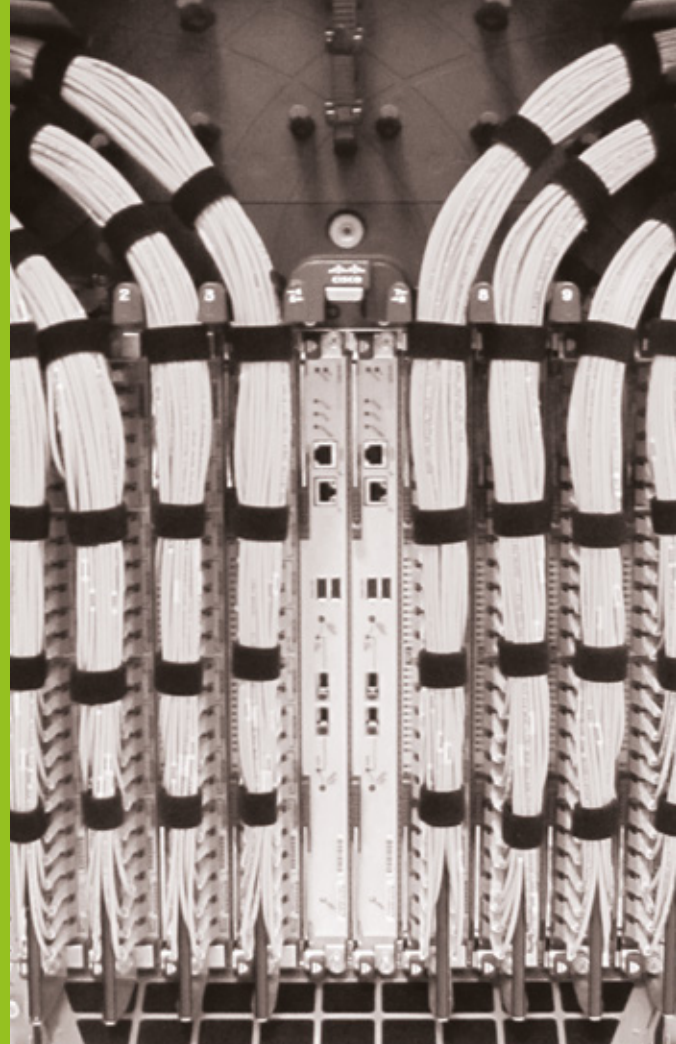

Copper Harness Design

- Delivering any category of cabling in virtually any pair count is our specialty. Color coded, labeled, tested, and designed for your application and unique installation requirements. From patch cords to multi-pair cabling, our solutions are a fit for any challenge.
- Copper solutions are available in 2 to 24 leg configurations for category cables, including voice applications up to 200-pair
- DAC, Category 6 & Category 5e, Mini-6 (28 AWG) & Mini-6a, Intra-Rack & Switch Port Distribution harnesses
- Patented CleanPatch and SwitchPack technology
- Copper patch panels, modular jacks, modular plugs, or other connectors terminated to fit your design
- Multiple bundling methodologies available – Expandable Sleeving, Overlap Sleeving, Velcro, Heat Shrink, etc.
- Engineered breakout direction and style to accommodate device port configuration and pathway
- Harnessing materials to match air handling environment; Plenum, Riser, LSZH, UTP & FTP
- Unique labeling such as source/destination installation detail and port level labeling available
- Intelligent packaging to assist with staging and deployment

Optical Fiber Harness Design

- As a company that spends a large portion of our time in the hyperscale space, we have developed patented and patent-pending solutions that we have introduced to the world's largest bandwidth consumers. Whether you're a hyperscaler or an enterprise client, our solutions are tried and tested in the Cloud. We've evolved with large global customers in the Pacific NW, allowing them to keep up with networking speeds and customer demand to offer a comprehensive solution set featuring both multimode (MM) and single-mode (SM) fiber.
- Application-specific breakout lengths from bundling exit are engineered as well as breakout type and size (fiber)
- Fiber connections using LC, MPO, adapters, cassettes and enclosures
- Pre-terminated fiber solutions are available in MM and SM from 2f – 864f counts and above on request
- High-density, low-loss, pre-terminated fiber solutions
- 10G/40G/100G and emerging solutions
- MM and SM; LC, SC, ST, FC, & MPO
- Transition technology, HFC patents

Packaging/Kitting

- Copper harnesses are uniquely coiled in boxes for direct pulling
- Package labeling corresponds to installation location (source/destination) and port identifiers
- Customer-specific labeling, color-coding, bundling, kitting, and packaging available
- Optical fiber cables spooled
- Pulling eyes available
- Reduction of waste and working sustainably is key to our approach
- Combine multiple parts and cables into a kit with just one part to reference and order
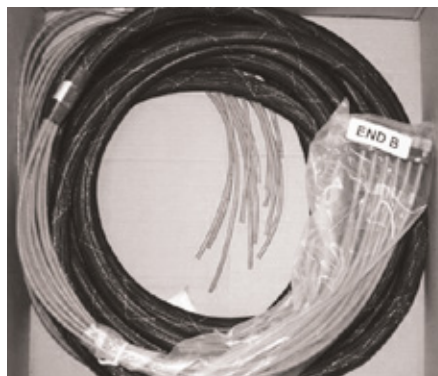
Performance/ Environment

- All category copper and optical fiber cables can be engineered into solutions
- Riser, Plenum, LSZH, OSP, ISP, Armored, high fiber count (SWR), Indoor/Outdoor
- MM fiber cables: OM1, OM2, OM3, OM4 etc.
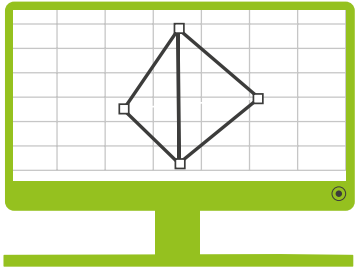- SM fiber cables: OS1, OS2, G.652D, G.657A1, G.657A2 etc.

Test

- Workmanship per IPC/ WHMA-A-620 Standards
- 100% performance tested to all current global standards: ANSI/ TIA/EIA, ISO/IEC
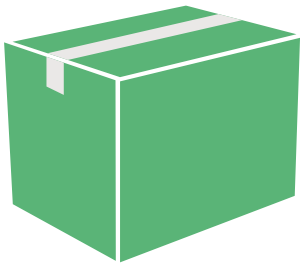- Test reports available on request

The RCI Process

Design

Production

Installation

Packaging

Satisfaction

Testimonial

"We started using AFL Hyperscale RCI products long before they gave this solution a trade name. We value the ability to quickly deploy a new solution to support our campus labs, switches, power over ethernet, or other applications where we can use a cost-effective harness. AFL Hyperscale products are engineered quickly and highly reliable. We have more than 10,000 Ethernet switch ports and every one of them is connected with RCI solutions."

AFL HYPERSCALE®

Data Center Cabling and Connectivity Experts

AFL Hyperscale is the first cabling and connectivity solution provider focused on the ever-evolving needs of data centers.

Hyperscale, colocation, and enterprise data centers are united in their pursuit to connect the unconnected, yet their infrastructure, performance, and operational challenges are totally unique.

We work collaboratively with our customers to create connectivity solutions tailored to their current needs and to the requirements of future networks. We then use our responsive, global operational capabilities and distribution network for fast delivery.

This approach has transformed how many data centers grow worldwide and is built on 70 years' combined experience in the design and manufacture of high-performance optical fiber networks, a global presence, and the backing and innovation sharing of our parent and grandparent companies, AFL and Fujikura, the pioneer in optical technology. AFL Hyperscale is your dependable partner to build a more connected world.

AFL Hyperscale - The World, Connected.

www.aflhyperscale.com