

AFL HYPERSCALE®



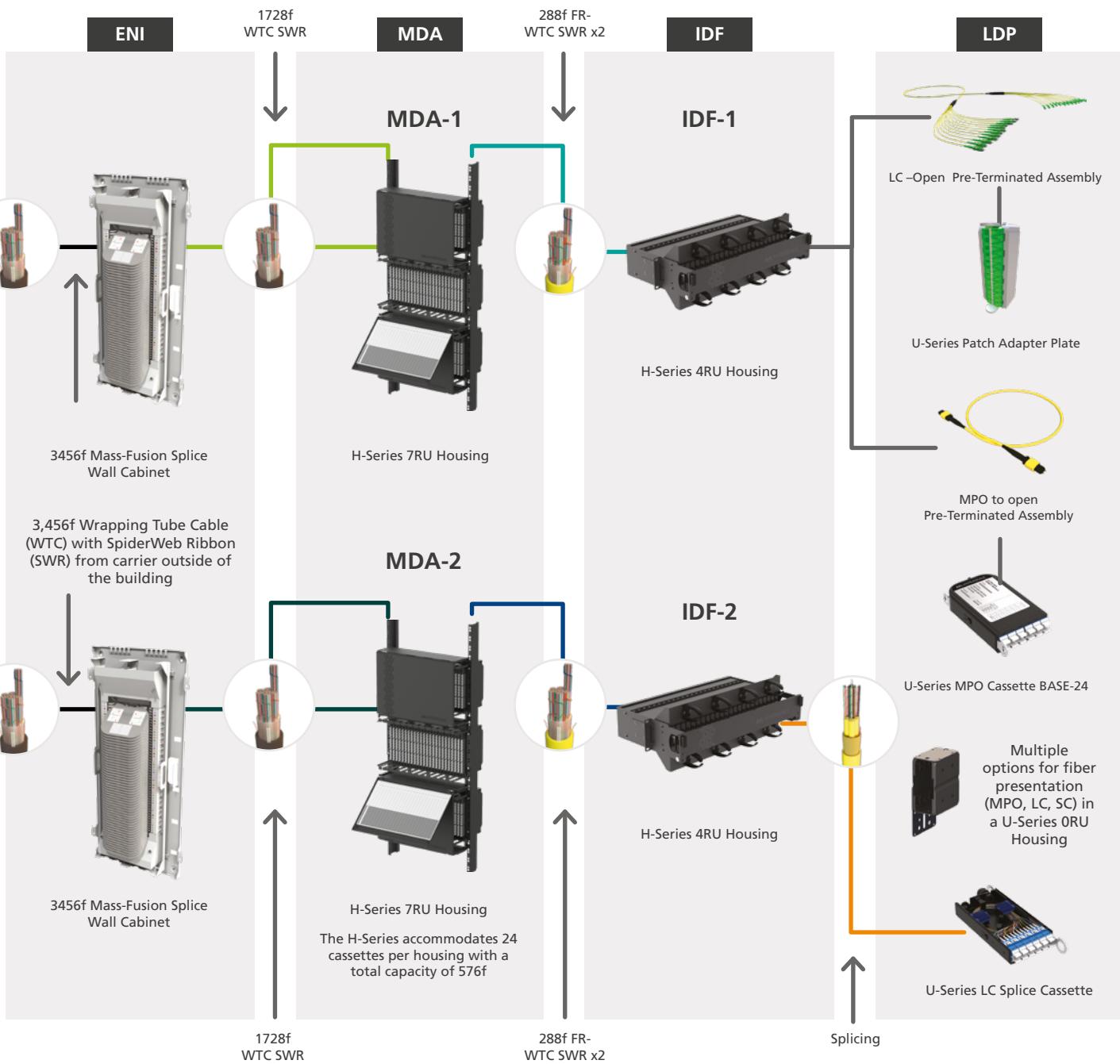
Series

**Data Center  
End-to-End  
Deployment**



# Data Center Network Topology:

## End-to-End Deployment with H-Series and SpiderWeb Ribbon® (SWR®) cable



ENI - External Network Interface

MDA - Main Distribution Area

IDF - Intermediate Distribution Frame

LDP - Local Distribution Point



# Data Center End-to-End Deployment:

## End-to-End Deployment with H-Series and SpiderWeb Ribbon® (SWR®) cable

This reference model shows how the H-Series and SpiderWeb Ribbon (SWR) cable can be utilized for an end-to-end data center deployment in a hyperscale or colocation environment.

With 3,456 fibers coming into the entry point (ENI) of the data center, mass-fusion splicing can reduce installation time by up to 70%. In this case, single-mode fiber has been selected allowing for bandwidth speeds of 400G, 100G, and 40G at longer distances than those achieved with multimode fiber.

The 3,456f Mass Fusion Splice Wall Cabinet is designed specifically to splice ultra-high fiber count cable from outside plant cable to inside plant cable. This space-saving, lightweight wall cabinet is designed for fast, one-person, installation.

In the ENI, 3,456 fibers are broken down into lower counts of 1,728f Wrapping Tube Cable (WTC) with SWR and sent to the Main Distribution Area (MDA). As MDAs can be located in different parts of the data center, this cable provides an excellent solution for compact, flexible, and lightweight cable distribution.

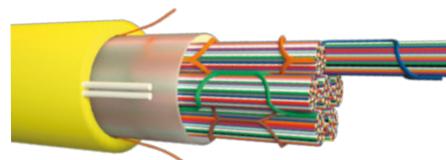
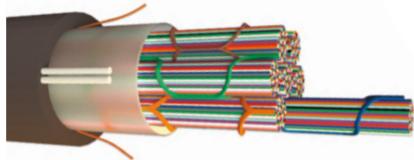
In the MDA, the H-Series Housing can be mounted and stacked on a shallow-depth rack or frame to minimize floor space required, maximize density, and therefore leave more room for tenants.

1728 fibers can be broken out into bundles of 24 fibers and distributed across two stacked H-Series housings, each containing 576 fibers. Each 24-fiber bundle can then be mass-fusion spliced to an LC presentation with an H-Series 24f LC Ribbon Splice Cassette.

With a host of pre-terminated assembly or patching options available, MDA-1 and MDA-2 can cross-connect across different halls or floors within the data center and can also be broken down into runs of 288 fibers to Intermediate Distribution Frames (IDF) located in the data hall. Between the IDF and the Local Distribution Point (LDP), a wide range of 24-fiber cable or assemblies can be deployed including cassette splicing, MPO for fast, plug-and-play installation, or pre-terminated cassettes for low-latency connections. The U-Series 2RU and 1RU housings are modular, meaning networks are configurable and scalable with 24 LC ports on the front of the U-Series cassettes.

In an end-to-end data center deployment, the H-Series provides a shallow-depth, front-access only housing that, when used with certain frames, can be bayed side-to-side, back-to-back, or against a wall - saving valuable floor space and leaving more room for customers. The H-Series is an innovative, easy-to-install physical layer solution that enables high fiber counts to be easily distributed to lower fiber counts across different data center environments, meaning your network can change and scale as customer demand continues to grow.

# Cable and Assemblies



## Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)

- Available in 6,912 - 144 fiber densities
- Compact cable construction to save duct and fiber raceway space
- Rollable ribbon construction for cable flexibility
- Suitable for mass-fusion and single-fiber splicing - fibers can be connectorized with single-fiber connector or MPO pigtail
- Outside plant, inside/outside plant, inside plant (including CPR) jackets available

[View Product Datasheet](#)

## Flame-Retardant Wrapping Tube Cable with SpiderWeb Ribbon

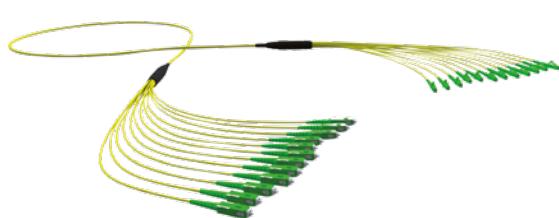
- Available in a number of flame-retardant or CPR ratings
- Compact cable construction to save duct and fiber raceway space
- Rollable ribbon construction for cable flexibility
- Suitable for mass-fusion and single-fiber splicing - fibers can be connectorized with single-fiber connector or MPO pigtail

[View Product Datasheet](#)

## LC Pre-Terminated Assemblies

- Compact, small dimension, flexible MicroCable, customizable to any length and tail fanout/stagger
- Available OM3, OM4 and OS1/OS2, and G.657A1 types
- 12 and 24 cores standard (high core counts up to 144 fibers available)
- 2mm ruggedized tails (900µm tails available)
- LSZH, OFNP, and OFNR cable jacket
- Factory-terminated and tested

[View Product Datasheet](#)



## MPO Pre-Terminated Assembly

- Compact, small dimension, flexible MicroCable, customizable to any length and tail fanout/stagger
- Available OM3, OM4 and OS1/OS2, and G.657A1 types
- 12 and 24 cores standard (high core counts up to 144 fibers available)
- LSZH, OFNP, and OFNR cable jacket
- Factory-terminated and tested

[View Product Datasheet](#)

# Cable and Assemblies



## AFL Hyperscale Enhanced Patch Cord

- Two-fiber patch cord
- Available from 0.5m to any length you require
- Insertion loss: maximum 0.25dB per connector

[View Product Datasheet](#)

# Connectivity



## 3456f Mass-Fusion Splice Wall Cabinet

- Available for mass-fusion splicing of 6,912f, 3,456f, or 288f ribbon cables
- Easy, one-person wall or rack mount installation
- Space-saving and cost-effective

[View Product Datasheet](#)



## H-Series 7RU Housing

- 7RU housing can accommodate 24 H-Series cassettes and a total of 576 LC ports
- Front-access only housing
- Slim-depth housing is ideal for shallow-rack environments
- Easy access makes adding, removing, or swapping cassettes simple and straightforward
- Available unloaded allowing you to add cassettes as your network grows
- Housing is robust but made out of lightweight aluminum alloy, enabling one-person installation

[View Product Datasheet](#)

# Connectivity



## H-Series 24f LC Ribbon/Single Splice Cassette

- Pre-loaded pigtails reduce on-site installation time
- Cassette is wider than many other cassettes on the market, facilitating easier splicing/fiber routing
- Slim cassette with single row adapter design allows easy access
- Available in tight buffer single strand pigtail and ribbon pigtail options
- Available in single-mode and multimode fiber types
- Gland fit for 2.5-6mm diameter cable

[View Product Datasheet](#)



## U-Series MPO Cassette BASE-24

- Plug-and-play cassette with 24-fiber ferrule MPO connector
- SM and MM (OM3/OM4) versions
- Polarity A, B, or C
- Up to 24 x fibers per cassette - 24 LC

[View Product Datasheet](#)



## H-Series Pass-Through Cassette

- LC pass-through cable solution with no splicing work required
- Lower insertion losses vs. MPO-LC cassette
- Slim cassette with single row adapter design allows easy access
- Available in single-mode and multimode fiber types
- Best paired with AFL Hyperscale pre-terminated cable with 24 x 600µm breakout kit in 600µm 360mm tails

[View Product Datasheet](#)



## H-Series 4RU Housing and Splice-Through Cassette

- Suitable for use in a shallow-rack environment (<300mm)
- Strong, lightweight for one-person installation
- Housing is 4RU in total with integrated cable management top and bottom
- All-front access allows flush mounting against a wall, maximizing data center floor space
- Scale as you grow with space for 24 4RU H-Series Splice-Through Cassettes
- Each cassette holds a maximum of 48 ribbon fibers or 24 single fibers

[View Product Datasheet](#)

# Connectivity



## U-Series 0RU Housing

- Kit for outside rack space U-Series cassette installation
- Single U-Series 0RU kit accepts single cassette
- Multiple kits can be stacked to create a multiple-cassette outside rack space housing system
- Front and rear cassette installation
- 2-point cassette locking position
- Compatible with U-Series MPO, pre-terminated, and splice cassettes

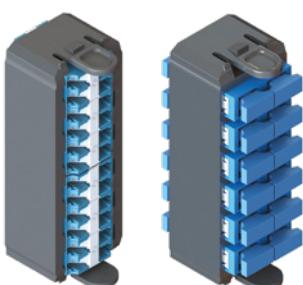
[View Product Datasheet](#)



## U-Series 2RU Pass-Through Patch Panel

- U-Series 2RU panel scales up to 12 x U-Series Patch Adapter Plates
- Up to 288 LC / 144 SC ports in 2RU
- Up to 288 LC / 144 using an MPO/MTP interface
- Compact size for installation in shallow-depth racks
- Shallow depth improves rear adapter port access
- Facilitated patch cord installation
- Cable management accessories

[View Product Datasheet](#)



## U-Series Patch Adapter Plate

- SC/LC interface
- Up to 24 x LC or 12 x SC ports in a single adapter plate
- Up to 288 x LC and 144 x SC ports in a 2RU space
- Compact in size
- LC quad shuttered adapters (24f LC)
- Secure installation with easy lock-and-release tab
- Easy front and rear adapter plate access
- Facilitated patch cord installation

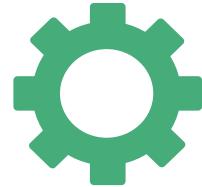
[View Product Datasheet](#)

# Your Data Center Connectivity Partner



## Global reach

Global support and manufacturing capabilities, with fast delivery across the globe.



## Innovative technology

Across fiber density, connectivity automation, splicing capability and emerging bandwidth speeds, we are at the forefront of optical fiber innovation.



## End-to-end solutions

From outside the data center to inside, we provide scalable easy-to-use, fast-to-install, high-performance network solutions.



## Comprehensive customer support

From product and installation training and installer certification to network warranties, network layouts and product design, we offer the most comprehensive customer support in the industry.

---

We pride ourselves on being a dependable partner for many of the world's largest cloud companies, social media platforms, and colocation providers, enabling them to grow and innovate – faster than any other cabling or connectivity manufacturer.

With a world-class technical team available to assist both in the field and back office, supported by pro-active global account management and highly responsive local support (in more than 25 languages), wherever you are in the world, we are here to help.



**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](http://www.aflhyperscale.com)