

## PRE-TERMINATED SOLUTION GUIDE

**AFL** HYPERSCALE®





## About

# **AFL** HYPERSCALE®

A global leader in fiber optic technology, AFL Hyperscale brings together over 70 years of design and manufacturing expertise to create next generation, end to end connectivity solutions for all data center, telecom and enterprise networks.

Using a consultative approach we bring responsiveness, innovation, and scalability to the forefront of our solutions with the aim of innovating network connectivity forever.

AFL Hyperscale. The World, Connected.

# INTRODUCING AFL HYPERSCALE PRE-TERMINATED SOLUTIONS

AFL Hyperscale pre-terminated solutions are designed to make on-site installation fast and easy, and alleviates the need for field termination or splicing, reducing installation time by up to 75%.

With an array of flexible and configurable pre-terminated solutions available, all assemblies are factory terminated and tested, giving our customers peace of mind that they have a high-performance network, tailored to the needs and density of their network.

Across MPO, Base-8 and multi-fiber assemblies, AFL Hyperscale has a comprehensive range of pre-terminated assemblies that offer performance and reliability:

- Save space, ensure rapid installations, and harness the power of Fujikura ferrule technology with AFL Hyperscale MPO assemblies
- Migrate network speed at the pace you require with a clear path from 10G, 40G, 100G to 400G and alleviate concern for ever-growing bandwidth requirements with Base-8 Solutions
- Use Multi-Fiber Pre-Terminated Solutions to speed up your deployment, by configuring the right assembly for your environment or application

Designed and manufactured by AFL Hyperscale, you have the added benefit of industry leading expertise, excellent customer support and first class service.

 [www.aflhyperscale.com/preterminated-solutions](http://www.aflhyperscale.com/preterminated-solutions)



**HIGH**  
PERFORMANCE



**FLEXIBLE**  
CONFIGURATIONS



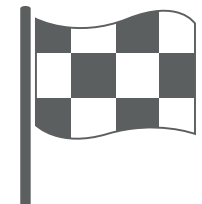
**MIGRATES**  
EASILY



**REDUCED**  
INSTALLATION  
TIME



**SCALABLE**  
SOLUTIONS



**FAST**  
LEAD TIMES

# AFL HYPERSCALE PRE-TERMINATED SOLUTIONS



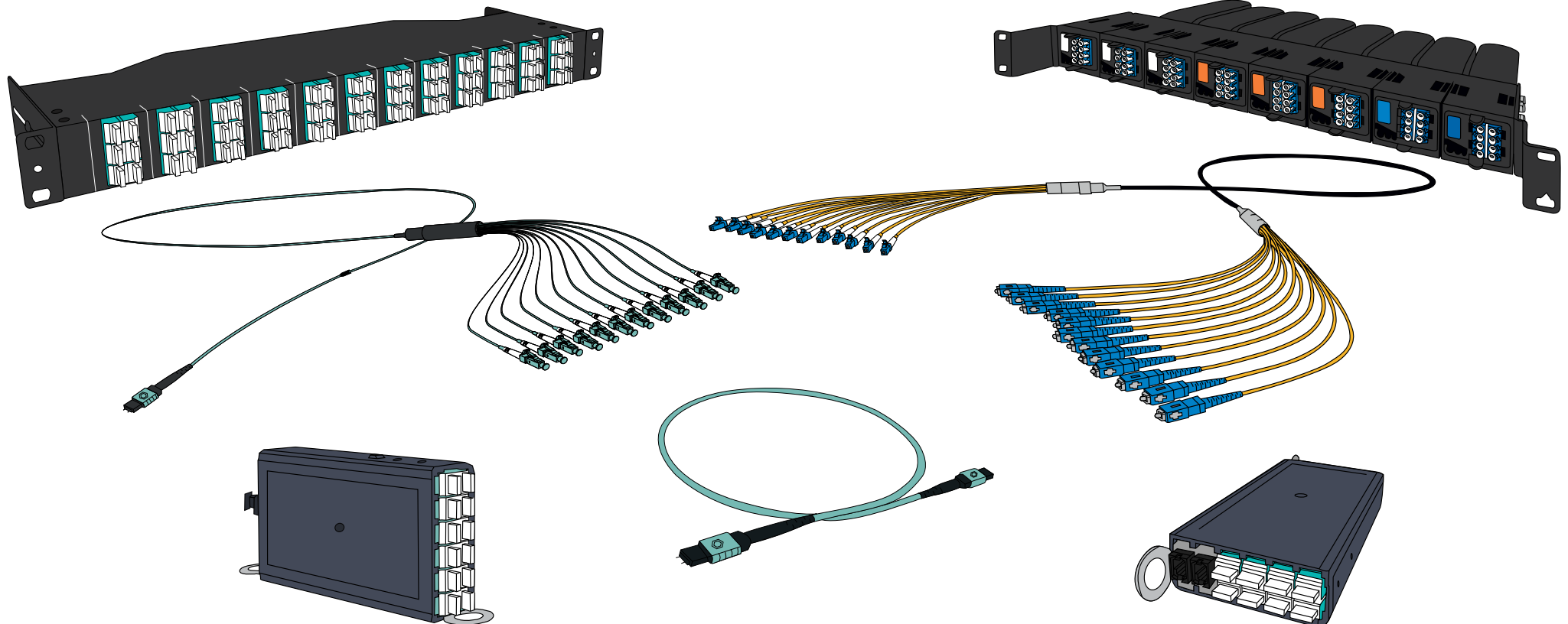
MPO



BASE-8



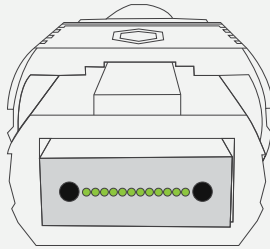
MULTI-FIBER  
ASSEMBLIES



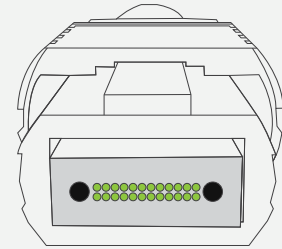
# AFL HYPERSCALE PRE-TERMINATED SOLUTION OVERVIEW

## MPO ASSEMBLIES

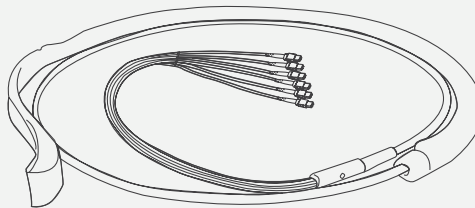
Increase density and save space with AFL Hyperscale MPO solutions. With a wide array of trunk, fan-out and modular assemblies, high-performance networks can be upgraded or installed quickly.



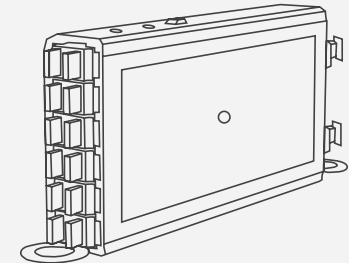
12 Fiber MPO Assemblies



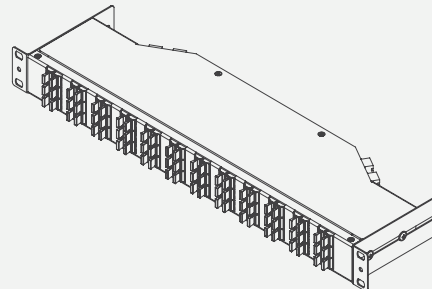
24 Fiber MPO Assemblies



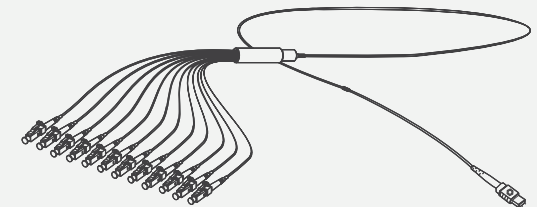
High-Fiber Count MPO Trunks



MPO to LC/SC Modules



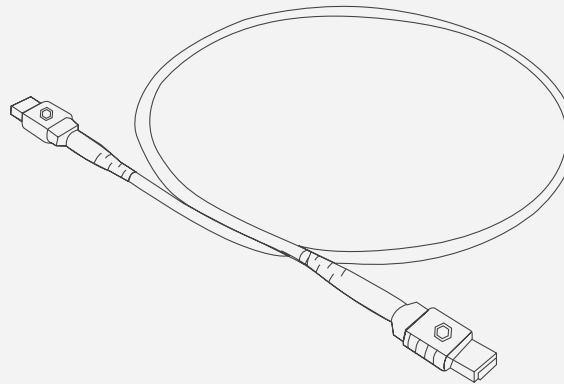
Ultra-High Density MPO to LC Panels



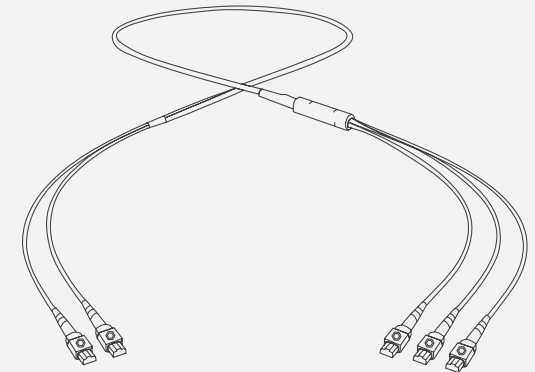
MPO Fanouts

## BASE-8 ASSEMBLIES

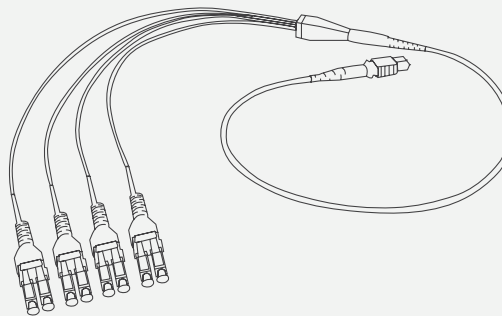
Simplify higher bandwidth migration with AFL Hyperscale Base-8 solutions. From 10G, 40G, 100G to 400G Ethernet protocols, AFL Hyperscale has an array of trunk, fanout and modular assemblies to achieve efficient, high-speed connections.



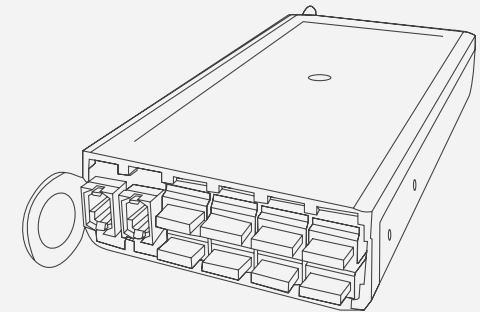
QSFP Trunks



High-Speed Migration Transition Assemblies



QSFP to SFP Fanouts



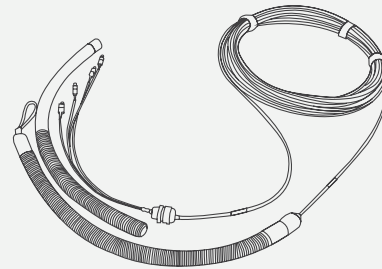
BASE 8

# AFL HYPERSCALE PRE-TERMINATED SOLUTION OVERVIEW

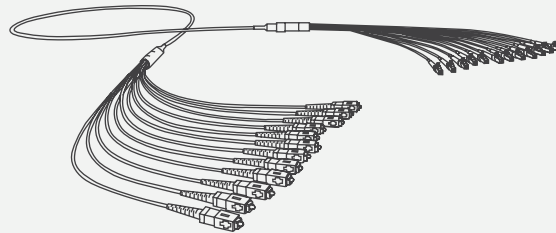
## MULTI-FIBER ASSEMBLIES

AFL Hyperscale recommends using pre-terminated multi-fiber assemblies wherever possible.

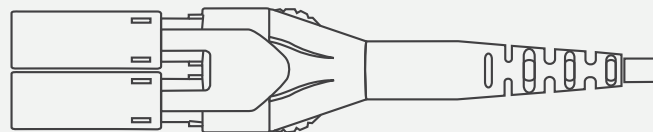
Get the exact assemblies required for your network with our easy to use configurators, and save up to 75% installation time by alleviating the need for field terminations or splicing.



Multi-Fiber Assemblies



High Fiber Count Assemblies



Patchcords

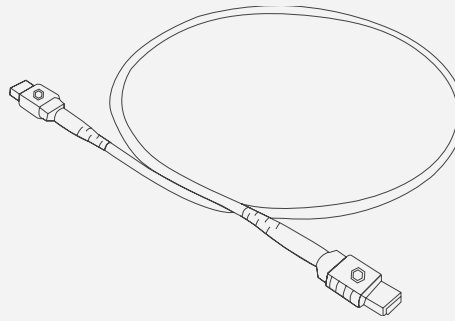


## AFL HYPERSCALE MPO ASSEMBLIES

AFL Hyperscale MPO Assemblies can be rapidly deployed and can provide high-density in a very small footprint.

All AFL Hyperscale MPO assemblies use the latest ferrule technology from Fujikura, a pioneer in optical fiber technology, and address the needs of customers who want an effective, optimized, high-performance, connector that will support their critical network.

### AFL HYPERSCALE MPO TRUNK ASSEMBLY



MPO trunk assemblies facilitate rapid deployment of high density cabling in data centers and other high fiber environments.

With our range of compact cable constructions, improve airflow and reduce congestion in containments and ducts. MPO trunk assemblies are available across a variety of cable and fiber types, core counts, and lengths.

Whatever your application or density - we can build the trunk for you and deliver it quickly.

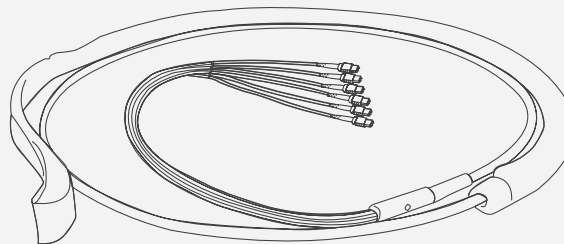
**12-144**  
FIBER ASSEMBLIES

**12 OR 24**  
FIBER MPO CONNECTORS



PREMIUM CONNECTORS

### HIGH FIBER COUNT MPO TRUNKS



Make the most of the available space in your ducts or containment with High Fiber Count MPO trunks.

High density installations are made quick and easy, with options to go from MPO to MPO or MPO to discrete connector.

With cables available for internal and/or external use, configurable tail lengths and tail diameter, high fiber MPO trunks are ideal across a range of high-density applications.

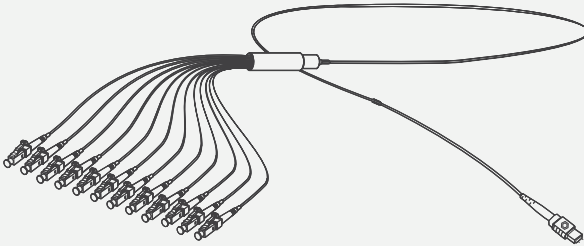
**12-288**  
FIBER ASSEMBLIES

**12 OR 24**  
FIBER MPO CONNECTORS



PREMIUM CONNECTORS

## MPO FANOUTS



MPO Fanout Assemblies are offered across a variety of fiber types, core counts, cable constructions, and each use our patented break-out module technology to provide a robust, secure transition between cable and discrete connector tails.

Assemblies are typically used to directly connect MPO cassettes, panels or backbone trunk assemblies with active equipment ports, maximizing costly Data Center rack space and easing cable management.

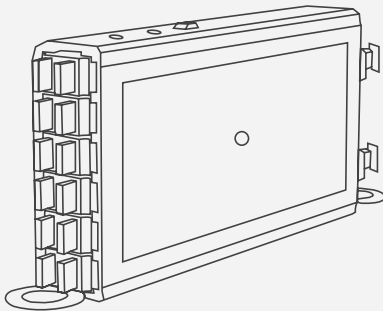
**12-24**  
FIBER ASSEMBLIES

**12 OR 24**  
FIBER MPO CONNECTORS



**900µm or  
2mm Tails**

## AFL HYPERSCALE MPO MODULE



The UHD MPO Module enables fast plug and play installation.

With a range of rear loading MPO connector options, fiber types, and front facing single form factor connections available, the UHD MPO module can be quickly loaded into the UHD chassis and quickly disconnected or reconfigured for Moves, Adds and Changes.

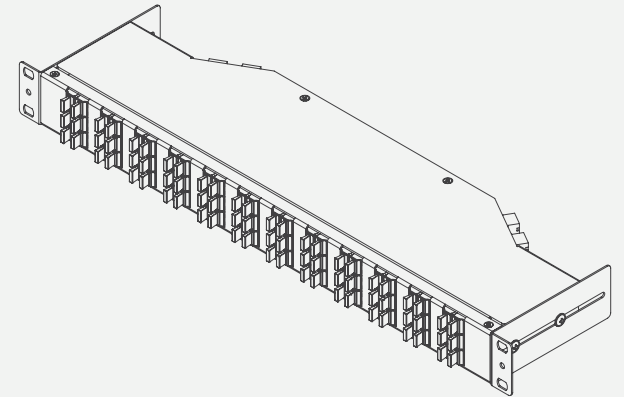
**A B C**  
RANGE OF POLARITIES

**12 or 24 Fiber  
OM3/OM4/  
Single mode**

**12 OR 24**  
FIBER MPO CONNECTORS

**LC or SC**

## AFL HYPERSCALE® MPO PANELS



For fast, easy installation, guaranteed high performance, and the most from your rack-space. Our range of MPO panels pack the highest possible port density into 1U of space with 12 MPO ports at the rear, and 144 easily accessible LC ports at the front.

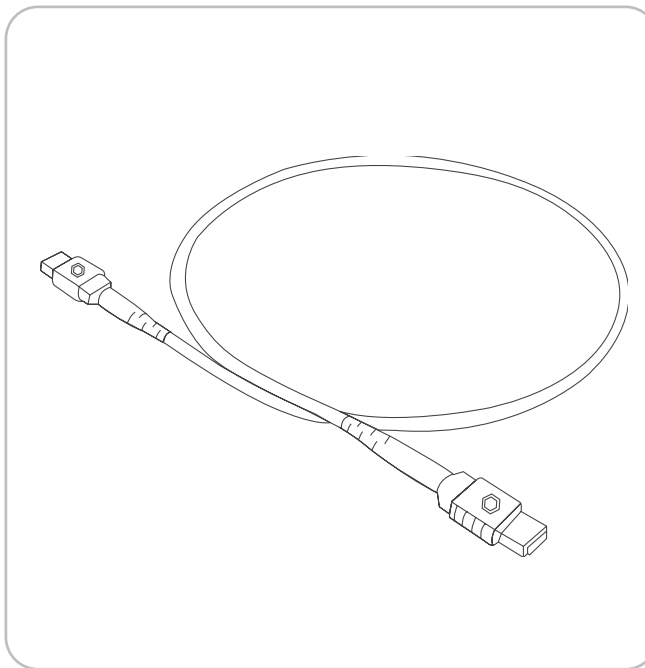
**SHALLOW DEPTH**  
↑ **11.7cm**



## AFL HYPERSCALE BASE-8 ASSEMBLIES

Base-8 Solutions are showing the way for high-speed networks. With migration pathways now at 40G and 100G, swiftly moving towards 200G and 400G.

Our Base-8 range is flexible, future proof, scalable, easy to install and here to help your data center stay ahead of ever-increasing bandwidth requirements.

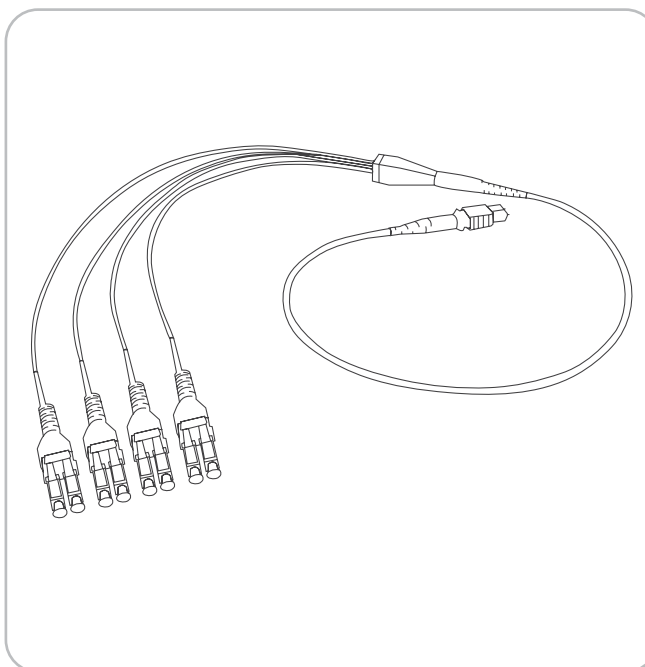


### BASE-8 TRUNKS

AFL Hyperscale Base-8 trunks utilize MPO connectors for plug-and-play installation and enable 40G transmission using 4 x 10G channels, or 100G transmission using 4 x 25G channels.

Base-8 trunks provide an efficient way to achieve higher speeds now and in the future.

Available with 4.5mm cable diameter trunks or as 3mm patch cords, AFL Hyperscale Base-8 trunks improve airflow and cable management space in a high density environment.

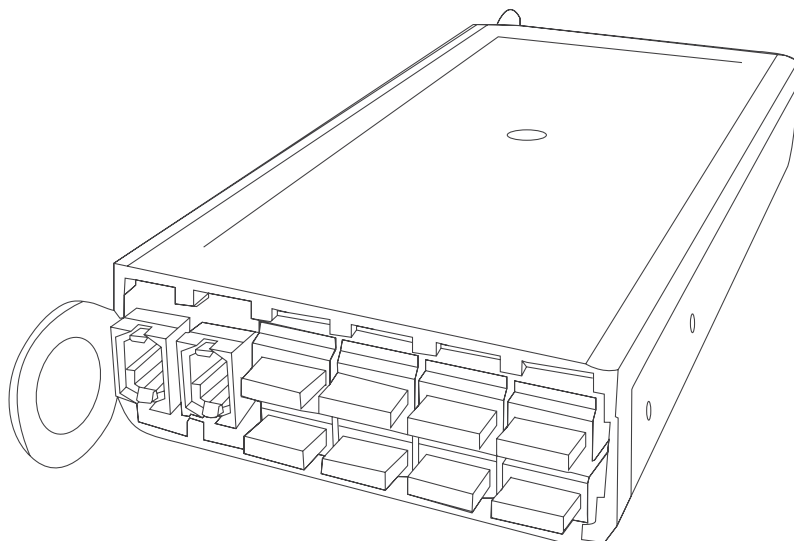


### BASE-8 FANOUTS

For high speed networks where power budgets are critical, AFL Hyperscale Base-8 Fanouts are the right solution.

With ruggedised tails in staggered or non-staggered formations, all variations offer high performance, and a reliable connection from a QSFP+ transceiver to 8 SFP+ ports, (4 x LC (DX) channels).

## BASE-8 MODULES

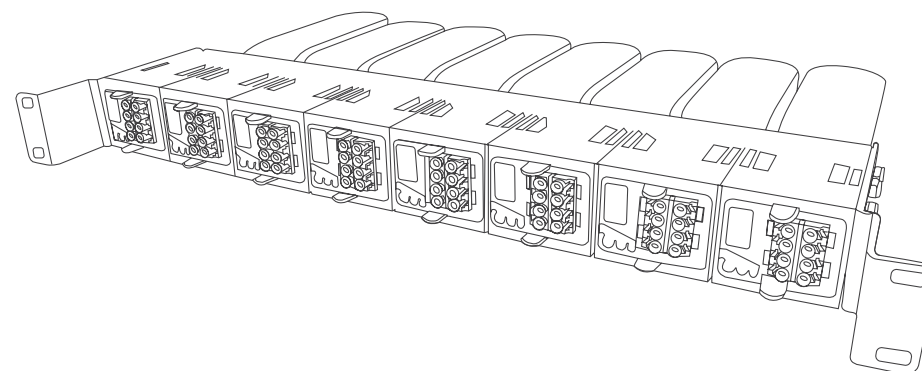


Upgrade your data center to meet new high speed applications with AFL Hyperscale BASE-8 UHD Modules.

Each module provides an interface between QSFP+ transceivers with MPO interface, to SFP+ devices with an LC Interface, bringing high-speed migration capabilities into a patch panel presentation.

This type of module provides a perfect alternative to fixed equipment to equipment connections provided by QSFP+ to SFP+ Fanout Assemblies.

## TOP OF RACK (TOR) PANEL AND MODULES



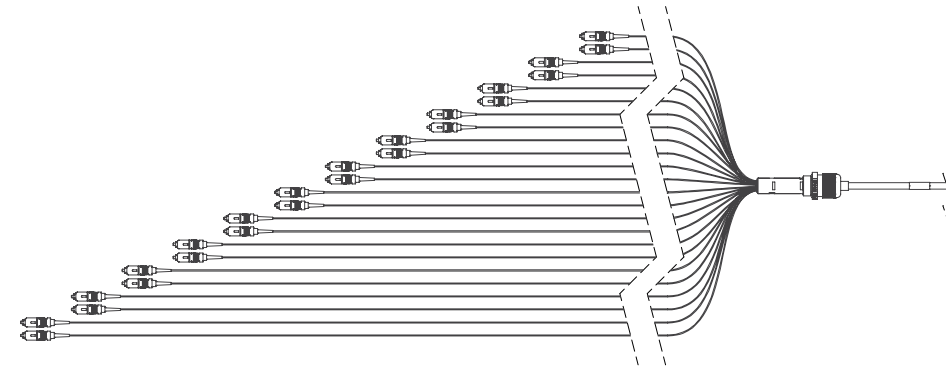
The 1U TOR panel provides intermediate patching positions to enable Moves, Adds or Changes not available with single QSFP+ MPO to LC Fanout connections, whilst also providing performance and cost advantage against transition panels.

The Modular TOR Panel is ideal for leaf and spine applications that need to allow for 10/40G migration or 25/100G, and has been designed to provide a host for MPO to LC fanouts allowing high density intermediate LC patching between an MPO and LC (DX) interface.

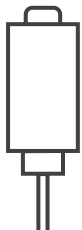
# AFL HYPERSCALE MULTI-FIBER PRE-TERMINATED SOLUTIONS

AFL Hyperscale multi-fiber pre-terminated solutions offer high performance, fast installation and flexible configurations.

Fully customizable from every aspect including fiber type, fiber count, cable construction, connector types, tail diameter, tail length, assembly length and labeling - all pre-terminated solutions are factory made, tested and fully traceable, alleviating the need for field terminations and reducing installation time by up to 75%.



1



## SELECT YOUR CONNECTORS

Select your discrete connectors from our wide range of Ultra Polished or Angle Polished connectors.

2

**2-288**  
FIBRE COUNT

## CHOOSE YOUR FIBER COUNT

Whether a small network link or connecting to a full blade server - select your fiber count from 2 fibers all the way to 288.

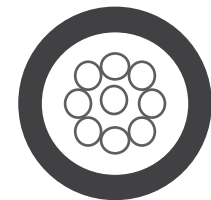
3

**MULTIMODE  
SINGLE MODE**

## SELECT YOUR FIBER TYPE

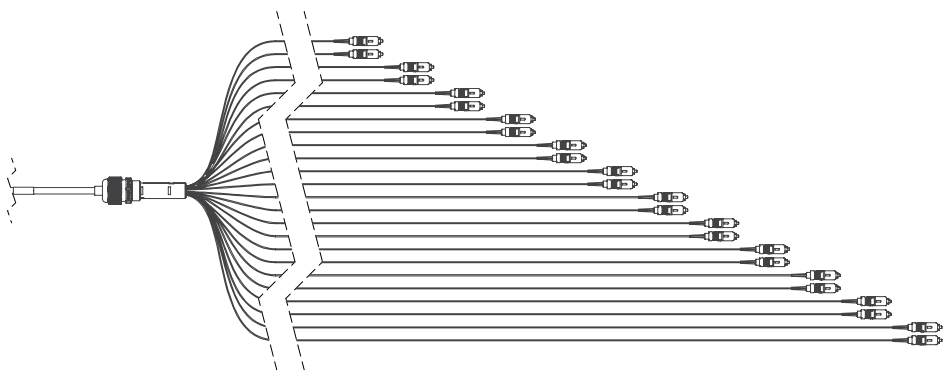
Whether a telecom network or high bandwidth enterprise data center, select the right fiber type for your network

4



## CABLE CONSTRUCTION

Require small diameter cable because space is at a premium, or do you require steel-tape armor for an external interconnection? Select the right cable for your application from our broad range of cable types



\*drawing is for illustration purposes only

## PATENTED TECHNOLOGY

All AFL Hyperscale multi-fiber pre-terminated assemblies use patented\* breakout modules to provide a secure transition and protection of fibres when breaking out to 900µm, 1.6mm, 2mm or 3mm tails.

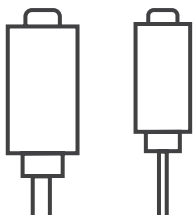
The innovative design guarantees assemblies of 2 to 288 core fiber cables superior tensile strength and crush resistance (true 1000 Newton pulling strength). This technology is the ideal choice for both long and short trunks and can be configured with both multi-fibre MPO and discrete connectors.

## FEATURES AND BENEFITS

- Fiber counts from 2-288
- High tensile strength and crush resistance
- Can be secured to cabinet mounting profile for space saving
- Compact cable and module dimensions ease duct and rack congestion
- Pre-terminated assemblies remove the need for splices giving improved power budget

\*Patent No. GB 2472014, WO2011010126, EP2457116

5



### DECIDE YOUR TAIL DIAMETER

Routing into the back of a patch panel, and space is limited, select 900µm tails. Feeding into the front of a panel, or into active equipment, ruggedize your tails for added protection.

6



### TAIL LENGTH MEASUREMENT

If our standard staggered or direct fanout configuration doesn't suit your needs, let us know the tail lengths you require.

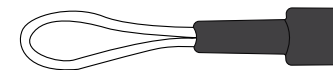
7



### DEFINE TIP TO TIP LENGTH

However long your assembly, AFL Hyperscale assemblies are well protected in a bag or on a reel, and fully tested before dispatch.

8



### DEPLOY QUICKLY

Add convenience to your installation by selecting if you want protective tubing (some assemblies only) each end, with a pulling eye attached one end or both.

