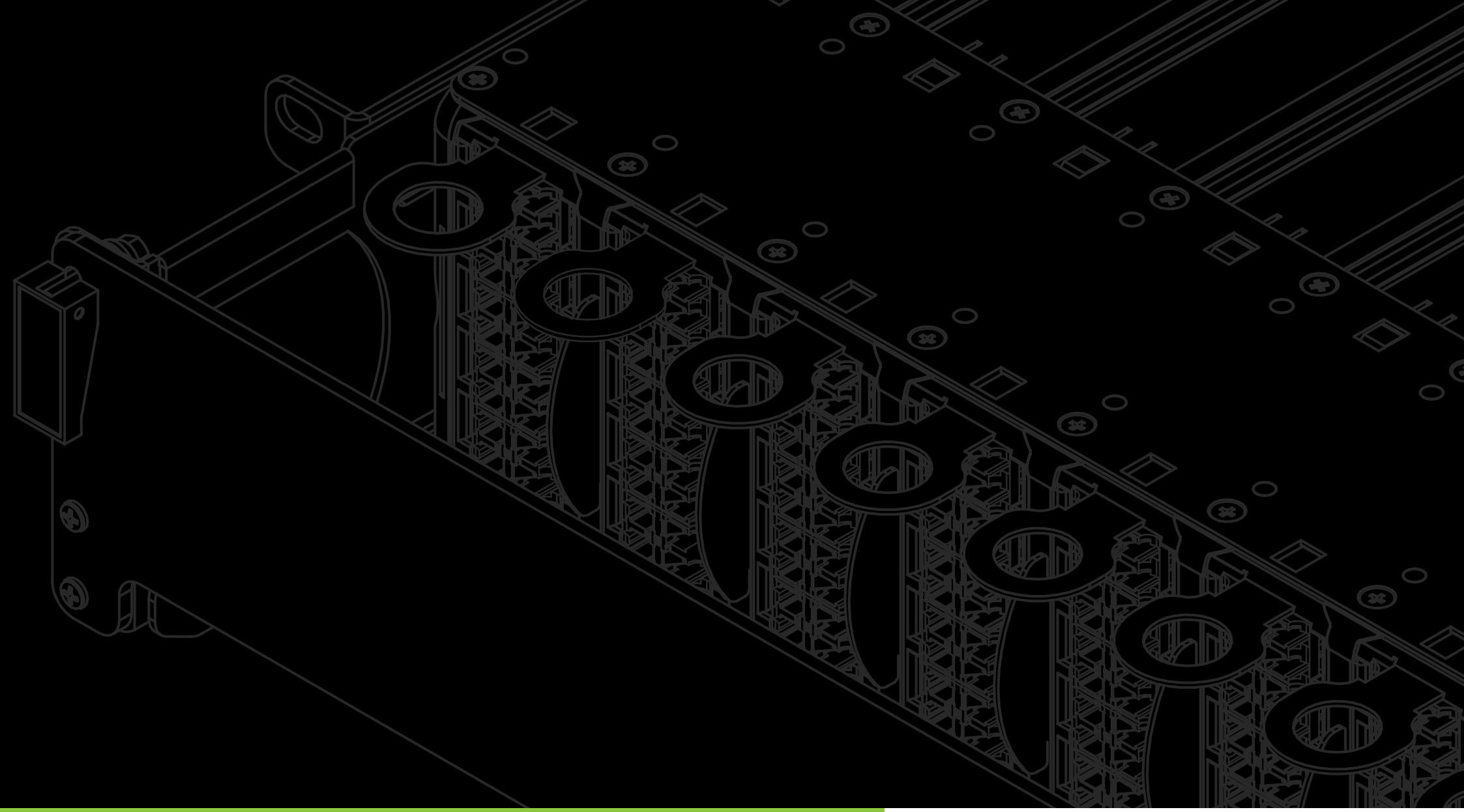


ULTRA HIGH DENSITY SOLUTION GUIDE

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.

THE AFL HYPERSCALE UHD SOLUTION AS EASY AS A,B,C

A: ASSEMBLIES
B: BUILDING BLOCKS
C: CHASSIS

Alleviate the concern for ever increasing bandwidth posed by Internet of Things (IoT), implementation of 5G, more connected devices and the continued growth of cloud computing, by using the AFL Hyperscale Ultra-High Density (UHD) Solution.

Made up of three core product sets; Assemblies, Building Blocks and Chassis, the AFL Hyperscale UHD solution enables you to scale your network with fast, easy, plug and play installation. Grow at the pace your business requires with a clear migration path from 40GB/s to 400GB/s and beyond, and all the while, have the assurance that your critical infrastructure is built on one of the most reliable, high-performance network solutions in the world.

Assemblies consist of high-performance, customizable MPO, pre-terminated, and patchcord assemblies. Building Blocks include UHD Modules, that can be connected by MPO, direct termination(LC or SC), or by splicing (LC or SC), as well as MPO adaptor plates, QSFP transition modules, and copper modules. Chassis consist of 1U, 2U and ZeroU configurations, 6U and 9U patch frames, and UHD MPO to LC panels.

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/uhd-solutions

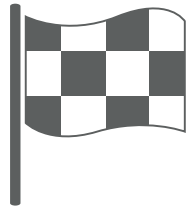
HIGH
PERFORMANCE

FLEXIBLE
CONFIGURATIONS

MIGRATES
EASILY

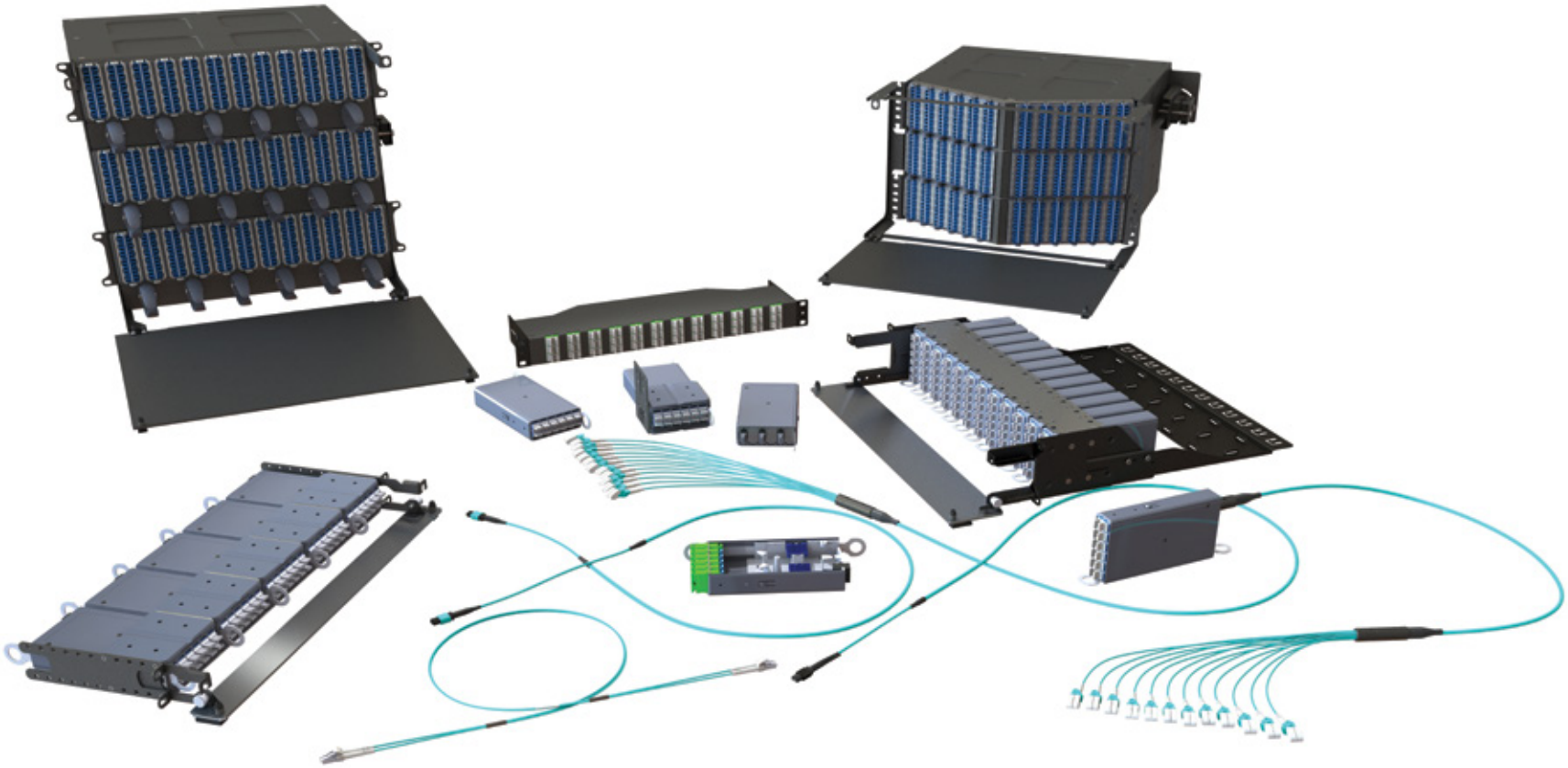
REDUCED
INSTALLATION TIME

SCALABLE
SOLUTIONS



FAST
LEAD TIMES

THE AFL HYPERSCALE UHD SOLUTION



THE AFL HYPERSCALE SOLUTION CAN ALSO BE USED AS PART OF THE AFL HYPERSCALE ULTRA-HIGH FIBER COUNT SOLUTION

DATA CENTER

TELECOMS

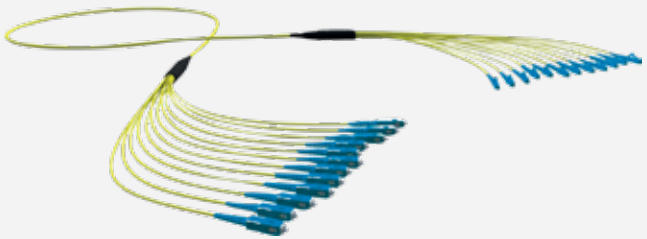
ENTERPRISE

THE AFL HYPERSCALE UHD SOLUTION IS AS EASY AS A,B,C

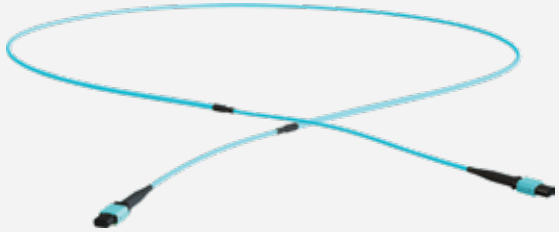
A:
ASSEMBLIES

AFL Hyperscale recommends using pre-terminated assemblies whenever possible.

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



Pre-Terminated Assemblies



MPO Assemblies

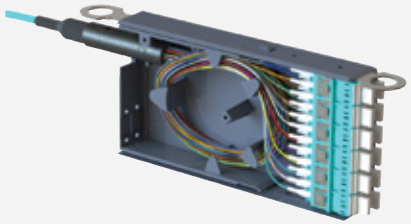
Patchcord Assemblies

B:
BUILDING BLOCKS

Easy to install and quick to connect. UHD Modules and Adapter Plates are readily available in a number of different configurations for a number of different applications.

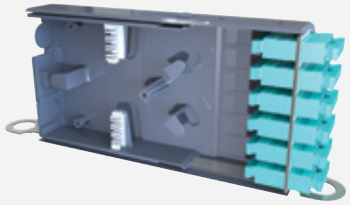
UHD MPO to LC/SC Module

Base-8 MPO to LC Modules

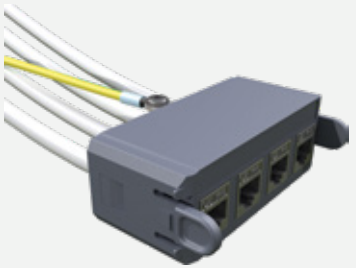


UHD Pre-Terminated Module

Plate Module



UHD Splice Module



UHD Copper Module

THE AFL HYPERSCALE UHD SOLUTION IS AS EASY AS A,B,C

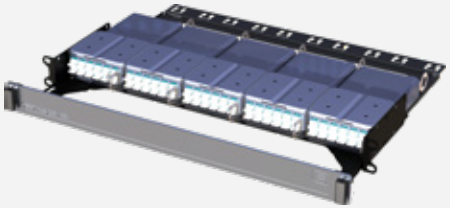
C:
CHASSIS

UHD chassis, frames, and panels maximize the full potential from your available space.

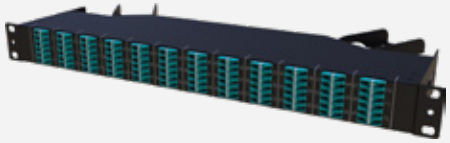
Modular and accessible, our UHD management solutions facilitate quick deployments, easy Moves, Adds and Changes (MACs) and provide potential to scale.

UHD 2U Modular Chassis

UHD 2U Modular Patching Frame



UHD 1U Modular Chassis



UHD 1U Slimline Panel

UHD 0U Module Chassis

UHD 6U Splice and Patch Cabinet

THE AFL HYPERSCALE UHD SOLUTION IS EASY AS A, B, C

A: ASSEMBLIES

AFL Hyperscale design and manufacture a complete range of configurable fiber assemblies including multi-fiber pre-terminated assemblies, MPO assemblies, patch cords, and pigtails. All assemblies are factory terminated, machine polished and tested, ensuring the highest quality, and performance for your network.

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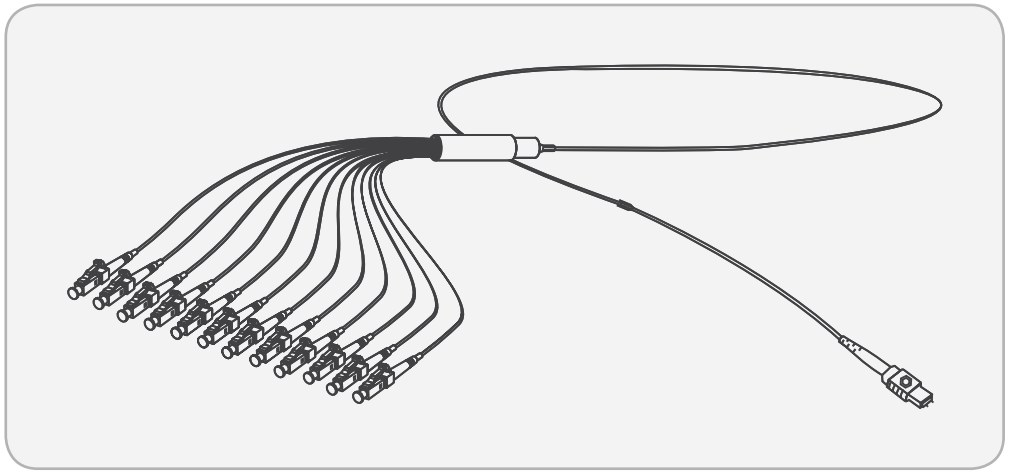
MPO ASSEMBLIES



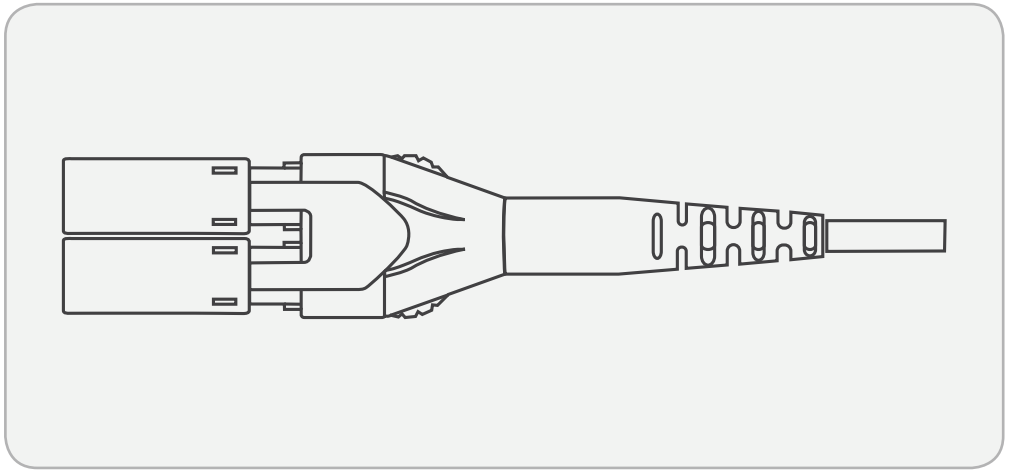
Configurable in every aspect including polarity, gender, fiber count, fiber type, cable construction and length, AFL Hyperscale MPO assemblies are built for purpose.

AFL Hyperscale MPO assemblies utilize MT ferrules from Fujikura, a pioneer in optical fiber.

ASSEMBLIES INCLUDE:

- QSFP+ to SFP Assemblies
- QSFP+ to QSFP+Trunks
- MPO Trunk Assemblies (4.5mm jacket)
- MPO Patch Assemblies (3mm jacket)
- MPO to LC/SC
- 3:2 Transition Assemblies
- 24 Fiber Ferrule Assemblies
- High Fiber Count MPO Assemblies (up to 144 fibers)

PATCHCORD ASSEMBLIES

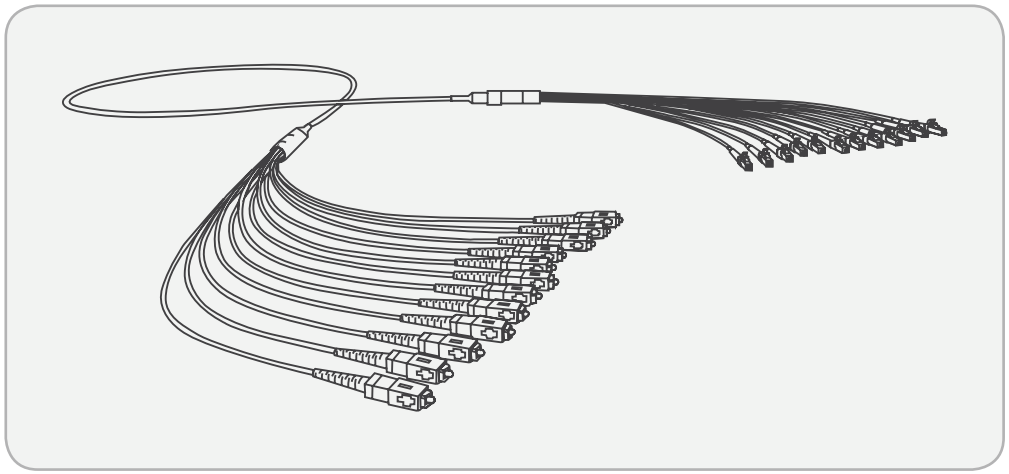


AFL Hyperscale offers a wide range of patch cords to perfectly suit your network application.

ASSEMBLIES INCLUDE:

- Enhanced Patchcords
- Data Center Patchcords
- Telecom Patchcords
- Uniboot Patchcords
- Reversible Polarity Uniboot
- Short Boot Patchcords

PRE-TERMINATED MULTI-FIBER ASSEMBLIES



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 port labeling - all pre-terminated solutions are factory terminated, tested and fully traceable, alleviating the need for field terminations and reducing installation time by up to 75%.

ASSEMBLIES INCLUDE:

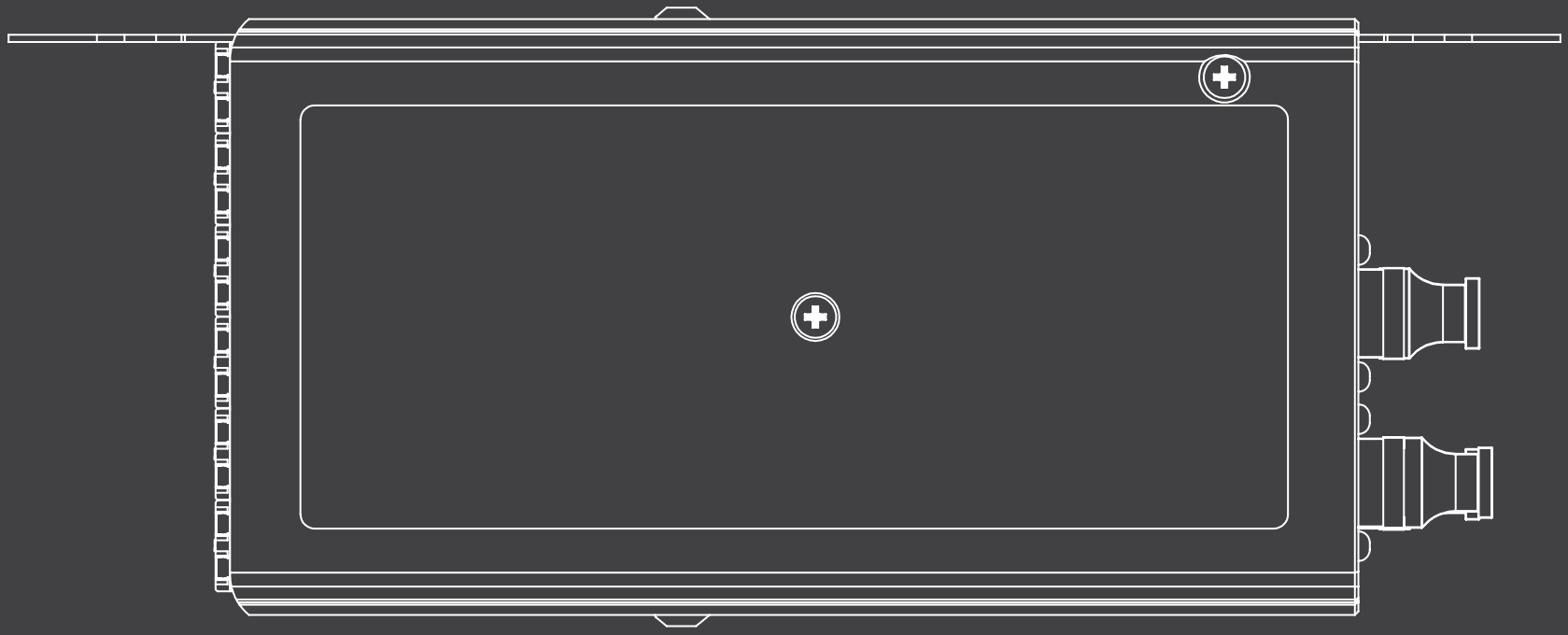
- 2-288 Fiber Assemblies
- Internal/External Assemblies
- CPR Rated Assemblies
- Internal/External Armoured Assemblies

THE AFL HYPERSCALE UHD SOLUTION IS AS EASY AS A,B,C

B: BUILDING BLOCKS

With MPO modules, pre-terminated modules, splice modules, adaptor plates and copper modules available, the AFL Hyperscale UHD Solution enables you to connect in a way that suits you.

Module line drawing is for illustration purposes only and does not reflect all module varieties



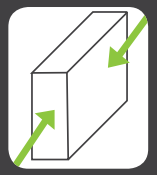
*This drawing is to scale

The AFL Hyperscale UHD Module is available in multiple configurations, adaptable for any network application.

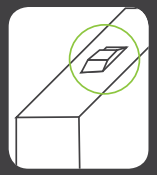
MPO modules provide plug-and-play connectivity, enabling fast deployment and makes Moves, Adds and Changes easier than ever. Splice modules combine convenient high-density termination and splicing capabilities in the field. Pre-terminated UHD Modules provide higher performance to your network by diminishing the number of links in the channel.

All AFL Hyperscale UHD Modules combine excellent performance across all the product lines and each includes key features such as:

EASY MODULE ACCESS



FRONT AND REAR LOADING



SERVICE LATCH FOR EASY PATCHING OR CLEANING MAINTENANCE

UP TO 24 LC

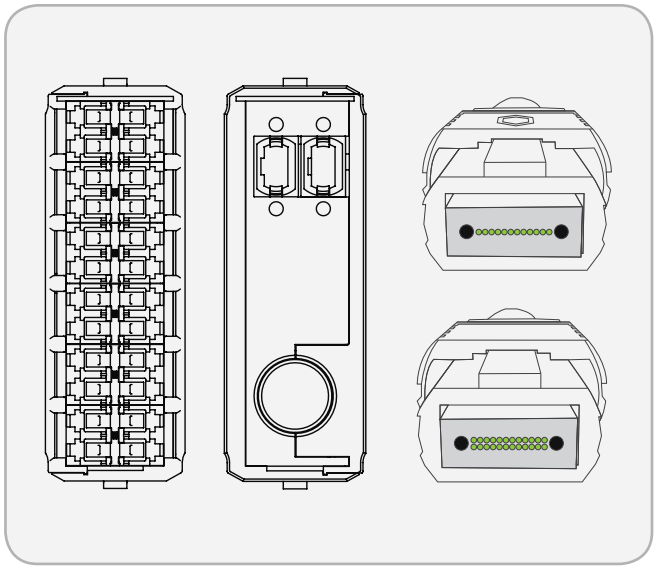
UP TO 12 SC

COMPATIBLE WITH 2U, 1U AND 0U CHASSIS.

SHUTTERED LC ADAPTERS FOR ADDED CLEANLINESS AND LASER SAFETY

EASY MODULE LOCK AND RELEASE MECHANISM

AFL HYPERSCALE UHD MPO MODULE

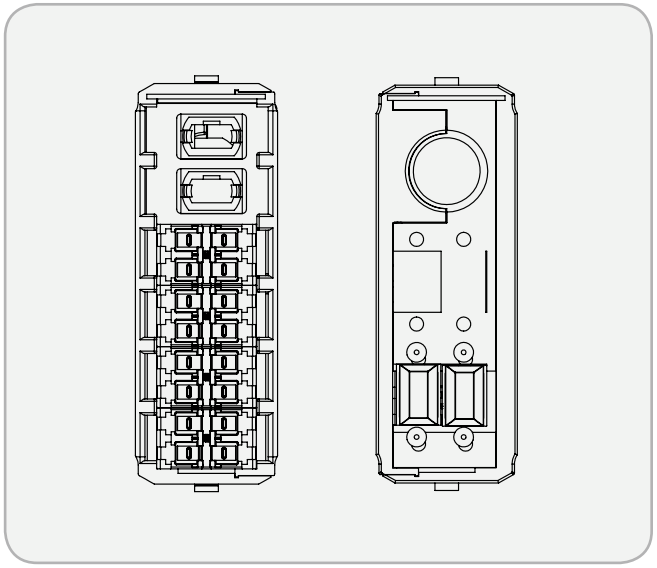


The UHD MPO Module enables fast plug and play installation.

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

- Available in range of polarities
- Available 12 or 24 fiber, OM3/OM4/Single mode
- 12 or 24 fiber MPO conne ctors
- Front presentation for 24 LC UPC or APC connections
- Front presentation for 12 SC UPC or APC connections

AFL HYPERSCALE UHD TRANSITION MODULE (2 X BASE-8)

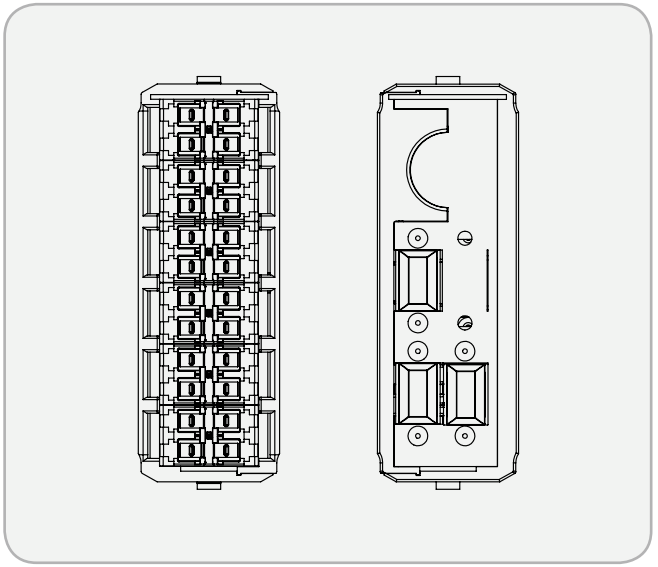


The UHD Transition Module (2 X BASE-8) provides an interface between 2 40G QSFP+ transceivers with MPO interface and 8 10G SFP+ 10G transceivers with LC duplex interface.

This module provides a perfect alternative to fixed equipment to equipment connections provided by QSFP+ to SFP+ Fan-Out Assemblies.

All optical ports are positioned in front of UHD modules providing convenient front access.

AFL HYPERSCALE UHD TRANSITION MODULE (3 X BASE-8)



The UHD Transition Module (3 X BASE-8) provides an interface between 3 40G QSFP+ transceivers with MPO interface and 12 10G SFP+ 10G transceivers with LC duplex interface.

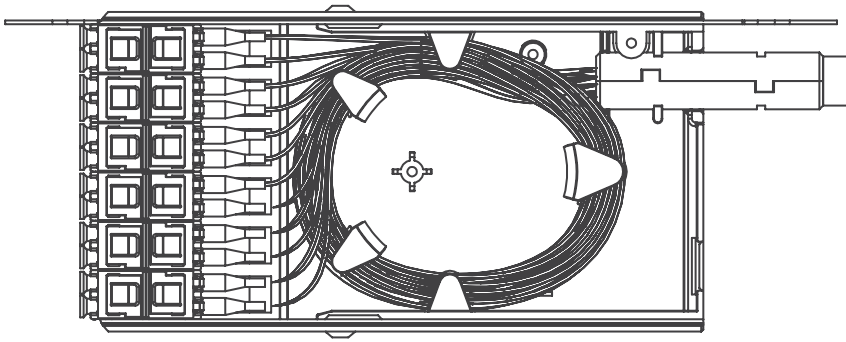
This module provides a compact alternative to support migrating speeds in your network for equipment to equipment connections provided by QSFP+ to SFP+ Fan-Out Assemblies.

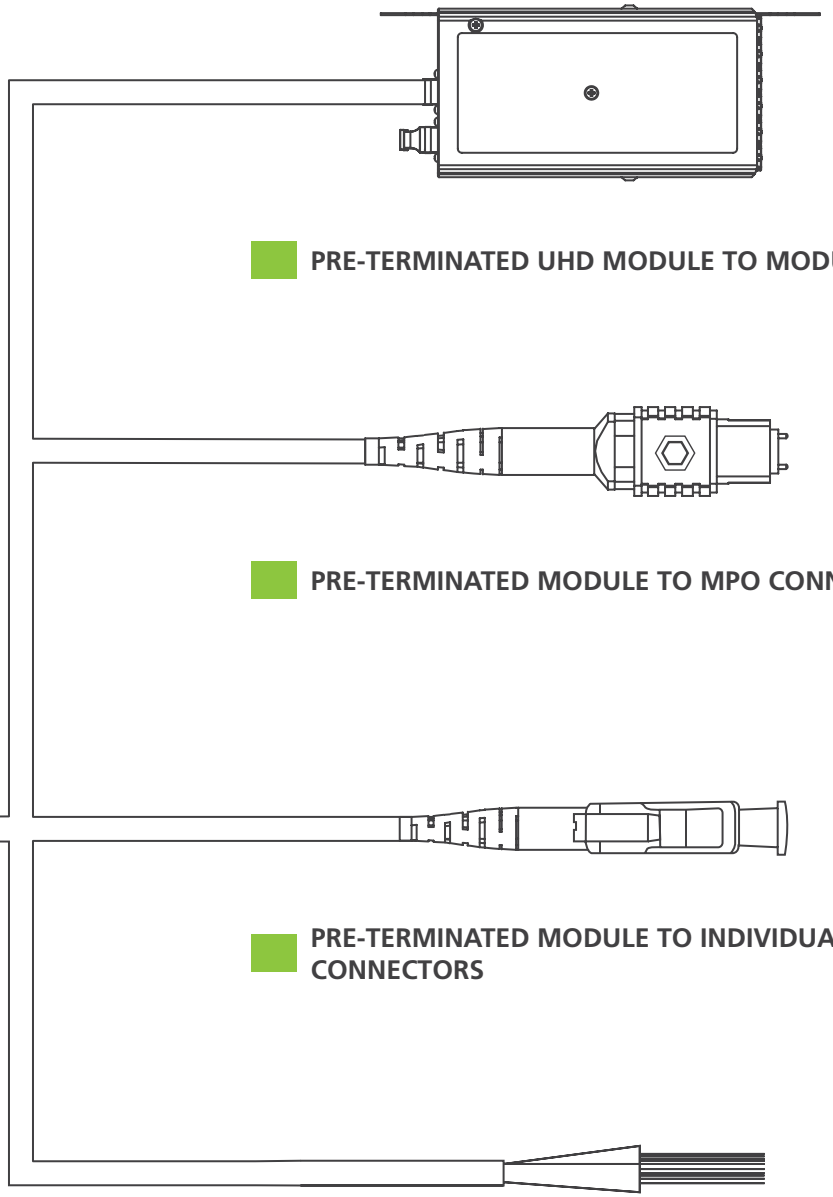
ULTRA HIGH DENSITY PRE-TERMINATED MODULE

UHD Pre-Terminated Modules bring convenience and flexibility to your network.

The convenience of a pre-terminated UHD module means fewer links in your network - resulting in higher performance and faster speeds. Not only that, but installation is even quicker.

Specify the fiber type and adapters required on the UHD module, the cable construction and length required, and then select your assembly preference for the opposite end. Out of the box, a fiber network has never been so convenient and fast to deploy.





PRE-TERMINATED UHD MODULE TO MODULE

PRE-TERMINATED MODULE TO MPO CONNECTORS

PRE-TERMINATED MODULE TO INDIVIDUAL CONNECTORS

PRE-TERMINATED MODULE TO OPEN CABLE FOR SPLICING ON SITE

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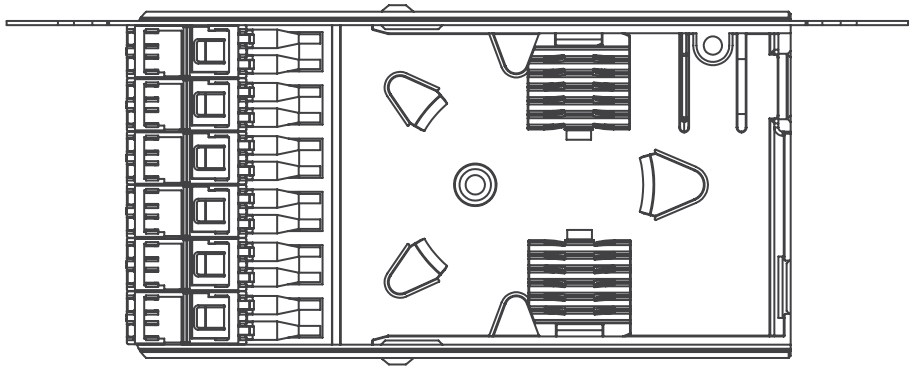
AFL HYPERSCALE UHD SPLICE MODULE

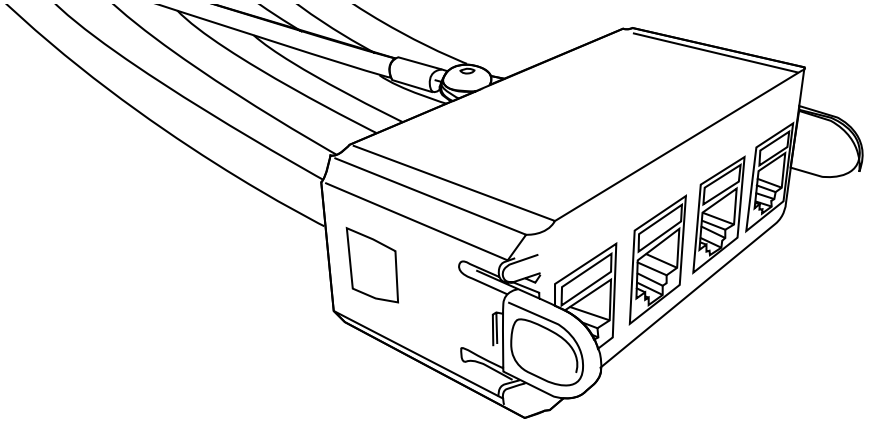


The AFL Hyperscale UHD Splice Module brings installer or site engineer convenience to the field.

With up to 24 splice positions, all modules are pre-loaded with easy-strip pigtails.

- Available with 24 LC or 12 SC pigtails preloaded
- Up to 12.5mm cable diameter entry
- Ultra Polished Connecter (UPC), and Angle Polished Connecter (APC) pigtails and adapters are available

AFL HYPERSCALE UHD COPPER MODULE



Copper links can co-exist with fiber modules on any UHD Chassis or Patch Frame with the AFL Hyperscale UHD Copper Module. The copper module comes with 4 x Category 6A screened tool free RJ-45 keystone jacks for on-site cable termination. The Module can also be used as a platform to install factory made copper pre-terminated assemblies.

THE AFL HYPERSCALE UHD SOLUTION IS EASY AS A, B, C

C: CHASSIS

UHD chassis, frames, and panels maximize the full potential from your available space.

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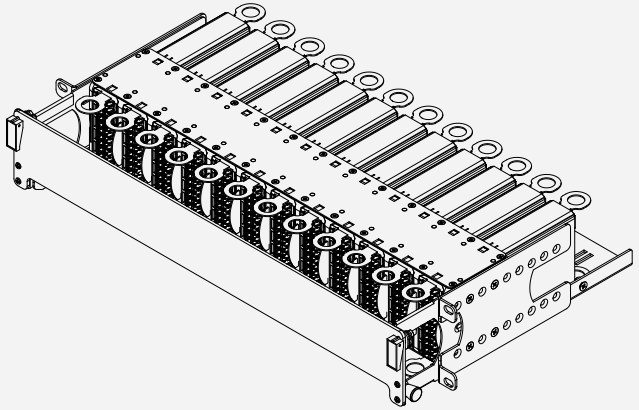


AFL HYPERSCALE UHD 2U CHASSIS

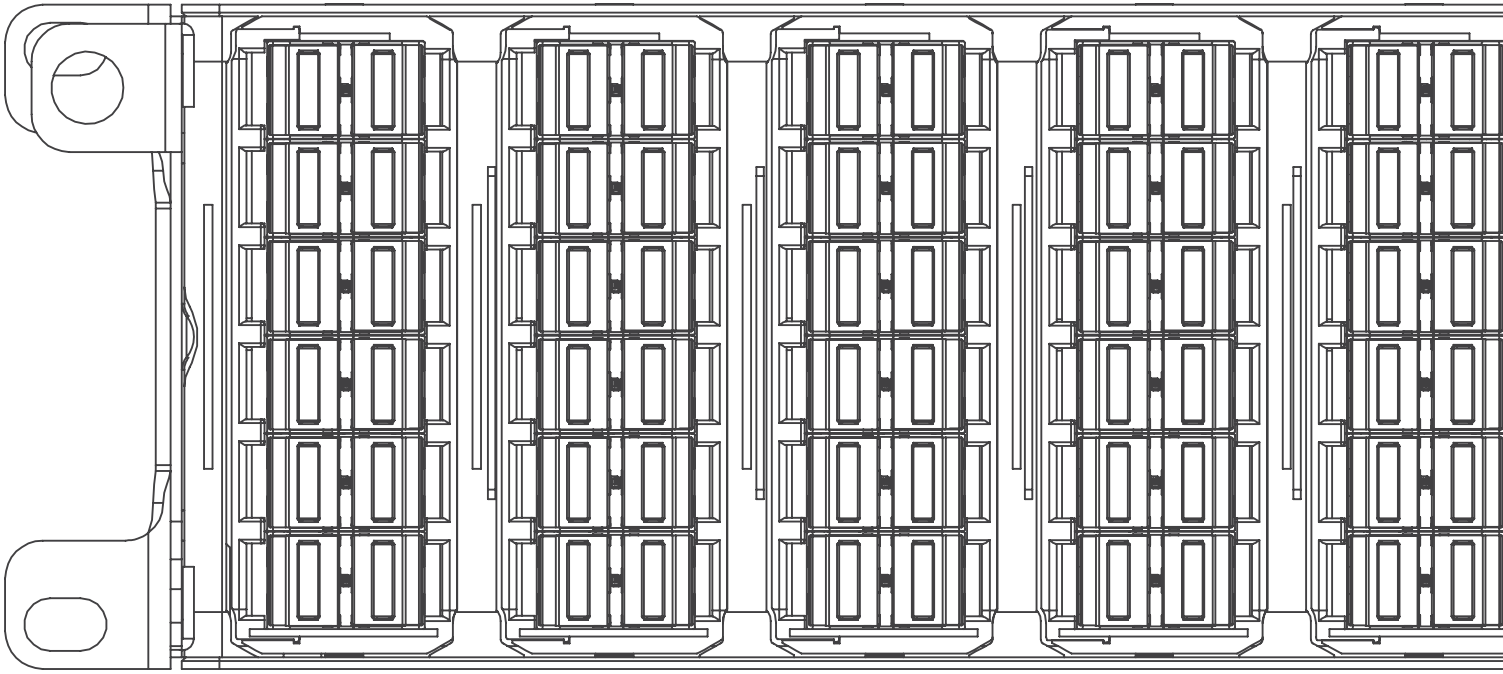
- Houses 12 UHD Modules
- Facilitates front and rear loading of UHD Modules
- Cable management means you can patch from above, below, or split to the left and right
- Shallow depth gives easy access to rear of chassis
- Rear cable management keeps incoming cabling neat and tidy
- Front door plate provides additional laser safety as well as port labelling chart

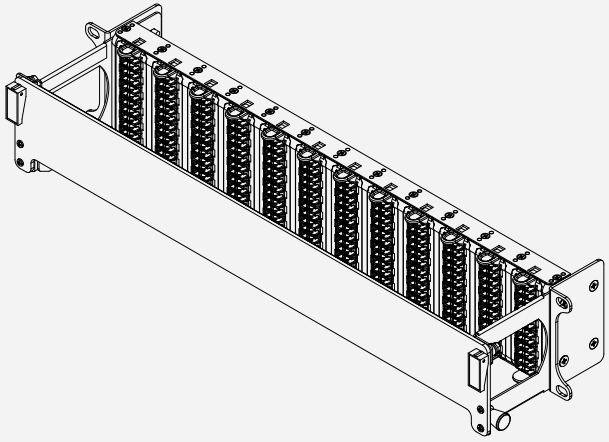
UHD 2U CHASSIS

Designed with large enterprise and data center applications in mind, across 12 slots, the 2U UHD Chassis and Patching Frame can hold up to 288 LC ports, 144 SC ports, or 2304 fibers using an MPO interface.

UP TO 12 MODULES

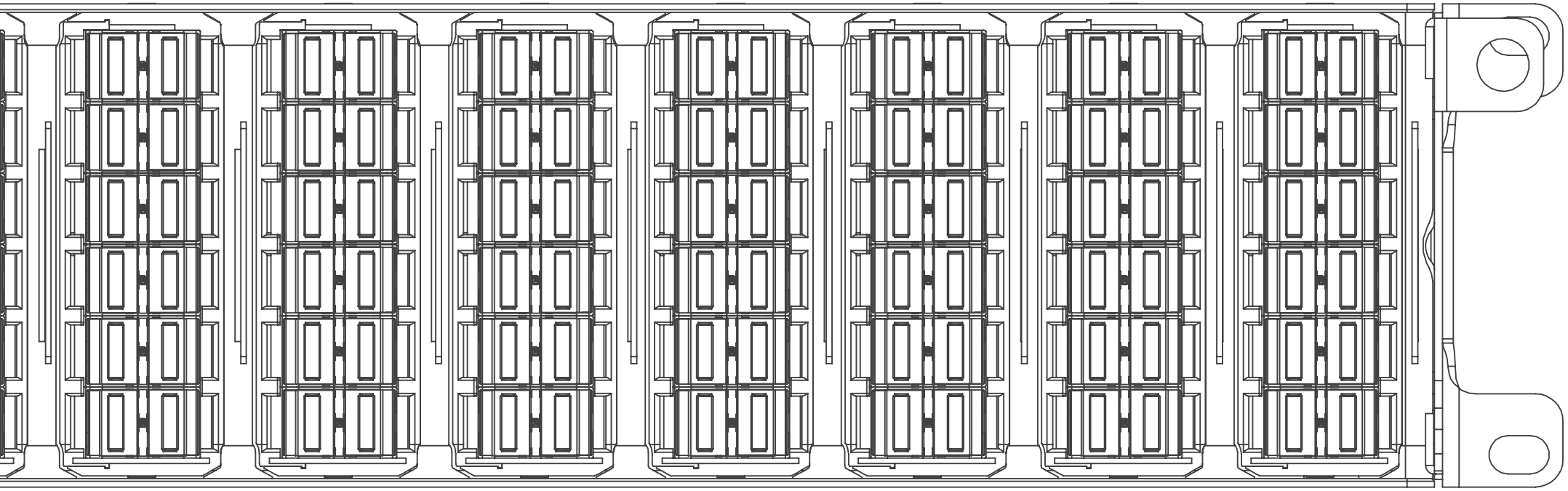
288 LC PORTS



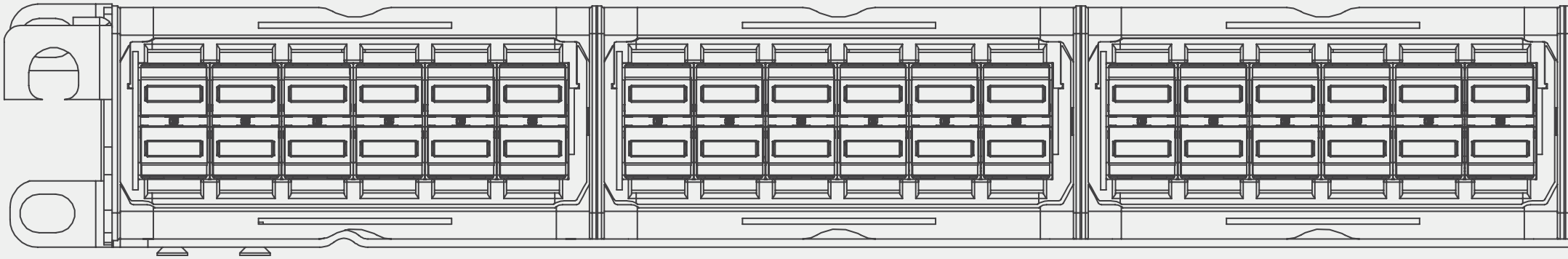


AFL HYPERSCALE UHD 2U PATCHING FRAME

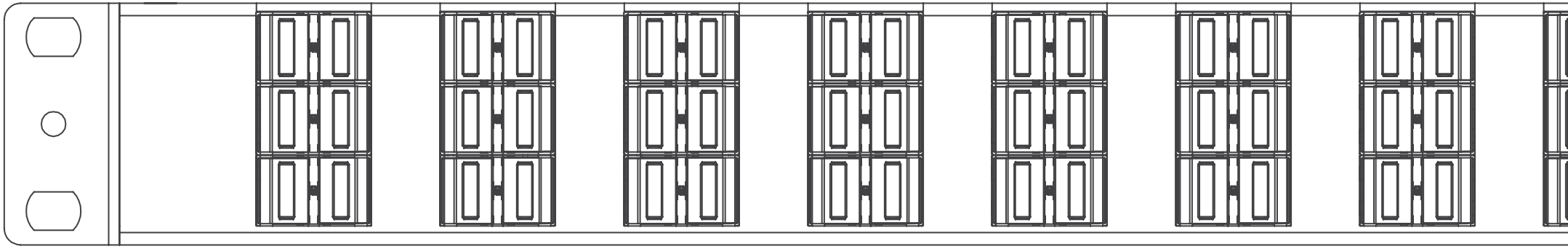
- Houses 12 UHD Faceplates
- Cable management means you can patch from above, below, or split to the left and right
- Shallow depth chassis gives easy access to rear of chassis
- Front door plate provides additional laser safety as well as port labelling chart



AFL HYPERSCALE 1U UHD CHASSIS

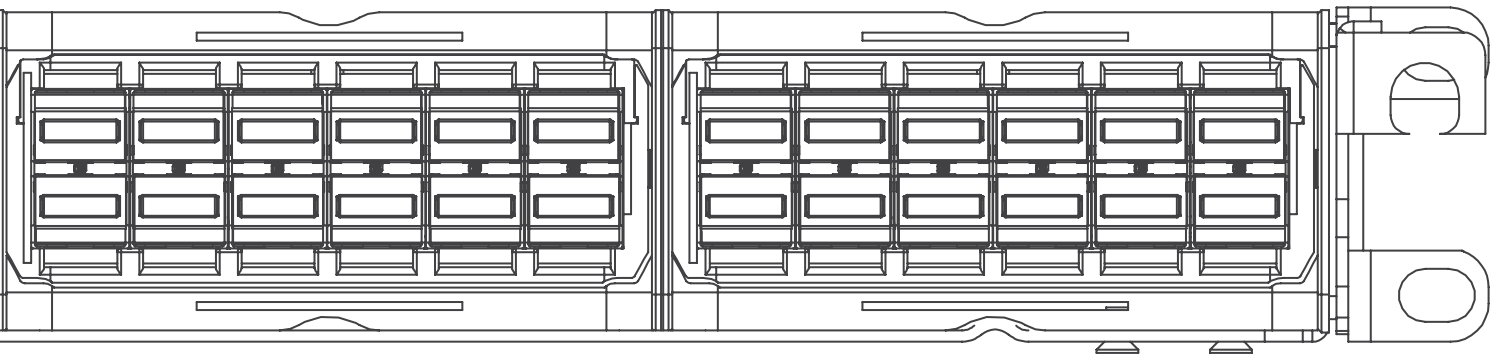


AFL HYPERSCALE 1U UHD SLIMLINE PANEL



UP TO 5 MODULES

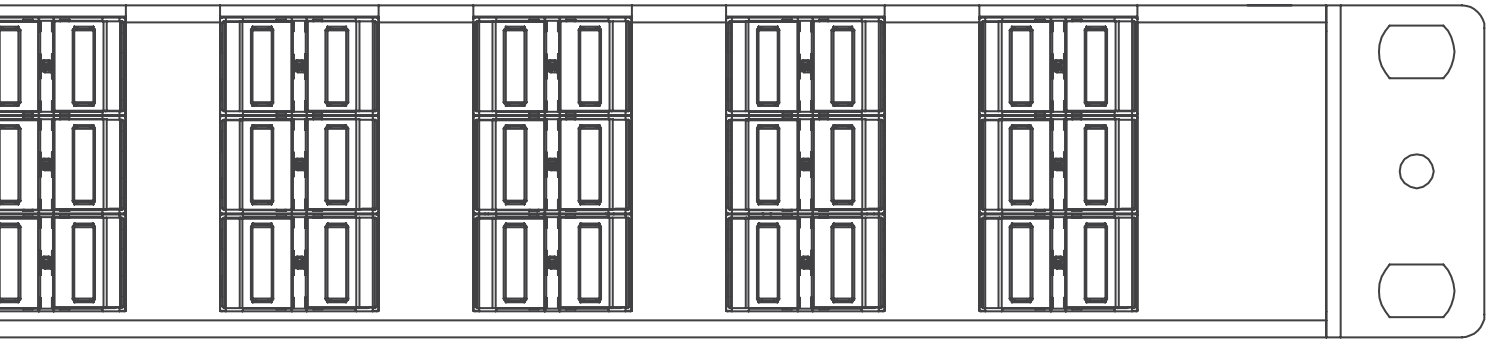
120 LC PORTS



KEY FEATURES

- Holds up to 120 LC ports, 60 SC ports or 960 fibers with MPO
- Houses 5 UHD Modules
- Facilitates front and rear loading of UHD Modules
- Cable management means you can patch from above, below, or split to the left and right
- Shallow depth chassis gives easy access to rear of chassis
- Rear cable management keeps incoming cabling neat and tidy
- Front door plate provides additional laser safety as well as port labelling chart

144 LC PORTS



KEY FEATURES

- Houses 144 LC ports on the front, preloaded with 12 MPO assemblies and 100% tested
- Shallow depth gives easy access to rear of chassis
- Rear cable management keeps incoming cabling neat and tidy
- Shuttered LC adapters provide additional level of laser safety and cleanliness

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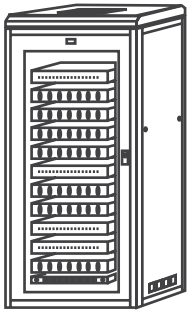
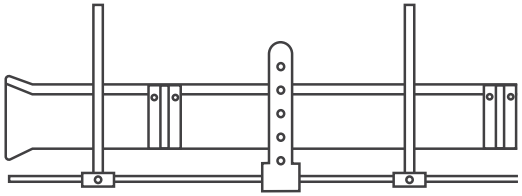
COMPLIMENTARY SOLUTIONS AND PRODUCTS FOR A FULL END-TO-END SOLUTION

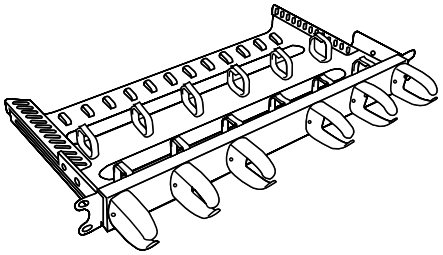
RACKS AND CABINETS



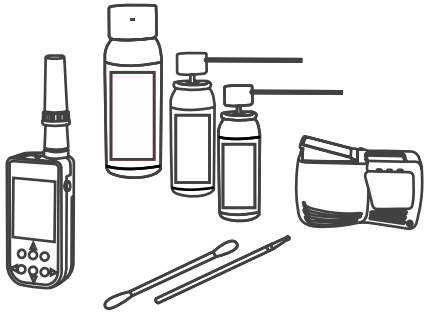
CONTAINMENT



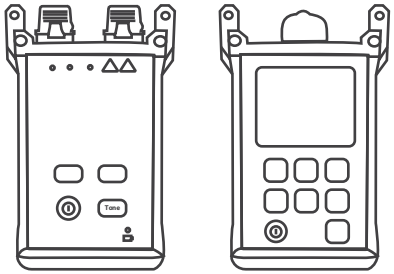
CABLE MANAGEMENT



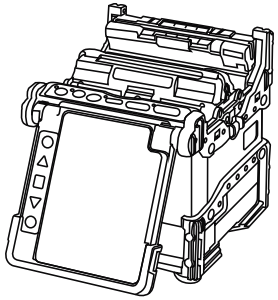
CLEANING AND CONSUMABLES



AFL TEST AND MEASUREMENT EQUIPMENT



FUJIKURA FUSION SPLICERS



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