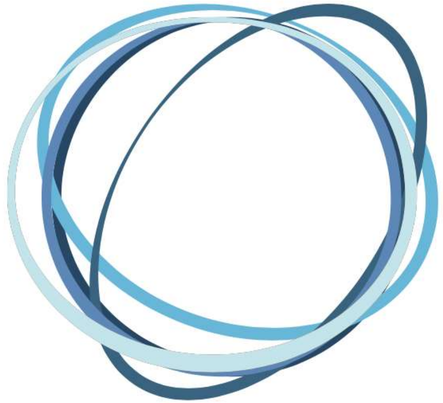

OPTERNA

AT LIFE SPEED™

Data Center Solutions

For this generation and the next…

Fast

Faster Moves, Adds and Changes over the lifetime of the Data Center reduce operational costs.

Flexible

Products which adapt to the needs and the environment of our customers. We realise that not everyone is the same.

Future-proofed

Performance that can out-perform the needs of today and that is ready for the higher data rates of tomorrow.

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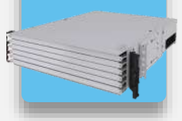
Data Center Portfolio

Standard portfolio for most applications

1



UHD Chassis

Used to house modules for connecting to nearby equipment

2

UHD Modules

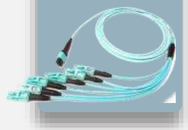
Provides the transition from trunk cables to equipment cords/harness

3

MPO & LC Trunk Cables

Used to connect modules inside server, switch or distribution racks

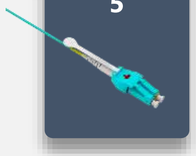
4



MPO/ LC harness cables

For equipment connections and rear of panel connections.

5



LC Patch cords?

For connecting to switches and servers from the UHD module.

6

Accessories

Cleaning products and accessories to support MPO portfolio.

OPTERNA AT LIFE SPEED®

Ultra High Density Chassis

Modular and scalable fiber management

OPTERNA
AT LIFE SPEED®

Chassis Hardware

- Suitable for Base-8, Base-12 and Base-24 connectivity types .
- Sliding trays for fast and easy access to connectivity.
- Available in 1U, 2U and 4U height variants.
- Integrated cable management at the front and the rear of the chassis.

Compact

Up to 72 ports (144 fibers) in just 1U of rack space

Scalable

Grow your network with a modular building blocks

Flexible

Covers all applications, connectivity types and fiber types

Fast

Easy and fast access to connectors and patch cords with sliding tray design

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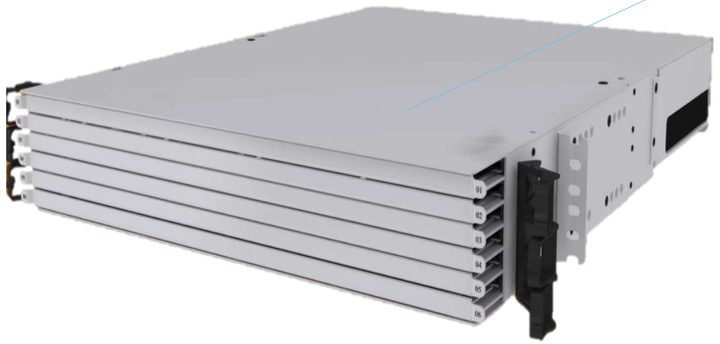
AT LIFE SPEED®

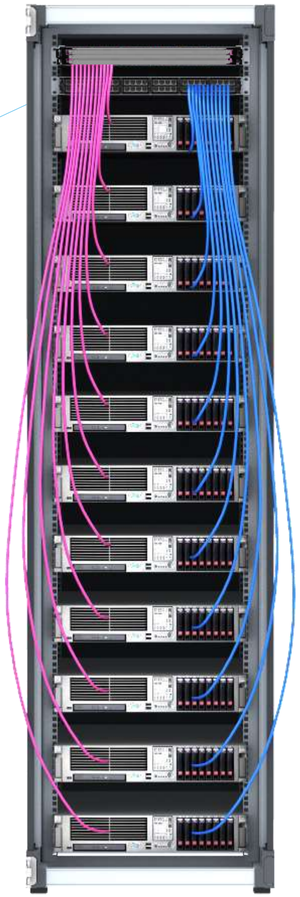
UHD-Ultra High Density Chassis

Fast, flexible future-proofed

1U/2U Chassis +
Suitable for server applications or ToR deployments.

High density +
Up to 72 ports (LC or MPO) per 1U chassis.





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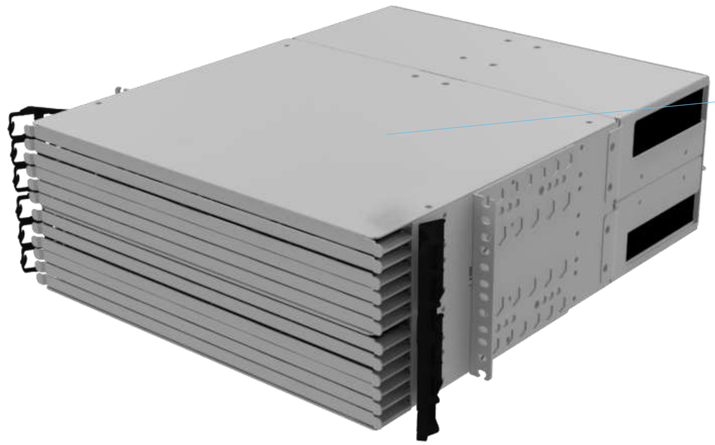
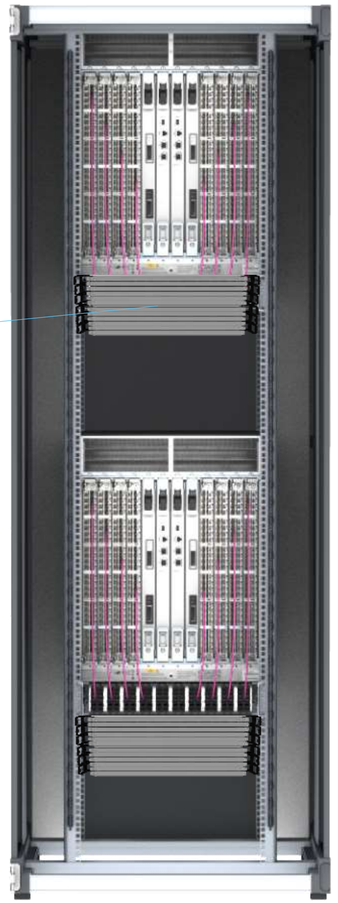
UHD-Ultra High Density Chassis

Fast, flexible future-proofed

4U Chassis
Suitable for high density switch and distribution management.

High density
Up to 288 ports (LC or MPO) per 4U chassis.





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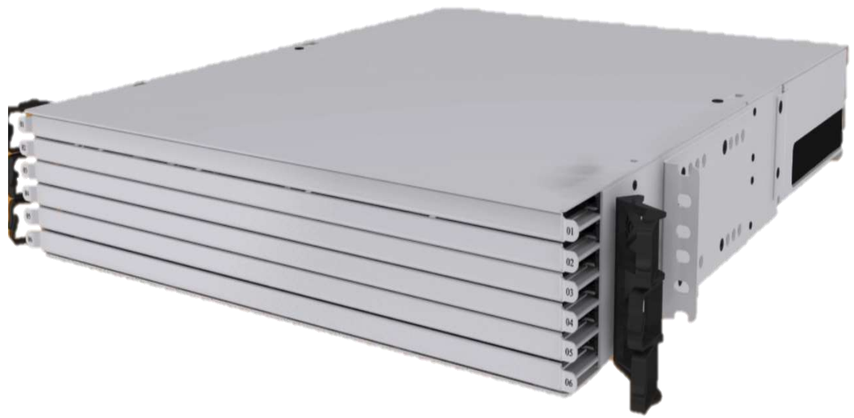
UHD-Ultra High Density Chassis

Fast, flexible future-proofed

1U, 2U and 4U high
Suitable for server applications (top of rack) or high density switch and distribution management.

Modular design
There are three separate sliding trays that provide access to the fiber connectivity.



Fast access
Access to front and rear connectors can be made in a matter of seconds.

Safe fiber routing
Patch cord guides and rear cable managers maintain safe and organized fiber routing.

OPTERNA AT LIFE SPEED®

UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Brush strip entry
Cables access the chassis via a brush-protected aperture at the sides of the rear cable manager.

Adjustable rails
The chassis can be recessed in the rack to suit different rack designs and door distances.

Row separation
Individual sliding trays allow access to modules without disruption to other pre-installed links.

Rear extension
Cables can be fixed at the rear of the chassis and service loops can be maintained.

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UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Hinged label plate
Innovative label plate hinges down for clear module and port identification.

Horizontal support
All cables are supported in the horizontal plain for clear separation and minimal disruption.

Sliding tray
Modules can be slid forward during moves, adds and changes.

Easy access
The UHD chassis provides excellent finger access to connectivity thanks to its open design.

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UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Snap-fit design
Modules slide into the chassis and lock into place without the need for special tools or accessories.

Quad adapter
The compact quad adapters facilitates a 1U density of 72 x LC ports (144 fibers)

Front access
Modules can be installed and serviced from the front of the chassis without disrupting live fibers.

4 or 6 ports
4-port and 6-port modules can be integrated into the UHD chassis for granular scalability.

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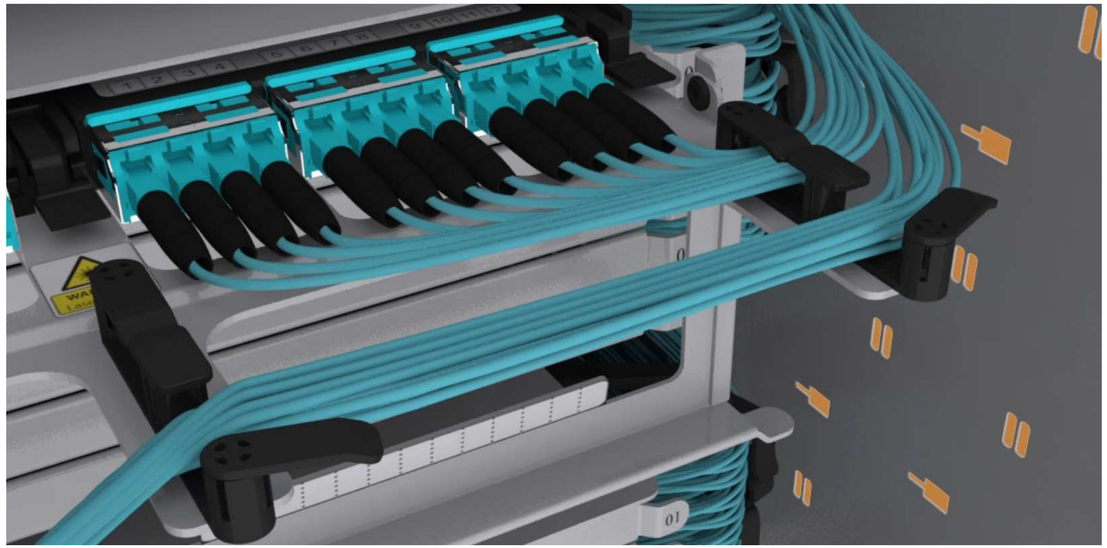
UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Fast access
Patch cords can be inserted or removed in seconds with the innovative latch feature.

Horizontal support
All cables are supported in the horizontal plain for clear separation and minimal disruption.



Clear separation
The patch cord guides have a two-part design that minimizes disruption to pre-installed links.

Safe fiber routing
Patch cords always follow the minimum bend radius during moves, adds and changes.

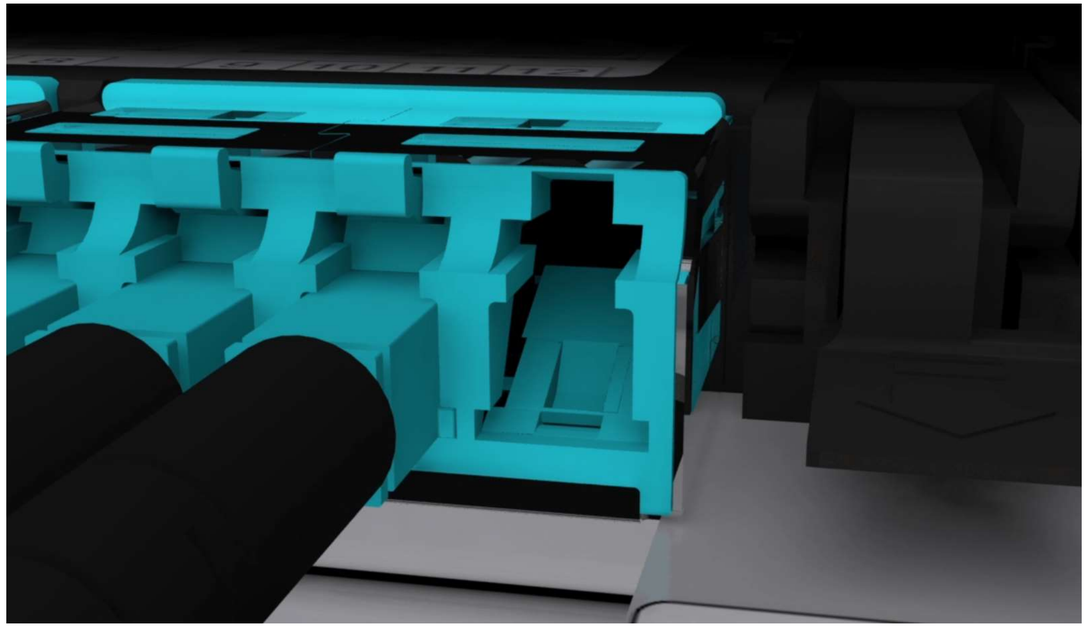
OPTERNA AT LIFE SPEED®

UHD-Ultra High Density Chassis

Fast, flexible future-proofed

High performance
Modules and cords have the highest performance level to support higher data rate migration and extended reach.

Quality materials
All of our components are made from the highest quality and safest materials.



Shuttered adapters
Dust-proof shutters help to maintain a clean environment for critical links.

Excellent finger access
Connectors can easily be inserted and removed due to the generous finger access above and below the connectors.

OPTERNA AT LIFE SPEED®

UHD-Ultra High Density Chassis

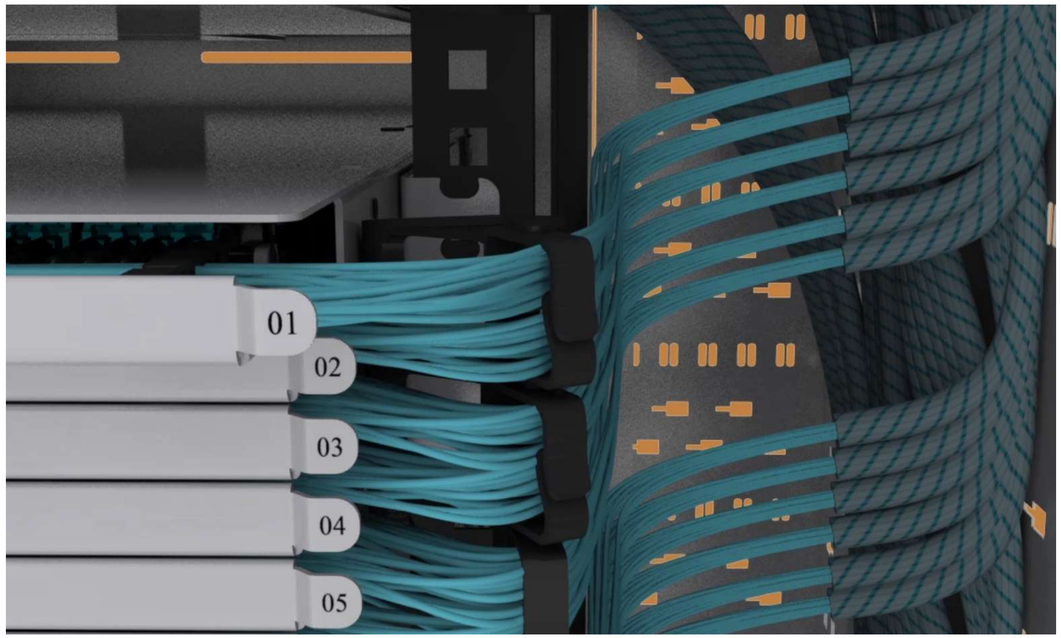
Fast, flexible future-proofed

Clear identification

Each row is clearly identified for fast and accurate traceability.

Service loop

Cable managers allow the trays to be slid out without any stress on the patch cords.



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UHD-Ultra High Density Chassis

Fast, flexible future-proofed

1 man install

The chassis can easily be installed by one technician without special training or accessories.

Self supporting

The chassis can be supported by a single screw on each side of the rail for convenience during installation.

Robust

The UHD chassis is made from durable materials which maintain performance during the lifetime of the data center

Smooth finish

The UHD chassis is powder-coated for a high-quality finish in either Grey or Black.

OPTERNA AT LIFE SPEED®

UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Fast cable fixation
Open grommets at the rear of the chassis provide fast fixation of trunk cables.

Service loop
The service loop can be easily and quickly adjusted to allow module access.

Safe fixation
No cable ties are needed to fix cables inside the UHD chassis.

Different sizes
Rubber grommets can easily be replaced to suit different cable diameters and constructions.

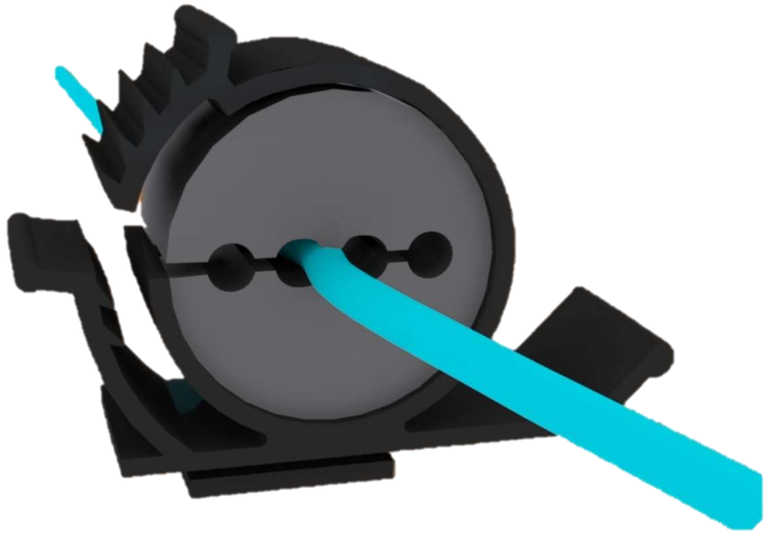
OPTERNA AT LIFE SPEED®

UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Snap-fit
The cable clips can be engaged with the chassis metalwork in just a few seconds.

Split design
Cables can be laid into position without the need to feed connectors through holes.



No tools
Cables can be fixed simply by pushing down the cable clip ratchet.

Retro-fittable
Cable clips can be added later if preferred or alternatively they can be used in other areas of the data center (e.g vertical rack space)

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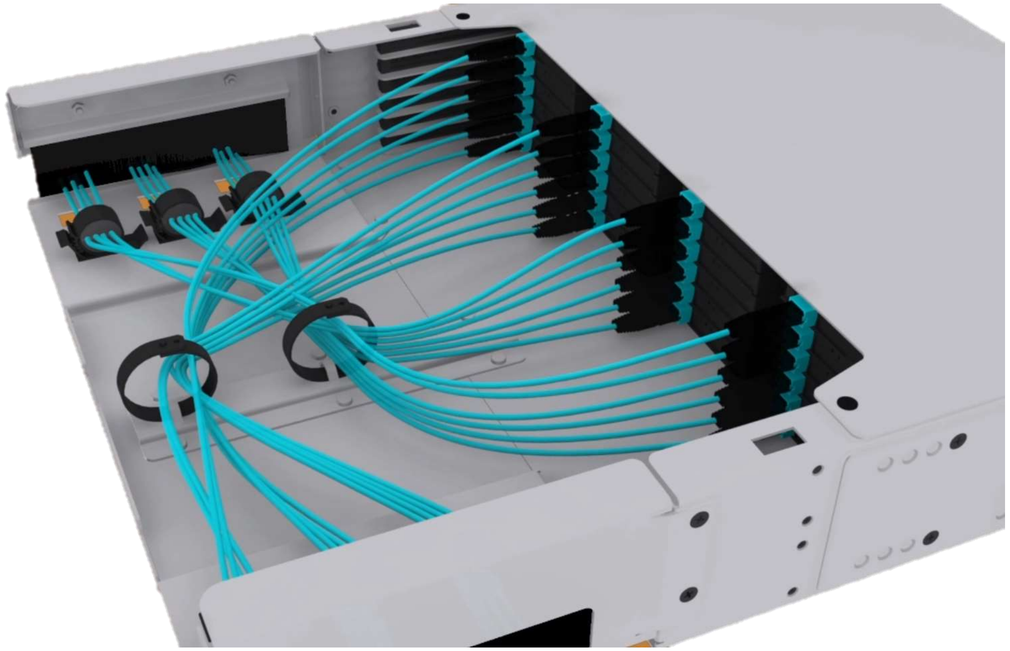
UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Cable loops
Provide an organized method for bundling cables at the rear of the chassis

High density
Up to 72 x MPO trunk cables can be managed in the rear extension.



Clear access
Technicians can still access the modules and connectivity at the rear of the chassis.

Service loop
Modules can be slid out at the front of the chassis and cable is safely managed at the rear.

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UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Flexible
Fiber modules can be slid into the chassis from the front or the rear side of the chassis

Easy access
Connectivity at the rear of the chassis is clearly visible and easy to reach.

OPTERNA
AT LIFE SPEED®

UHD-Ultra High Density Chassis

Fast, flexible future-proofed

Compact version
In racks where insufficient depth is available for rear extension plate.

Improved access
Without the cable extension at the rear of the chassis, users an get better access to the MPO connectors (subject to cable management).

Lighter
Users can eliminate chassis weight be choosing not to use the rear extension plate.

Safe fiber routing
Creativity is the key to success in the great and primary education

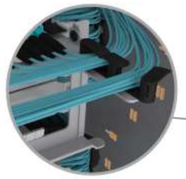
OPTERNA AT LIFE SPEED®

Opterna UHD Chassis

Ultra High Density Chassis

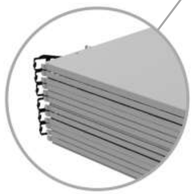
WIDE RANGE OF MODULES
Provides a dust-proof protection of port until cord is connected.

CORD MANAGEMENT
Provides a dust-proof protection of port until cord is connected.



SHUTTERED ADAPTERS
Provides a dust-proof protection of port until cord is connected.

1U, 2U AND 4U AVAILABLE
144, 288 and 576 fibers depending on application.



CLEAR IDENTIFICATION
Provides a dust-proof protection of port until cord is connected.

HIGH PACKING DENSITY
Up to 144 fibers can be safely managed in just 1U of rack space. That's 576 fibers per 4U!

REAR CABLE MANAGEMENT
Provides a dust-proof protection of port until cord is connected.

ONE-MAN INSTALLATION
Hook the chassis onto a single screw before tightening to finish.

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OPTERNA
AT LIFE SPEED®

UHD Modules

Compact, high-performance building blocks

Modules

Fast, flexible future-proofed

Scalable

Mix and match different types of modules and fiber types in the same chassis.

Compact

4 and 6-port modules provide a compact and scalable way to build your infrastructure.

Fast install

Simply slide the module into the chassis until it clicks into place.

Wide range

Available as MPO-LC transition, LC and MPO patching, MPO conversion, splicing and TAP monitoring.

OPTERNA AT LIFE SPEED®

MPO-LC transition module

Future-proofed solution for 1G and 10G

Super low-loss
Only 0.35dB IL over the complete MPO-LC transition module.

4 and 6 port
Suitable for legacy 12-fiber or next generation 8- fiber installations

Polarity options
Different internal fiber routing schemes available on request.

Shuttered LC adapter
Prevents unwanted dust getting on the end-face of the connectors.

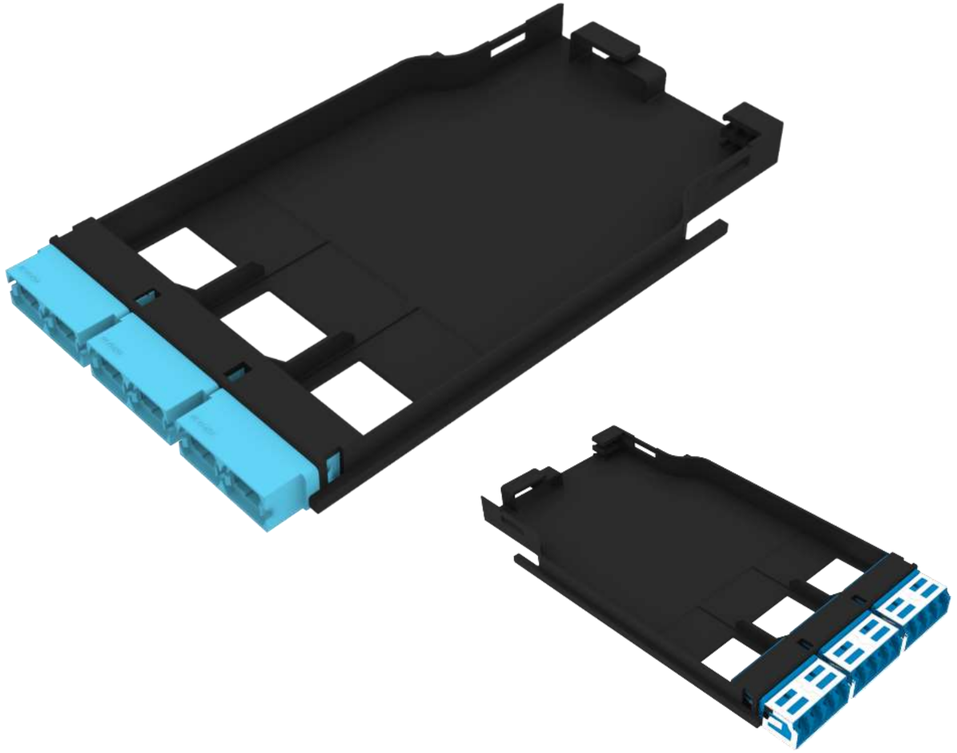
OPTERNA AT LIFE SPEED®

MPO & LC patching module

Efficient, low-loss option for simple and cost-effective links

All Bases covered
Patching modules are available for 2f LC, and 8f, 12f and 24f MPO options

4 and 6 port
MPO versions available in 4-port and 6-port



Easy upgrade
Cable grip at the rear of the module facilitates fast insertion of new cables during service.

Coloured adapters
Fiber performance clearly identified by color.

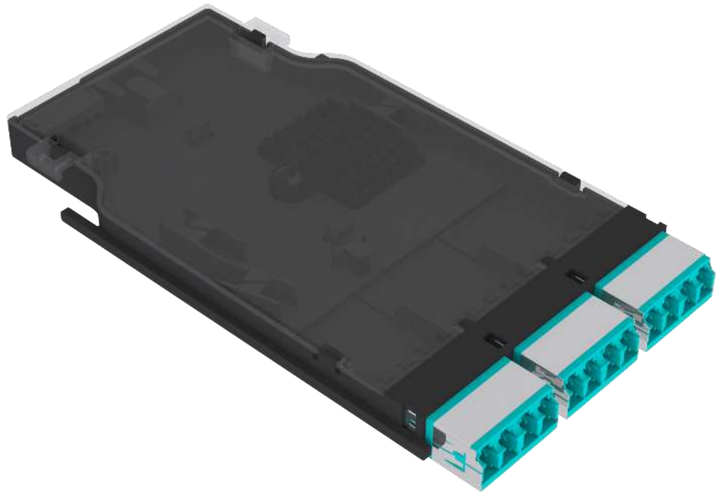
OPTERNA
AT LIFE SPEED®

Splicing module

12 fiber splice module for direct cable connections

All types covered
Suitable for pigtail splicing or ribbon splicing.

12 fibers
12 fibers as standard but 8 fiber available on request.



Clear fiber routing
Internal cassette tray provides clear fiber routing and separation.

ANT compatible
Suitable for metal sandwich-type splice protectors.

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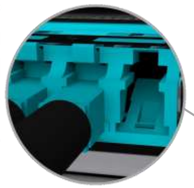
Opterna Module

Ultra High Density Chassis

SHUTTERED ADAPTERS
Less time spent cleaning connectors due to shuttered LC quad adapters at the front of the module.



ULTRA LOW LOSS
0.35dB maximum loss over a multimode OM3/4 MPO-LC transition module.

BASE-8 READY
Ready for emerging data rates of 40G, 100G and 200G over 8 fibers.

PATCHING MODULE MPO/LC
Designed for 40G/100G links that are all MPO or singlemode links that are all LC.

12 F SPLICE CASSETTE
Standard pigtail splicing or ribbon splicing possible..

HIGH PACKING DENSITY
Up to 12 modules per 1U giving a packing density of 144 fibers (72 ports)

TAP monitoring
TAP modules in many configurations for monitoring signal transmission.

SNAP-FIT INSERTION
Slide the module in from the front or the rear until it snaps into position.

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OPTERNA
AT LIFE SPEED®

MPO/MTP Trunk Cables

High density pre-terminated backbone cables

OPTERNA
AT LIFE SPEED®

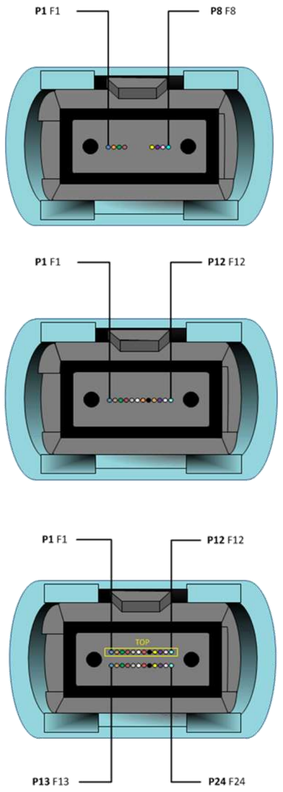
MPO Connectors

A Base-type for every application

Base-8 Future-proofed
The most future-proofed connector due to the extensive ethernet roadmap and transceiver developments.

Base-12 Legacy
The most common MPO choice over the past 10-15 years

Base-24 SR10
The current solution for 100G over CFP transceivers.



Mixed bag of connectors

Three different MPO connectors need to be supported at the moment due to the rapid data rate growth and technology advancements.

Base-8 solutions will lead the way in the future with plans to use 8 fibers from 1G to 400G in the future.

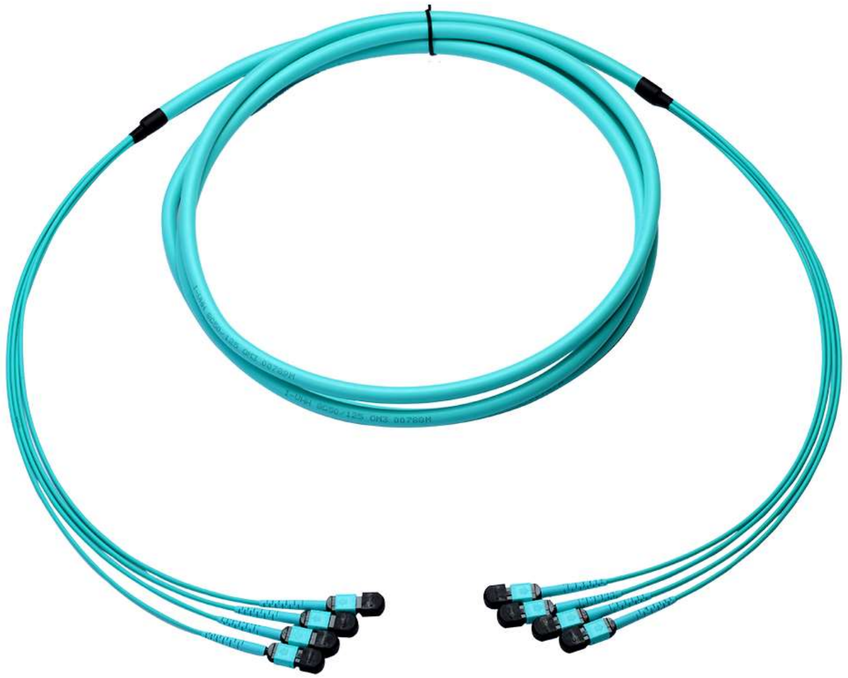
OPTERNA AT LIFE SPEED®

MPO Trunk Cables

The backbone of the Dtaa Center

Super low-loss
Only 0.35dB IL over the complete MPO mated pair.

12-144 fibers
Choose your level of scalability based on your topology. 288 fibers is the recommended zone-distribution fiber-count.



Polarity options
Type A or type B polarity depending for legacy applications or next generation topologies

Bend-optimized
OM3 and OM4 cables are supplied with bend-optimized fibers as standard.

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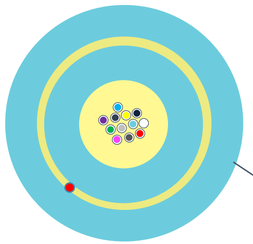
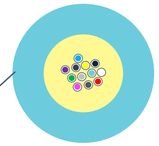
What and where?

Protection and flexibility



RUGGEDIZED
Diameter 4.5mm ⌀

Ruggedized cables are more suitable for installation into cable baskets or ladders because they offer a much higher degree of mechanical protection.



STANDARD
Diameter 3mm ⌀

Standard small diameter cables are more suitable when patching to equipment because the cable is more flexible and the space-consumption is much lower (33%).

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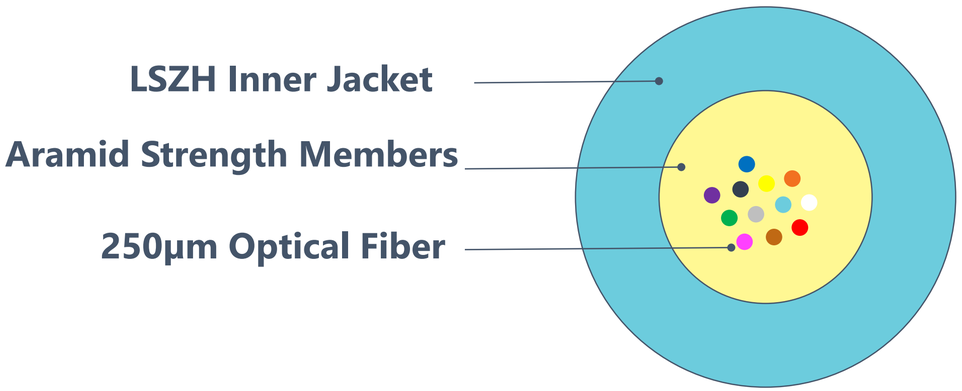
Single jacket construction

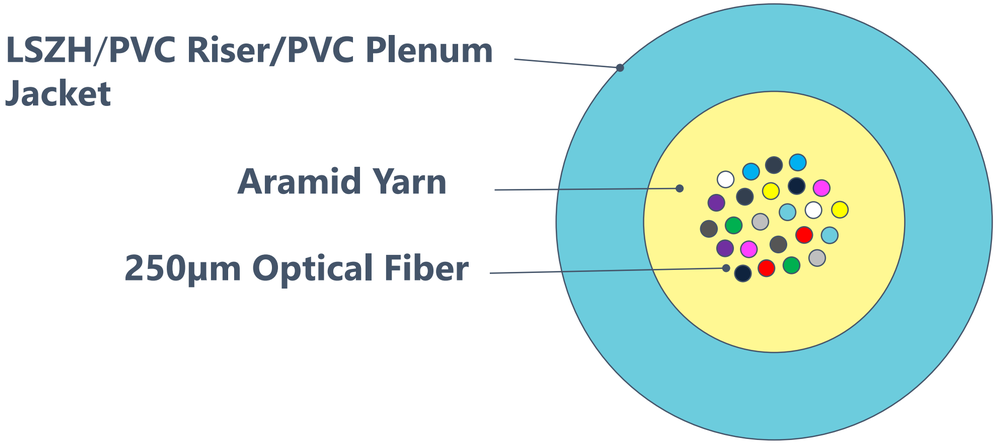
Single strand micro-cable over-sleeved

STANDARD
Diameter 3mm ⌀



- More flexible
- More space-efficient

STANDARD
Diameter 3.6mm ⌀



- More flexible
- More space-efficient

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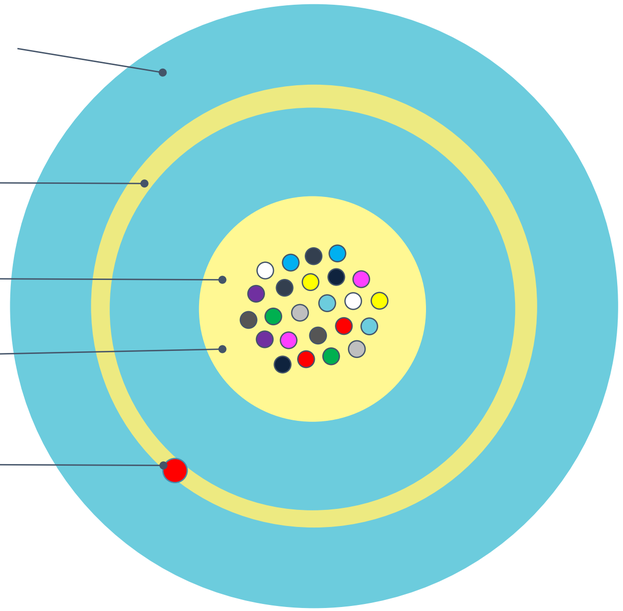
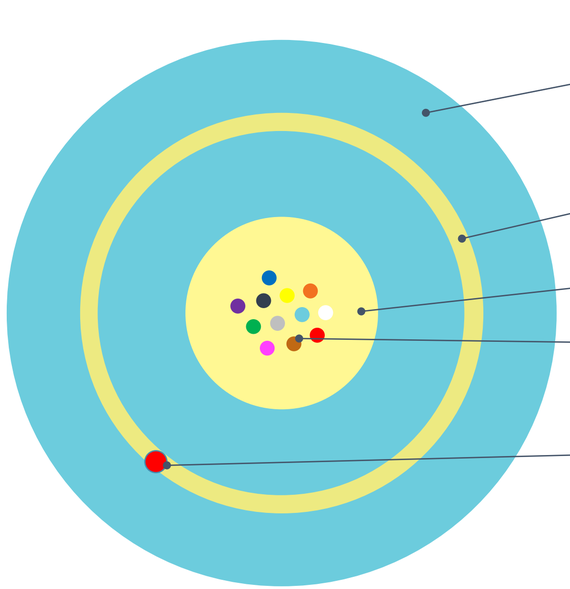
Over-jacket construction

Single strand micro-cable over-sleeved

STANDARD
Diameter 5.6/3.6mm ⌀



STANDARD
Diameter 4.5/3mm ⌀



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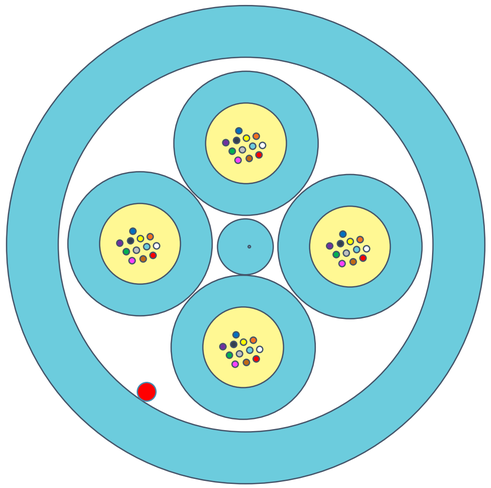
Trunk cable construction

Multi stranded micro-cable over-sleeved

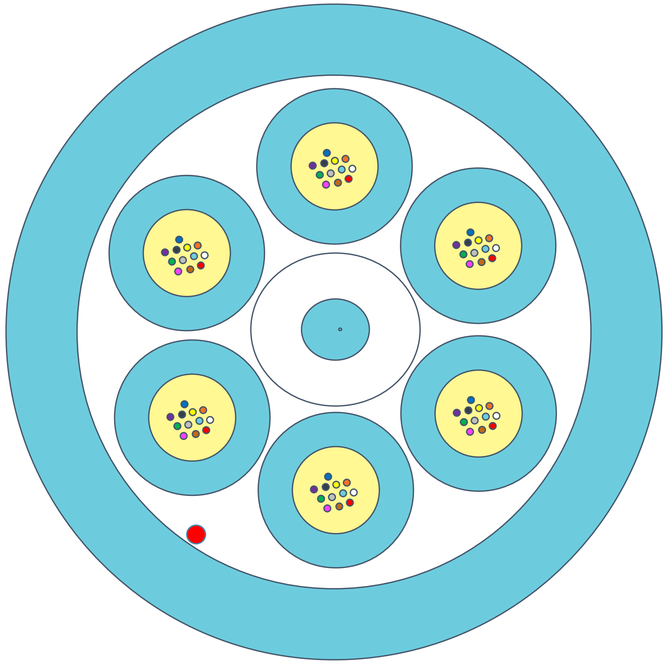
48f (4 x 12f)

Diameter 10.3mm



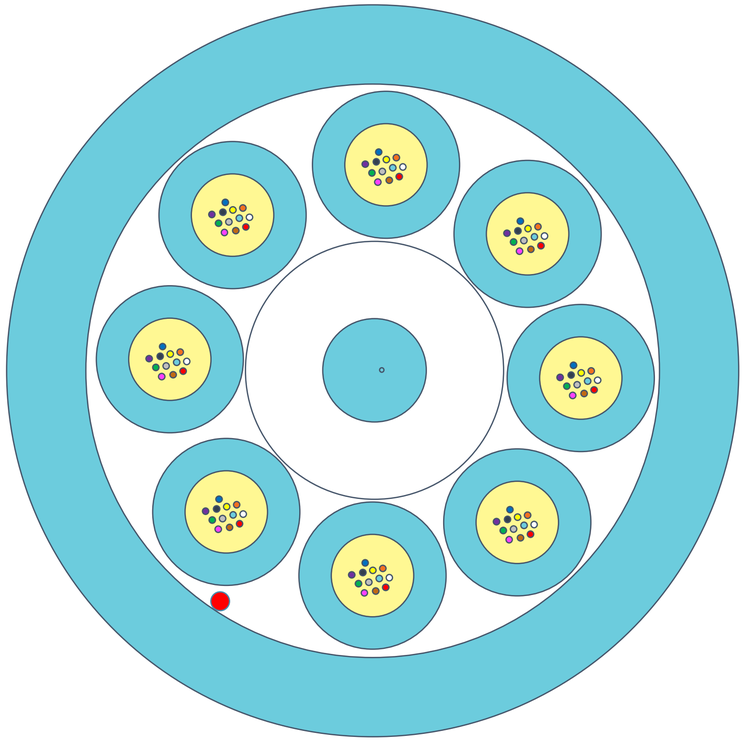
72f (6 x 12f)

Diameter 12.2mm



96f (8 x 12f)

Diameter 14.1mm



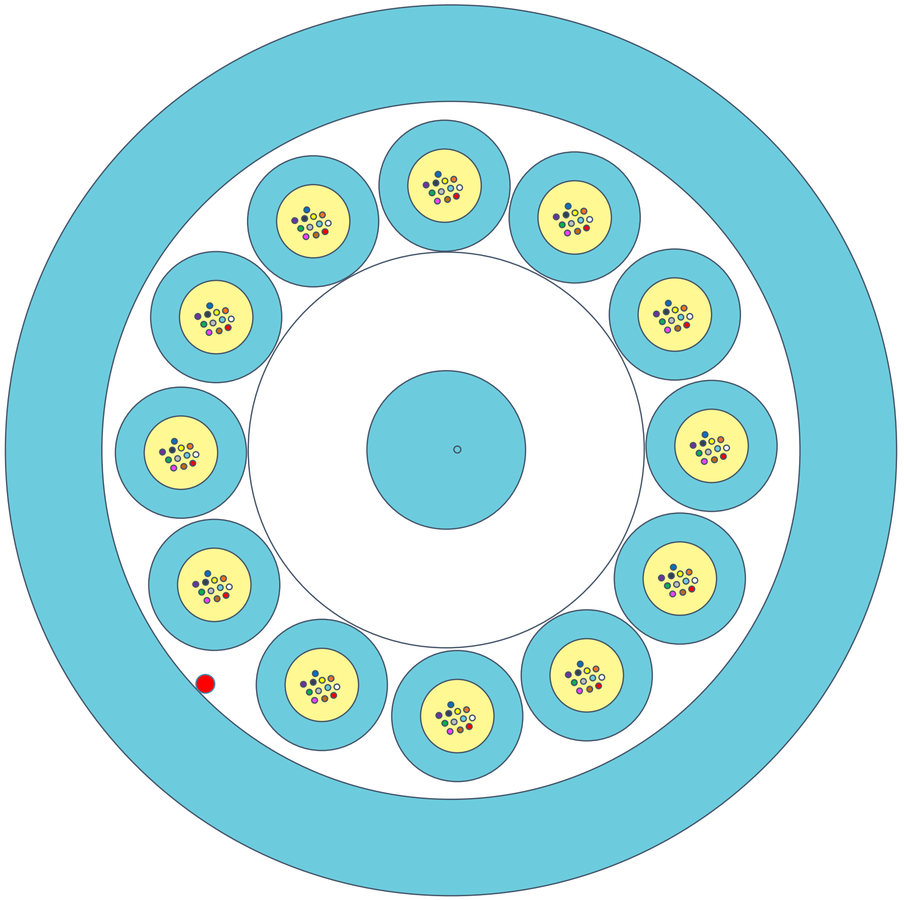
OPTERNA
AT LIFE SPEED®

Trunk cable construction

Multi-stranded micro-cable over-sleeved

96f (8 x 12f)

Diameter 14.1mm



OPTERNA
AT LIFE SPEED®

MPO Patch cords

Compact, flexible connections to active equipment

OPTERNA
AT LIFE SPEED®

MPO Patch Cords

Flexible connections to high data rate transceivers

3mm cable diameter
Patching inside of equipment racks requires a small and flexible cable design.

Super low-loss
Our performance of 0.3dB IL allows extended reach and increased headroom across the complete link.

Bend optimized
Our cables are supplied with bend-optimized fibers as standard. Singlemode and multimode.

40G and 100G ready
We supply 8 fiber and 24 fiber patch cords for 40G and 100G respectively.

OPTERNA AT LIFE SPEED®

MPO-LC Harness

Tailor-made harnesses for high-density switches and servers

MPO-LC Harness

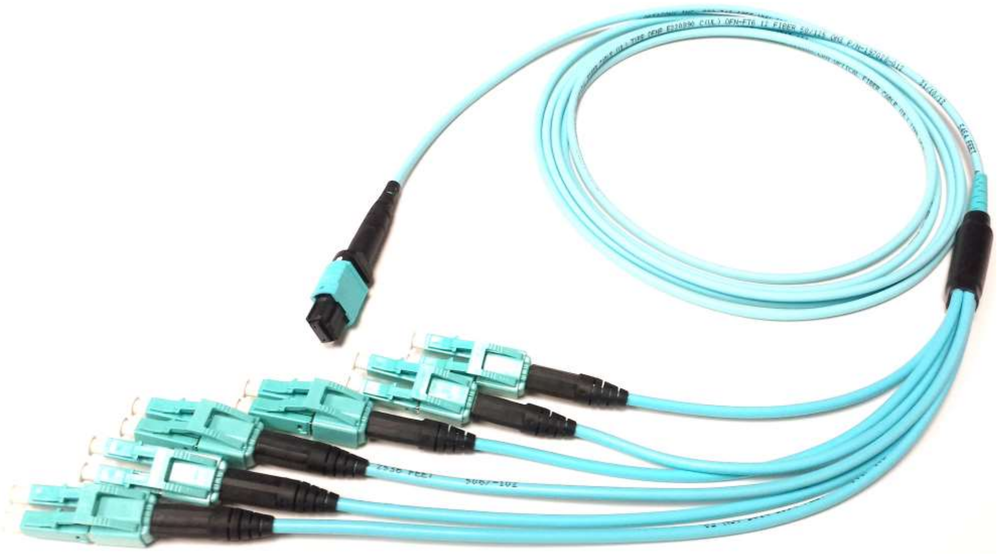
Your great subtitle in this line

3/2mm cable diameter

The smallest possible cable diameter is used to save space in high-density patching environments.

Tailor-made

Built to match the equipment ports in the switch or server.



Compact housing

Extremely small housing reduces cable clutter in front of switch air-inlets-

40G and 100G

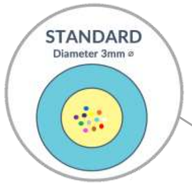
Creativity is the key to success in the great and primary education

OPTERNA AT LIFE SPEED®

Opterna Harness

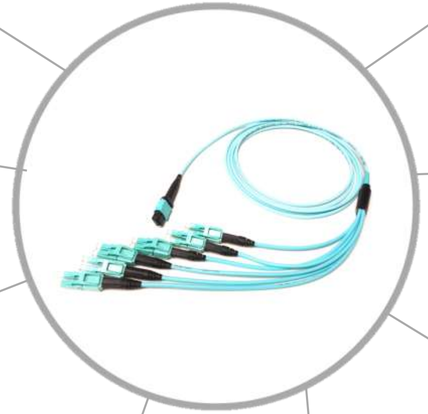
Ultra High Density Chassis

COMPACT & FLEXIBLE CABLE
3mm micro-cable reduces cable congestion at the front of high density switches and servers.



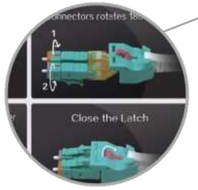
POLARITY SWITCHABLE
Easily change polarity by adjusting the key on the MPO connector.

ULTRA LOW LOSS
0.35dB maximum loss over a multimode OM3/4 harness asembly.



TAILOR-MADE TAILS
Each tail can be perfectly adapted to the specific equipment it connects to.

FAST POLARITY FLIP
Change the polarity in seconds by pulling back the shroud and rotating the connector bodies.



COMPACT FURCATION
Slim-line housing is perfect for high density applications where port access is critical.

.

PULL-TAB FOR EASY ACCESS
Fast Moves, Adds and Changes thanks to an easy access pulling tab at the rear of the connector..

8, 12 AND 24 FIBER
All standard fiber-counts possible to suit individual applications or data rates.

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OPTERNA
AT LIFE SPEED®

LC Patch cords

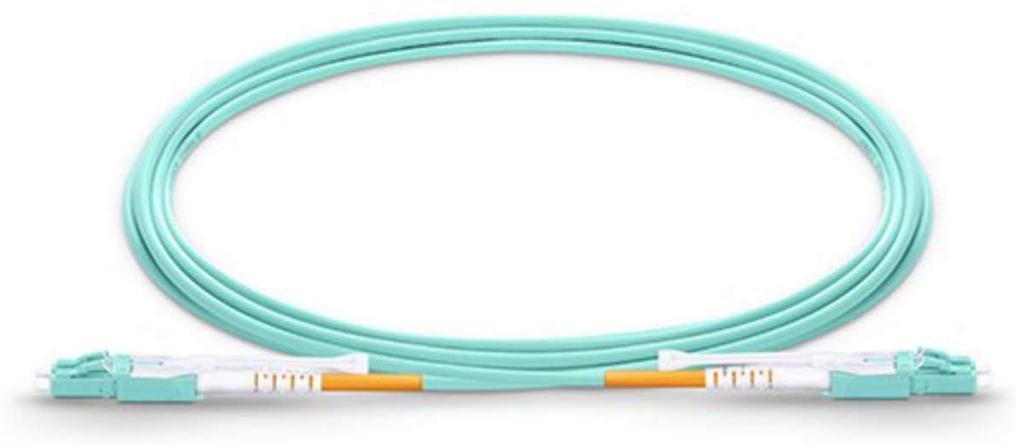
Compact, high-performance building blocks

LC cords

Ultra High Density Chassis

2mm uni-tube cable
More space efficient than standard duplex figure 8 cables.

Polarity switchable
Change polarity in a matter of seconds with the innovative shroud.



Pulling tab
High packing density and fast access thanks to integrated pulling tab.

Low-loss
0.15dB loss over multimode OM3 and OM4 assemblies.

OPTERNA AT LIFE SPEED®

Sharing - Knowledge

Advising our customers and listening

OPTION 01

Choosing the glass

Singlemode for longer distances and unlimited data or multimode?

OPTION 02

Application distance

What are the distance limitations at data rates of 40G and 100G?

OPTION 03

Which Base-Type?

Which MPO connector will give me the best migration path?

OPTION 04

Topology choice

Should I build an inter-connect or a cross-connect topology?

OPTION 05

Which polarity?

Should I use type-A, type-B or do I have other alternatives?

OPTION 06

Standardisation

Am I adhering to the recommended standard with this design?

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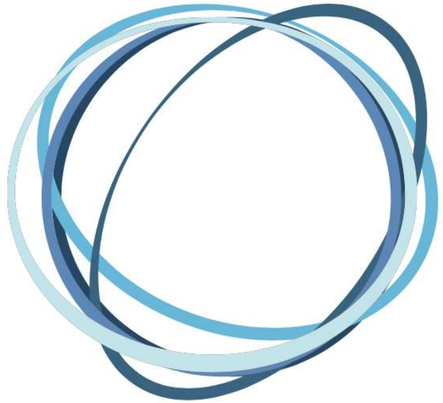

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