



MTP[®] / MPO



Multi-fibers Cabling Solutions

Application & Product Guide

Delivering Increased Bandwidth and Lower Latency for Data Center

ABOUT ARTIC

Dynamic, flexible and customer focused, ARTIC FIBER is constantly evolving along with the industry. We develop and manufacture high end innovative solutions for connectivity and structured cabling.

Our exigent international customer base is active in multiple segments: Data Center, Telecommunication networks and Premise networks. With multiple locations around the globe coupled with our distribution network we know how to best serve you with the greatest attention.

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Proven quality and performance backed by dedicated technical support, superior manufacturing capabilities, and supply chain agility for today's advanced server connections.



We Delivery
Fiber Optic
Solution



✓ MTP® / MPO Multi-fibers Cables Assemblies

- 12FO Standard MTP® / MPO Trunk Cable



Keyed Characteristic

- NTT Compatible;
- Low loss interconnect;
- Push-pull mating of MTP for quick connections;
- 100% tested;
- Compliance with the 40 and 100Gbps protocols;
- Consistent and repeatable performance.

Application

- High density interconnects for: Telephony central office and local loop & Data Communications;
- Provides interconnect for parallel optical transmitters and receivers.

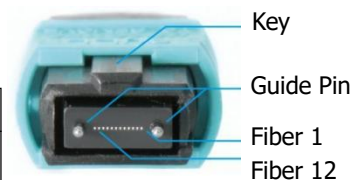
Specification

MTP®: Trademark US Conec Ltd.

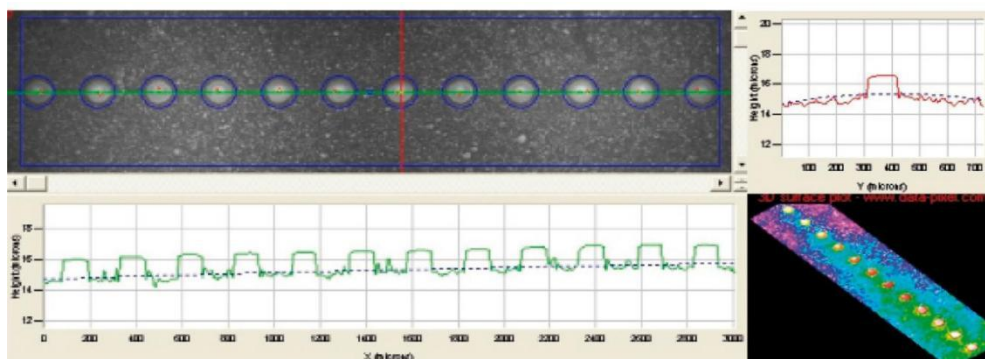
Type and Color Code Connectors	Insertion Loss (IL)	Optical Return Loss (RL)
Multimode MTP® Standard Connector	0.35 dB Typical (All Fibers) 0.75 dB Maximum (Single Fiber) ^{1,3}	> 20 dB (0° Flat Polished) ^{2,3}

1 IL test according to IEC 61300-3-4;
2 RL test according to IEC 61300-3-6;
3 Tested with proposed encircled flux launch condition on 50µm fiber & 850nm per IEC 61280-4-1.

Position of Fibers



3D Testing Results



✓ MTP® / MPO Multi-fibers Cables Assemblies

• 24FO Standard MTP® / MPO Trunk Cable



Keyed Characteristic

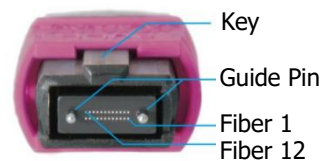
- 24 fibers in a single connector;
- Push-pull connectors eliminates the risk of damaging the ferrule during the connection;
- 3 versions of connector PIN configuration: Female-female, male-male, male-female;
- Thin, very flexible fiber optic patch cable (Round cable, 4.0mm and flat cable, 4.1mm x 0.3mm) with 24 fibers;
- Available fiber OS2, OM2, OM3, OM4;
- Different lengths and color available;
- Sticker labeling at both cable ends (Optional);
- Polarity version of A, B, C.

Specification

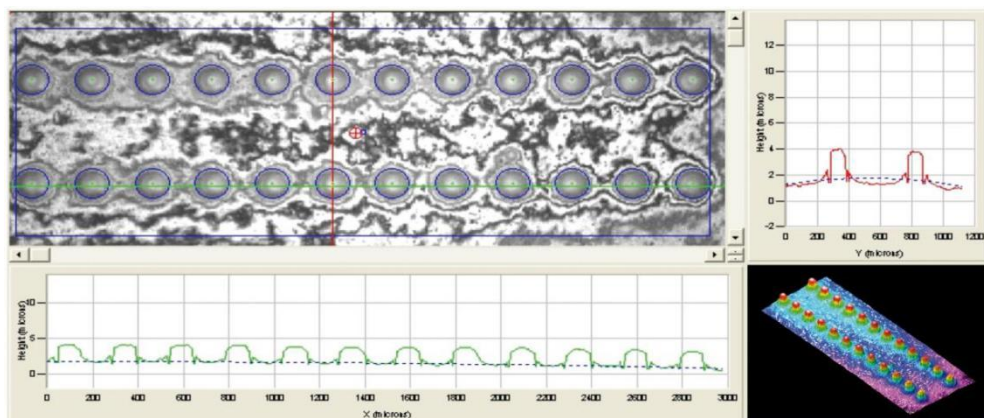
MTP®: Trademark US Conec Ltd.

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Position of Fibers



3D Testing Results



✓ MTP® / MPO Multi-fibers Cables Assemblies

• MTP® / MPO Pre-terminated Cable



12FO MTP® / MPO

			
	Mini Core	Micro Bundle	Cable with separation tubes
Feasibility	up to 144 fibers Singlemode Multimode OM3 / OM4	up to 288 fibers Singlemode Multimode OM3 / OM4 Cable diameter: <9mm	up to 144 fibers Singlemode Multimode OM3 / OM4 Hybrid cable, eg MTP-LC
Application	Data center SAN link	Data center SAN link	Data Center Backbone

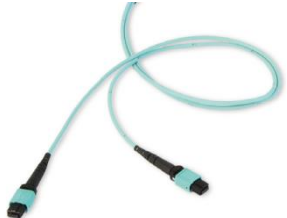
24FO MTP®/MPO

			
	Mini Core	Micro Bundle	Cable with separation tubes
Feasibility	up to 144 fibers Singlemode Multimode OM4	up to 288 fibers Singlemode Multimode OM4 Cable diameter: <9mm	up to 144 fibers Singlemode Multimode OM4 Hybrid cable, eg MTP-LC
Application	Data center SAN link	Data center SAN link	Data Center Backbone

✓ MTP® / MPO Multi-fibers Cables Assemblies

• 12FO Elite MTP® / MPO Trunk Cable

MTP12 Elite (m) - MTP12 Elite (m) 50µm OM4, Magenta		
		
Type	A	C
12 (1x12), 4.5 mm		
7m	12NTAMP07	12NTCMP07
10m	12NTAMP010	12NTCMP010
15m	12NTAMP015	12NTCMP015
20m	12NTAMP020	12NTCMP020
25m	12NTAMP025	12NTCMP025
30m	12NTAMP030	12NTCMP030
24 (2x12), 8.9 mm		
10m	24NTAMP010	24NTCMP010
15m	24NTAMP015	24NTCMP015
20m	24NTAMP020	24NTCMP020
25m	24NTAMP025	24NTCMP025
30m	24NTAMP030	24NTCMP030
48 (4x12), 8.9 mm		
10m	48NTAMP010	48NTCMP010
15m	48NTAMP015	48NTCMP015
20m	48NTAMP020	48NTCMP020
25m	48NTAMP025	48NTCMP025
30m	48NTAMP030	48NTCMP030
72 (6x12), 10.8 mm		
10m	72NTAMP010	72NTCMP010
15m	72NTAMP015	72NTCMP015
20m	72NTAMP020	72NTCMP020
25m	72NTAMP025	72NTCMP025
30m	72NTAMP030	72NTCMP030
144 (12x12), 8.4 mm		
10m	144NTAMP010	144NTCMP010
15m	144NTAMP015	144NTCMP015
20m	144NTAMP020	144NTCMP020
25m	144NTAMP025	144NTCMP025
30m	144NTAMP030	144NTCMP030

MTP12 Elite (m) - MTP12 Elite (m) 50µm OM3, Turquoise		
		
Type	A	C
12 (1x12), 4.5 mm		
7m	12NTAMP07	12NTCMP07
10m	12NTAMP010	12NTCMP010
15m	12NTAMP015	12NTCMP015
20m	12NTAMP020	12NTCMP020
25m	12NTAMP025	12NTCMP025
30m	12NTAMP030	12NTCMP030
24 (2x12), 8.9 mm		
10m	24NTAMP010	24NTCMP010
15m	24NTAMP015	24NTCMP015
20m	24NTAMP020	24NTCMP020
25m	24NTAMP025	24NTCMP025
30m	24NTAMP030	24NTCMP030
48 (4x12), 8.9 mm		
10m	48NTAMP010	48NTCMP010
15m	48NTAMP015	48NTCMP015
20m	48NTAMP020	48NTCMP020
25m	48NTAMP025	48NTCMP025
30m	48NTAMP030	48NTCMP030
72 (6x12), 10.8 mm		
10m	72NTAMP010	72NTCMP010
15m	72NTAMP015	72NTCMP015
20m	72NTAMP020	72NTCMP020
25m	72NTAMP025	72NTCMP025
30m	72NTAMP030	72NTCMP030
144 (12x12), 8.4 mm		
10m	144NTAMP010	144NTCMP010
15m	144NTAMP015	144NTCMP015
20m	144NTAMP020	144NTCMP020
25m	144NTAMP025	144NTCMP025
30m	144NTAMP030	144NTCMP030

MTP12 Elite (m) - MTP12 Elite (m) 9µm, Yellow		
		
Type	A	C
12 (1x12), 4.5 mm		
7m	12NTAMP07	12NTCMP07
10m	12NTAMP010	12NTCMP010
15m	12NTAMP015	12NTCMP015
20m	12NTAMP020	12NTCMP020
25m	12NTAMP025	12NTCMP025
30m	12NTAMP030	12NTCMP030
24 (2x12), 8.9 mm		
10m	24NTAMP010	24NTCMP010
15m	24NTAMP015	24NTCMP015
20m	24NTAMP020	24NTCMP020
25m	24NTAMP025	24NTCMP025
30m	24NTAMP030	24NTCMP030
48 (4x12), 8.9 mm		
10m	48NTAMP010	48NTCMP010
15m	48NTAMP015	48NTCMP015
20m	48NTAMP020	48NTCMP020
25m	48NTAMP025	48NTCMP025
30m	48NTAMP030	48NTCMP030
72 (6x12), 10.8 mm		
10m	72NTAMP010	72NTCMP010
15m	72NTAMP015	72NTCMP015
20m	72NTAMP020	72NTCMP020
25m	72NTAMP025	72NTCMP025
30m	72NTAMP030	72NTCMP030
144 (12x12), 8.4 mm		
10m	144NTAMP010	144NTCMP010
15m	144NTAMP015	144NTCMP015
20m	144NTAMP020	144NTCMP020
25m	144NTAMP025	144NTCMP025
30m	144NTAMP030	144NTCMP030

✓ MTP® / MPO Multi-fibers Cables Assemblies

• 24FO Elite MTP® / MPO Trunk Cable

MTP 24 Elite (m) - MTP24 Elite (m)
50µm OM4, Magenta

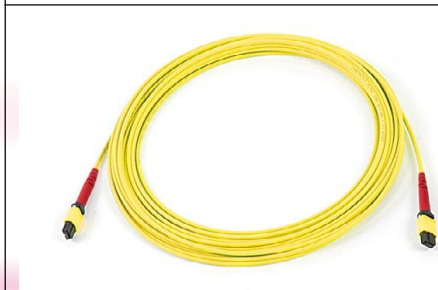


Type A

24 (1x24), 3.8 mm

10m	24NTAMP010
15m	24NTAMP015
20m	24NTAMP020
25m	24NTAMP025
30m	24NTAMP030

MTP 24 Elite (m) - MTP24 Elite (m)
9µm, Yellow



Type A

24 (1x24), 3.8 mm

10m	24NTAMP010
15m	24NTAMP015
20m	24NTAMP020
25m	24NTAMP025
30m	24NTAMP030

MTP 24 Elite (m) - MTP24 Elite (m)
50µm OM4, Magenta



Type A

48 (4x12), 8.9 mm

10m	48NTAMP010	48NTCMP010
15m	48NTAMP015	48NTCMP015
20m	48NTAMP020	48NTCMP020
25m	48NTAMP025	48NTCMP025
30m	48NTAMP030	48NTCMP030

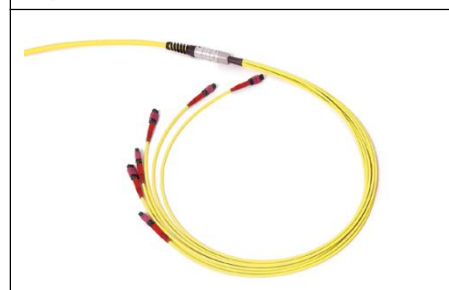
72 (3x24), 10.8 mm

10m	72NTAMP010	72NTCMP010
15m	72NTAMP015	72NTCMP015
20m	72NTAMP020	72NTCMP020
25m	72NTAMP025	72NTCMP025
30m	72NTAMP030	72NTCMP030

144 (6x24), 8.4 mm

10m	144NTAMP010	144NTCMP010
15m	144NTAMP015	144NTCMP015
20m	144NTAMP020	144NTCMP020
25m	144NTAMP025	144NTCMP025
30m	144NTAMP030	144NTCMP030

MTP 24 Elite (m) - MTP24 Elite (m)
50µm OM4, Magenta



Type A

48 (4x12), 8.9 mm

10m	48NTAMP010	48NTCMP010
15m	48NTAMP015	48NTCMP015
20m	48NTAMP020	48NTCMP020
25m	48NTAMP025	48NTCMP025
30m	48NTAMP030	48NTCMP030

72 (3x24), 10.8 mm

10m	72NTAMP010	72NTCMP010
15m	72NTAMP015	72NTCMP015
20m	72NTAMP020	72NTCMP020
25m	72NTAMP025	72NTCMP025
30m	72NTAMP030	72NTCMP030

144 (6x24), 8.4 mm

10m	144NTAMP010	144NTCMP010
15m	144NTAMP015	144NTCMP015
20m	144NTAMP020	144NTCMP020
25m	144NTAMP025	144NTCMP025
30m	144NTAMP030	144NTCMP030



☒ **MTP® / MPO Multi-fibers Cables Assemblies**

- 24FO Elite MTP® / MPO Trunk Cable

MTP12 Elite (m) - MTP12 Elite (f) 50µm OM4, Magenta	
	
Type A	
12 (1x12), 3.0 mm	
10m	12NTAMP010
15m	12NTAMP015
20m	12NTAMP020
25m	12NTAMP025
30m	12NTAMP030

MTP12 Elite (m) - MTP12 Elite (f) 50µm OM3, Turquoise	
	
Type A	
12 (1x12), 3.0 mm	
10m	12NTAMP010
15m	12NTAMP015
20m	12NTAMP020
25m	12NTAMP025
30m	12NTAMP030

- 12FO Elite MTP® / MPO Patch Cord and Harness Cable

MTP12 Elite (f) - MTP12 Elite (f)		
		
Type	A	B
50µm OM4, Magenta		
3m	12NTAMP003	12NTCMP003
7m	12NTAMP007	12NTCMP007
15m	12NTAMP015	12NTCMP015
50µm OM3, Turquoise		
3m	12NTAMP003	12NTCMP003
7m	12NTAMP007	12NTCMP007
15m	12NTAMP015	12NTCMP015
9µm Monomode, Yellow		
3m	12NTAMP003	12NTCMP003
7m	12NTAMP007	12NTCMP007
15m	12NTAMP015	12NTCMP015

MTP12 Elite (f) - LC duplex		
		
	LC	LC APC
50µm OM4, Magenta		
3m	12NTAMP003	-
7m	12NTAMP007	-
15m	12NTAMP015	-
50µm OM3, Turquoise		
3m	12NTAMP003	-
7m	12NTAMP007	-
15m	12NTAMP015	-
9µm Monomode, Yellow		
3m	12NTAMP003	-
7m	12NTAMP007	-
15m	12NTAMP015	-

Push-Pull Tab (extension of the connector)



for MTP® / MPO connector (Set of 10 pcs)

Fittings see chapter "Pigtails, fittings and cassettes to be merged"

* Other specification on request

☒ **MTP® / MPO Multi-fibers Cables Assemblies**

- 24FO Elite MTP® / MPO (Extension trunk)

MTP24 Elite (m) - MTP24 Elite (f) 50µm OM4, Magenta	
	
24 (1x24), 3.8 mm	
10m	12NTAMP010
15m	12NTAMP015
20m	12NTAMP020
25m	12NTAMP025
30m	12NTAMP030

MTP24 Elite (m) - MTP24 Elite (f) 9µm, Yellow	
	
24 (1x24), 3.8 mm	
10m	12NTAMP010
15m	12NTAMP015
20m	12NTAMP020
25m	12NTAMP025
30m	12NTAMP030

- 24FO Elite MTP® / MPO Patch Cord and Harness Cable

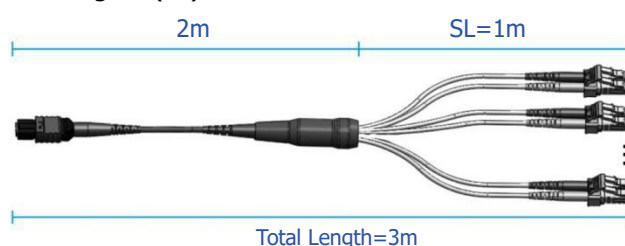
MTP24 Elite (f) – MTP24 Elite (f)	
	
50µm OM4, Magenta	
10m	12NTAMP010
15m	12NTAMP015
20m	12NTAMP020
25m	12NTAMP025
30m	12NTAMP030
9µm OS2, Yellow	
10m	12NTAMP010
30m	12NTAMP030

MTP24 Elite (f) - LC duplex		
		
50µm OM4, Magenta		
3m	12NTAMP003	-
7m	12NTAMP007	-
15m	12NTAMP015	-

MTP24 Elite (f) - LC duplex		
		
9μm OS2, Yellow		
3m	12NTAMP003	-
7m	12NTAMP007	-
15m	12NTAMP015	-

Diagram

Overlengths (SL) Harness cable





✓ Fiber Optical Management System

• 40/100G/200G/400G MTP® / MPO Chassis Solutions

Keyed Characteristic

- Modular design, 19-inch rack installation, convenient for later expansion;
- High-density design, can install MPO adapter panel, LC adapter panel, MPO module box;
- Can adapt to pre-terminated MPO module box or fusion type module 40G/100G/400G wiring requirements;
- With 12-core module box and 24-core module box as the basic unit, 1U supports up to 144 cores, 2U supports 288 cores, and 4U supports 576 cores. Check the connection inside the box at any time, and provide dust protection;
- Meet the standards: GR-1435-core, IEC 61754-7, YD/T- 778.

19" 1RU 96 Cores = 24F X 4 Cassette



Frame with Module Cassette [NTMT0096F1](#)

19" 1RU 96 Cores = 24F X 4 Cassette



Frame with Module Cassette [NTMT0096F2](#)

19" 1RU 144 Cores = 12F X 12 Cassette



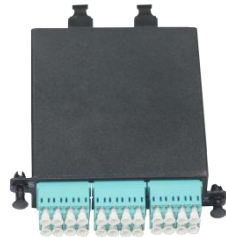
Frame with Module Cassette [NTMT00144F](#)

19" 4RU 384 Cores = 24F X 16Cassette



Frame with Module Cassette [NTMT00384F](#)

Module Cassette 24F = 6 X LC Quad



Cold-rolled Steel Module Cassette [MC0024](#)

Module Cassette 12F = 6 X LC Duplex



ABS Module Cassette [NTMC0012](#)

Module Cassette 24F = 12 X LC Duplex



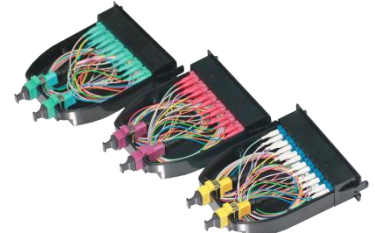
ABS Module Cassette [NTMC0024](#)

Module Cassette 24F = 6 X LC Quad



Cold-rolled Steel Module Cassette [MC0024](#)

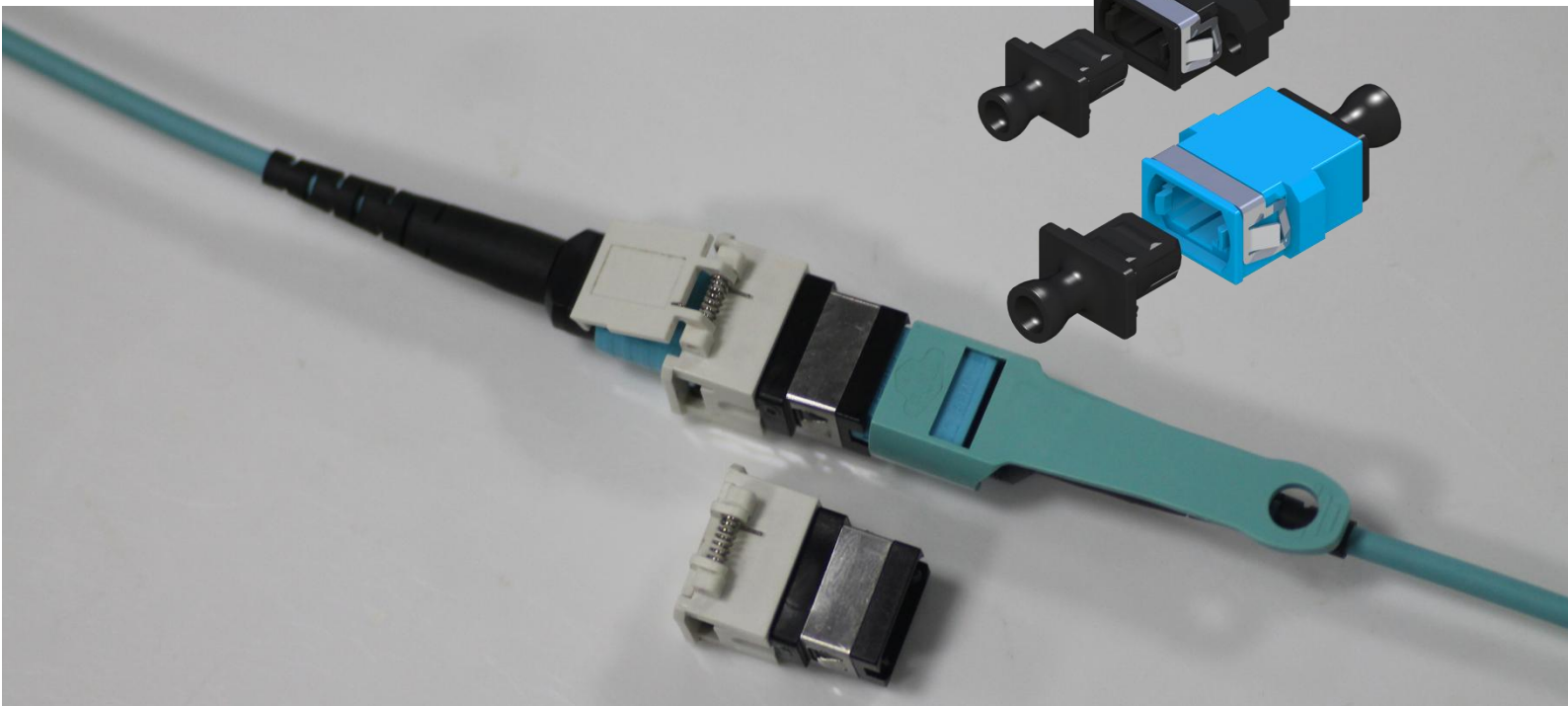
Module Cassette 24F = 12 X LC Duplex



ABS Module Cassette [MC0024](#)

✓ **Fiber Optical Management System**

- MTP® / MPO Optical Adapter



Aqua-Flange Keyway Convertible

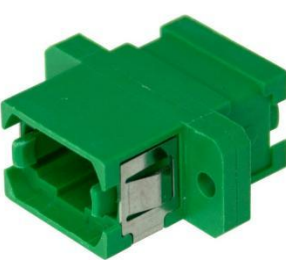
Multi-mode OM3 Aqua

Aqua-Reduced Flange Keyway Convertible

Multi-mode OM3 Aqua

Black-Flange Keyway Convertible

Single-mode OS2 Black

MPO Fiber Panel Adapters with SC Footprint		
		
Multi-mode OM3 Aqua	Single-mode OS2 Green	Single-mode OS2 Blue

✓ Fiber Optical Management System

- High Density LC Uniboot Optical Cable



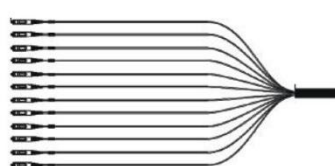
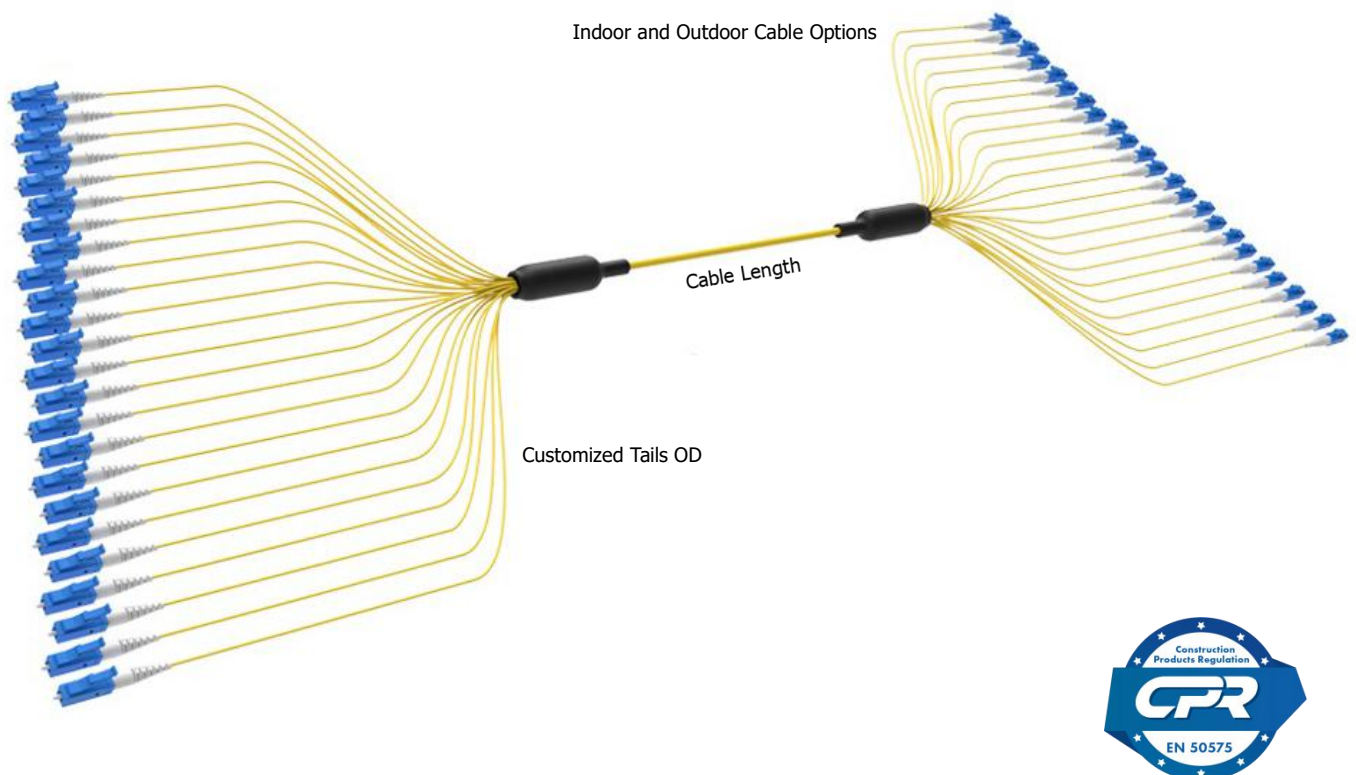
As the networking environment of today becomes increasingly dependent on high speed and high density solutions, effective cable management is a real issue. The key concern is how to manage more cables in a smaller amount of space. LC Uniboot fibre patchcord reduces cable management space comparing to standard patchcords. The patchcord utilises a special round duplex cable that allows duplex transmission within a single 1.6mm, 2.0mm, 2.4mm or 3.0mm cable. As a result of these features our uniboot patch cord offers improved airflow and visibility of equipment within a high density network environment.

High Density Enhanced New Uniboot LC Plenum Cable, 2.0/3.0mm				
				
Model 1	Model 2	Model 3	Model 4	Model 5

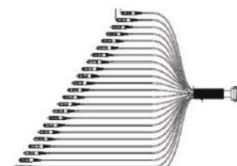
✓ Fiber Optical Management System

- Pre-terminated Trunk Cables

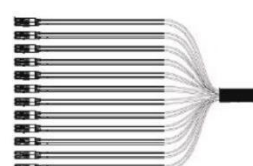
ARTIC FIBER manufactures a broad range of factory terminated and tested multi-fibre cable assemblies. These assemblies are available in various fibre types and counts, cable constructions and connector options. Preterminated fibre optic cable assemblies are suitable for horizontal or vertical deployment in a range of applications. Pre-terminated cables offer the advantage of reduced time and cost associated with on-site cable breakout and connector terminations. They are ideally suited where narrow installation timeframes are applicable or on-site terminations are hazardous or pose OH&S issues.



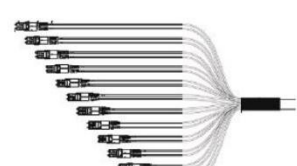
Single Fan out



Single Staggered



Pair Fan out



Pair Staggered

✓ **Fiber Optical Management System**

• Fiber Optic Cleaning Tools

ARTIC FIBER offers a complete range of cleaning tools to ensure the connector end faces are clean and in compliance with installation procedures.



One Click Cleaner SC FC ST



One Click Cleaner LC



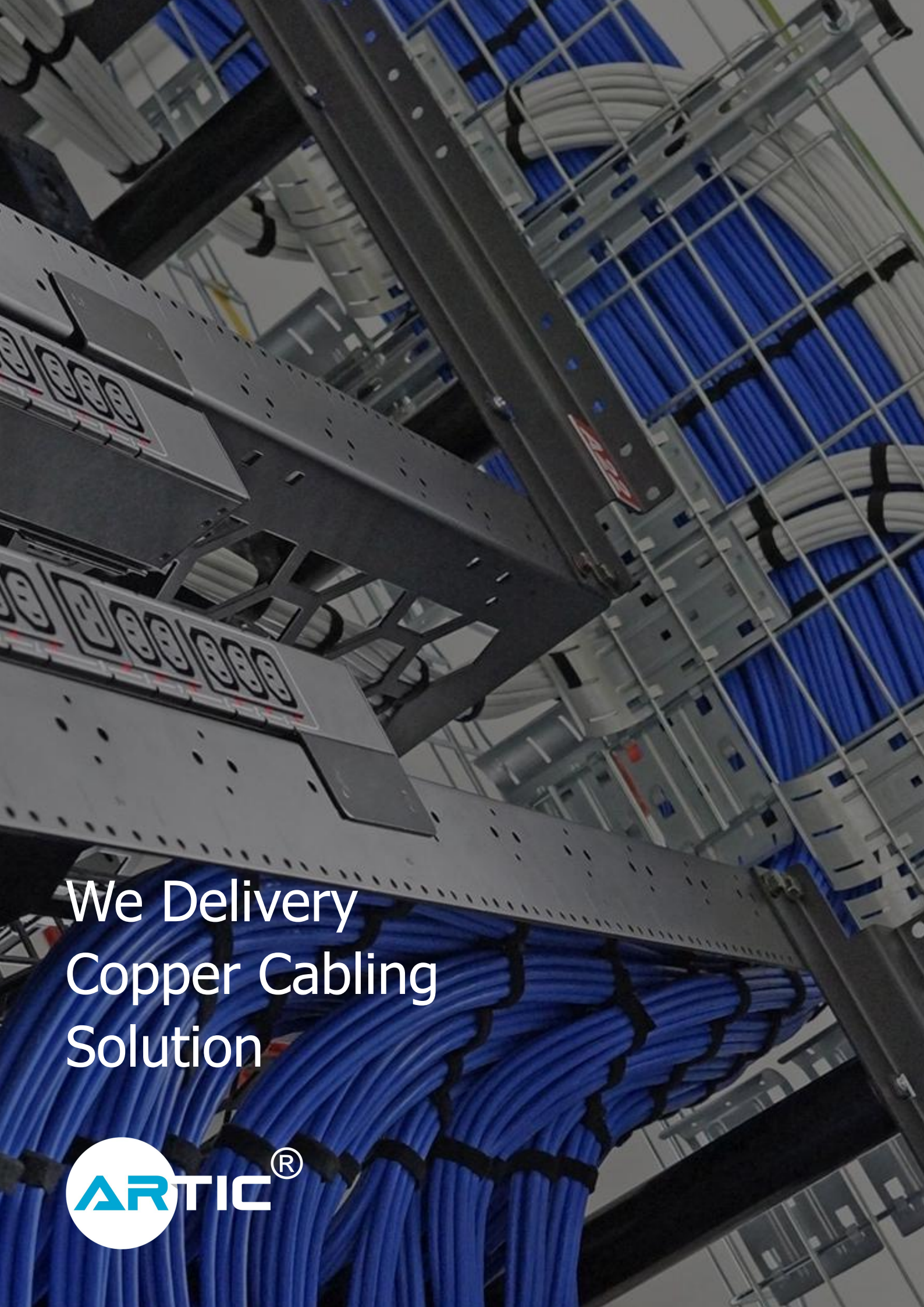
One Click Cleaner MTP-MPO



Cleaner Single Ferrule Connectors



Cleaner MTP-MPO Ferrules



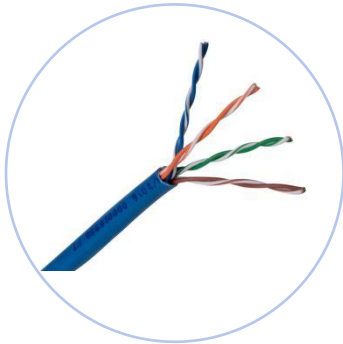
We Delivery
Copper Cabling
Solution



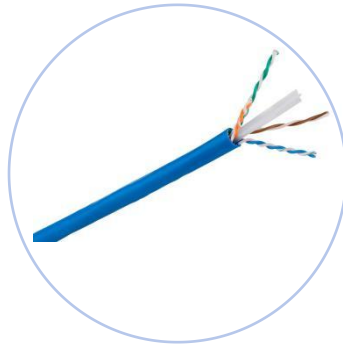
✓ **Structured Cabling System**

- Patch Cords & Lan Cables

ARTIC FIBER offers a full range of copper cables and accessories for your data center project.



CAT5e U/UTP Cable



CAT6 U/UTP Cable



CAT6 F/UTP Cable



CAT7 S/FTP Cable



Preterminated Cables



CAT5e U/UTP Patch Cord



CAT6 U/UTP Patch Cord



CAT6A S/FTP Patch Cord



CAT6 STP PCB Loaded Patch Panel



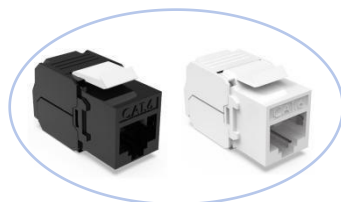
CAT6A UTP Keystone Jack Patch Panel



1U UTP Angled Unloaded Patch Panel



1U Cable Manager 5 hooks Plastic, Depth 80mm



CAT6 UTP Keystone Jack



Wall Outlet box 2 ports

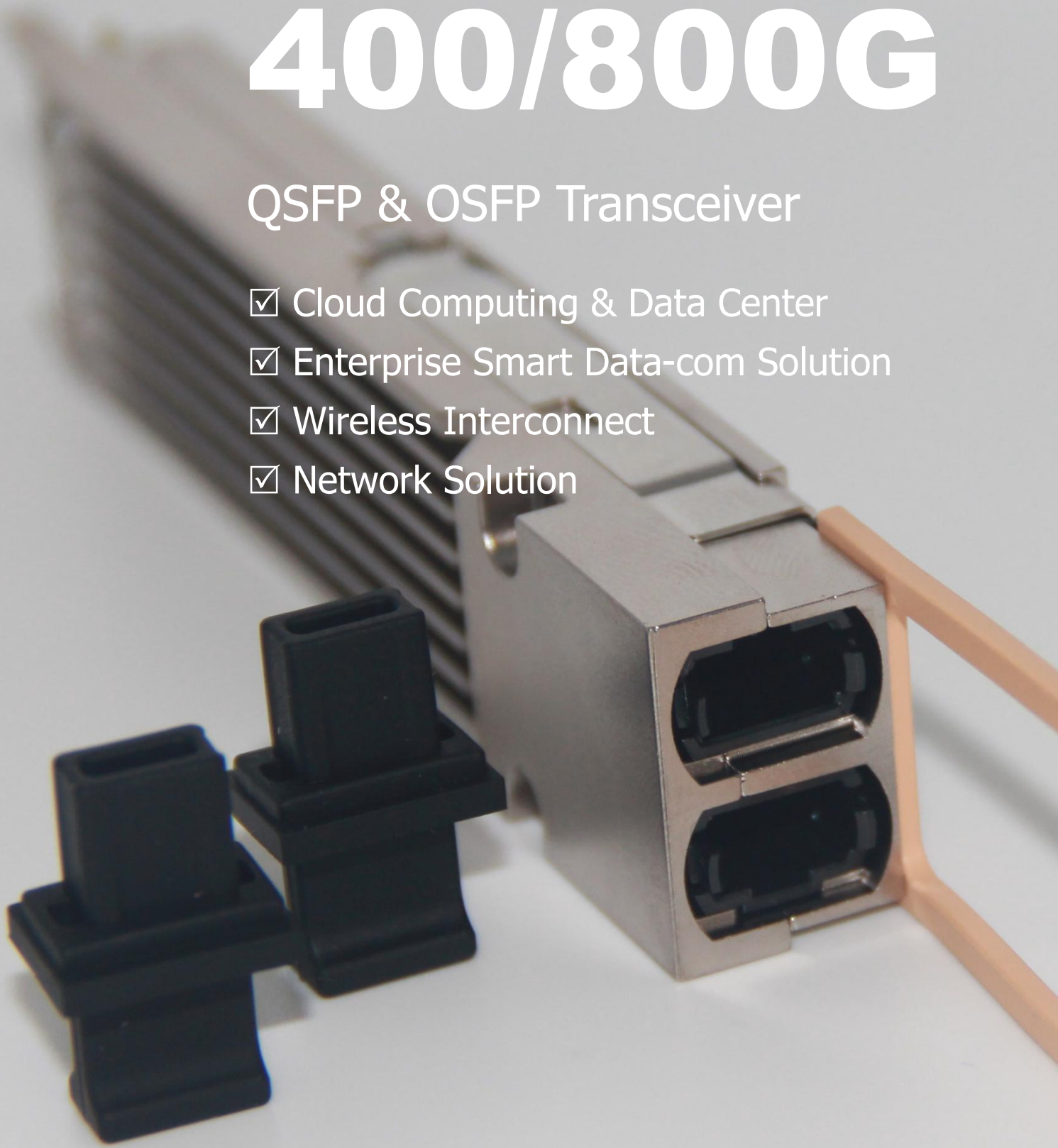


Copper Faceplates Euromod

400/800G

QSFP & OSFP Transceiver

- ☑ Cloud Computing & Data Center
- ☑ Enterprise Smart Data-com Solution
- ☑ Wireless Interconnect
- ☑ Network Solution



✓ Fiber Optical Transceivers

- Fiber Optic Active Components

ARTIC FIBER helps meet the growing demand for interconnect solutions that offer improved performance at increasing data rates, all of our network transceivers are fully compliant to MSA standards.

100G QSFP28



10G SFP+ BiDi



100G QSFP28 CWD4



10G SFP+ Duplex



100G QSFP28 PSM4



10G SFP+ CWDM



100G QSFP28 LR4



10G XFP BiDi



* Other specification on request

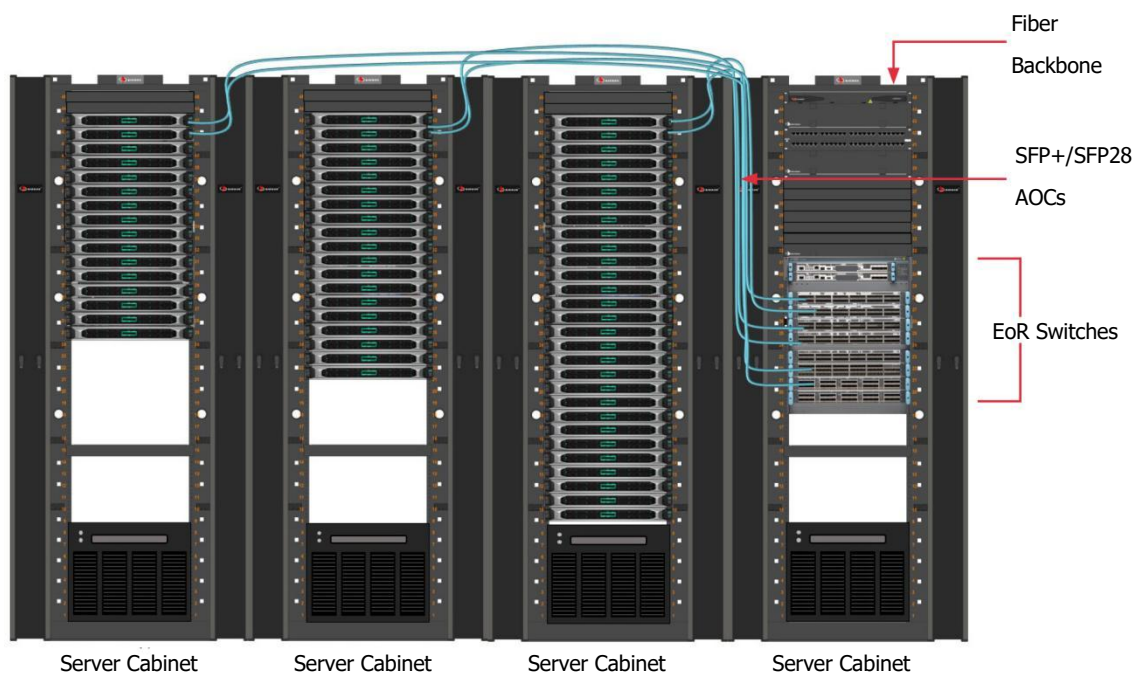
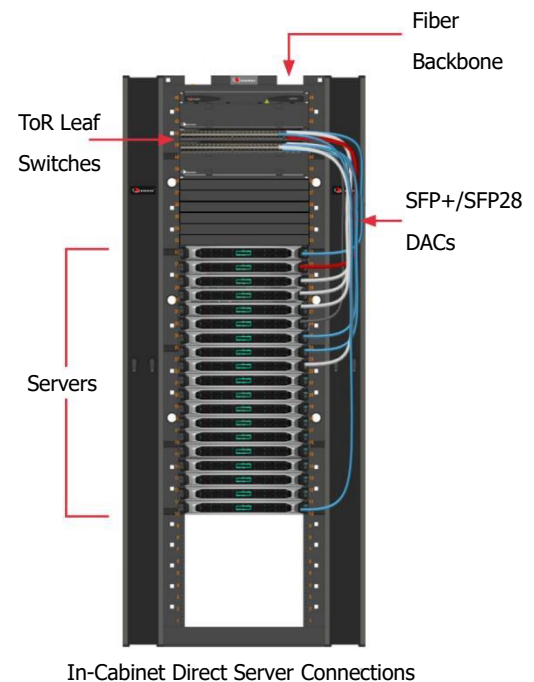
✓ High Speed Fiber Optical Cable

• Server and Storage Deployment Configurations

Top of Rack is a common topology in the data center for switch-to-server connections, where leaf switches, servers, and sometimes storage devices are located in the same rack or cabinet and connected via short-reach DACs. It's especially ideal for server clusters that support a specific application, enabling extremely low-latency communications between servers.

Many server connections of 3 meters or below can be made within a cabinet as the distance from the top to the bottom of the cabinet averages 2.5 meters or less. ToR deployments are also popular due to its modular design that makes it easy to expand with additional cabinets when more compute is needed.

For clusters where multiple racks or cabinets house servers with switches placed at the EoR or MoR, AOCs can support longer distances to accommodate cabinet-to-cabinet connections.



Cabinet-to-Cabinet Direct Server Connections

✓ High Speed Fiber Optical Cable

- DAC & AOC

ARTIC FIBER DAC Cables and AOC Cables are widely applied in data centers for high-performance computing network cabling system owing to their lower latency, lower power and lower cost. DAC Cables and AOC Cables come in a variety of configurations to meet network requirements. Each is available in 10G SFP+, 25G SFP28, 40G QSFP+, and 100G QSFP28 data rates with additional options for breakouts from 40G to 4x10G or 100G to 4x25G variants.



100G QSFP28 AOC



40G QSFP+ AOC



100G QSFP28 DAC



40G QSFP+ DAC

* Other specification on request

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