



DEEPBLUE TELECOM

Data Center MPO Connectivity Catalogue



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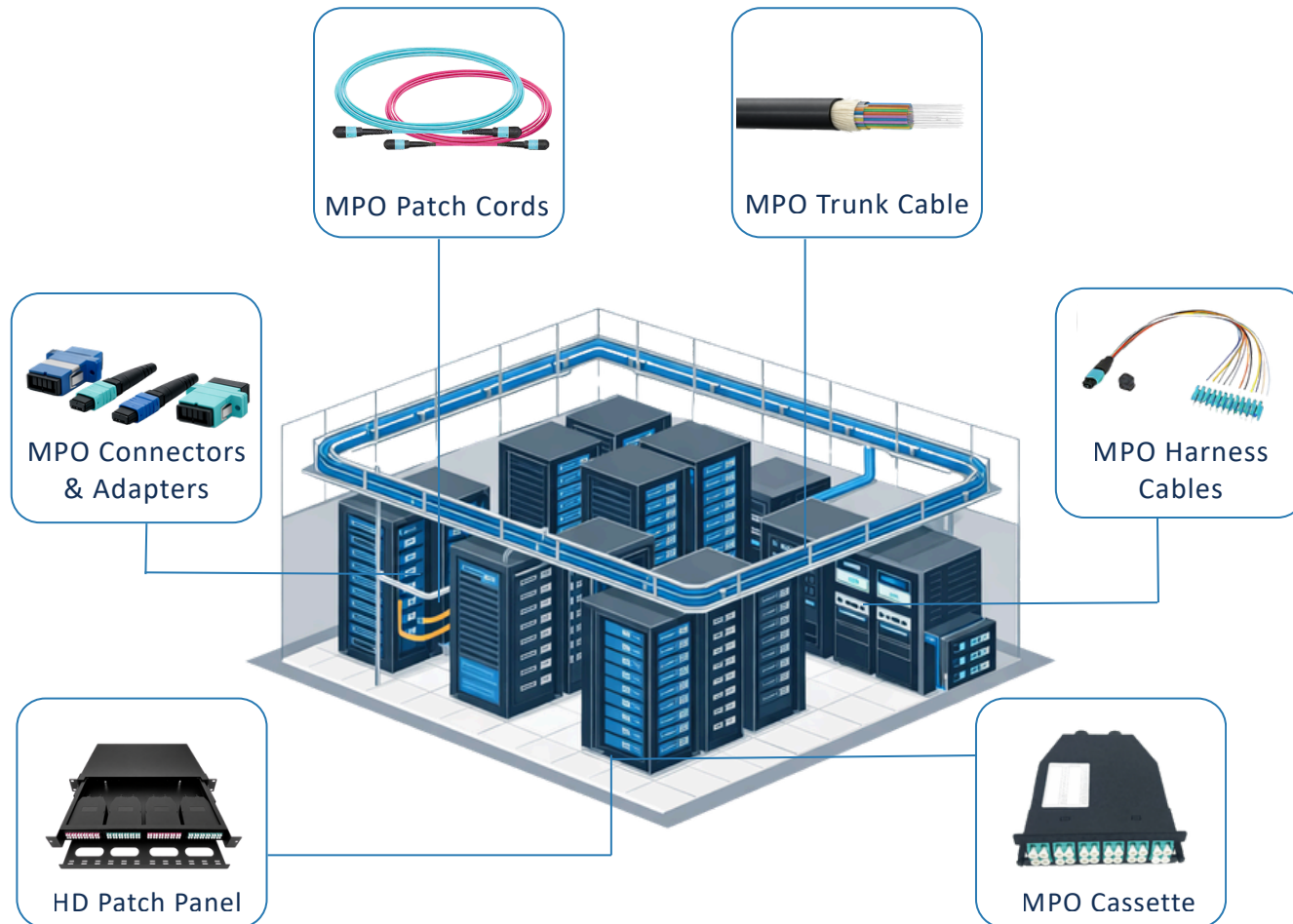
Data Center Solutions

Data center cabling solutions provide the physical layer for high-speed network connectivity, enabling reliable transmission of digital signals between switches, servers, storage systems and cross-connect areas. They support scalable network expansion while maintaining organized and efficient cable management.

Our data center portfolio includes high-density MPO trunk and multi-leg trunk assemblies, MPO-to-LC harness cables, high-density patch panels and cassettes, as well as connector and adapter components for efficient installation and maintenance. Solutions are available in various configurations to accommodate different reach and bandwidth requirements and can be tailored to specific site designs and migration plans.

All products are designed and manufactured in accordance with applicable international standards and undergo consistent quality control and testing to ensure reliable performance and product consistency.

MPO System Architecture



To specify a MPO high-density system, please confirm:

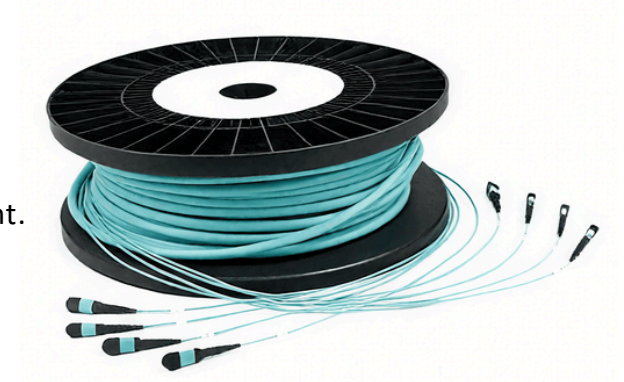
- Target speed & optics: 100/200/400/800G (SR/DR/FR...);
- Patch architecture: ToR/EoR / Spine-Leaf / MDA-HDA-EDA/ Zone Cabling;
- Fiber type & reach: OS2 /OM3/ OM4 / OM5, distance;
- Polarity plan: Type A/B/C; Male/Female.

MPO Trunk Cable

Mini-Round MPO Trunk Cable

Features:

- Compact mini-round design for simple routing in racks and pathways.
- High flexibility for tight turns and crowded cable managers.
- Factory pre-terminated MPO ends for fast, plug-and-play deployment.
- Designed for frequent patch-panel interconnect and clean front/rear management.
- Fiber options available: bend-insensitive (e.g., ITU-T G.657.A1/A2).
- Clear identification: color coding, labeling, and marking.
- Optional: 100% test report and serial traceability.

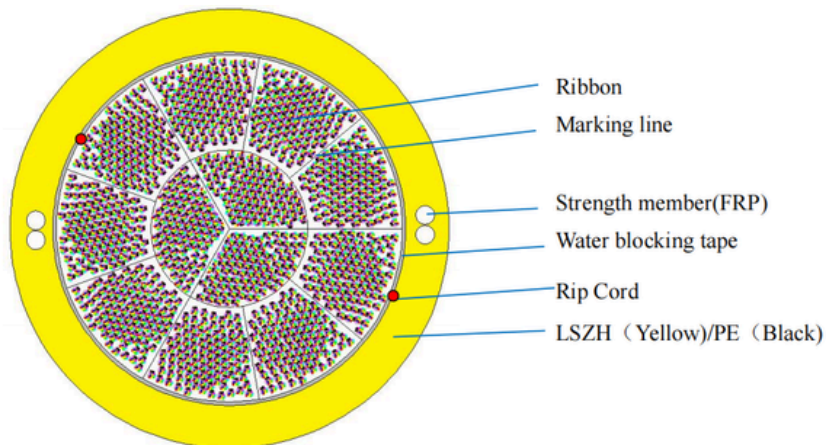


Item	Options
Fiber count	12/24/48/72/96/144 fibers
Fiber Type	OS2 / OM4 / OM5
MPO interface	MPO-12 / MPO-16
Polarity	Type A / Type B / Type C
MPO Connector Type	Male / Female (Pinned / Unpinned)
Endface	UPC/APC
Jacket	LSZH/PE/OFNR/OFNP
Length	10-100m

Ribbon MPO Trunk Cable

Features:

- High fiber density ribbon design for backbone and high-count deployments.
- Bend-insensitive fiber options: ITU-T G.657A1 / G.657A2.
- Reliable mechanical performance, IEC 60794 tested (tension, crush, impact, bend, twist, temperature cycling).
- Flexible architecture: multiple ribbon counts and bundled/sub-unit configurations.
- Sheath options to match the environment: LSZH and PE.
- Clear identification: standard fiber color coding, ribbon ID, and sheath marking for easy management.



Item	Options
Amount of Fiber	144–6912 fibers
Fibers per Ribbon	12F/16F
Ribbons per Bundle	9/12/18/24/27/36/48.....
Bundle Units No	1/2/3/4/5/6.....

Backbone Cable Option

Technical Specification:

Item	GYFDXBPH-16F&12F	GYFDXBPH-16F	
Applicable fiber count / scope	144–6912 fibers	1728 fibers	3456 fibers
Fiber type options	ITU-T G.657A1 / G.657A2	ITU-T G.657A1 / G.657A2	ITU-T G.657A1 / G.657A2
Coating OD (incl. color layer)	250 ± 10 µm (w/o color: 245 ± 10 µm)	205 ± 10 µm (w/o color: 200 ± 10 µm)	205 ± 10 µm (w/o color: 200 ± 10 µm)
Ribbon grouping / sub-unit structure	Ribbon count varies by fiber count	Sub-unit = 12 ribbons × 16F (192F); 9 bundles total	Sub-unit = 24 ribbons × 16F (384F); 9 bundles total
Representative cable OD / mass	Varies by fiber count; e.g. 1728F: Ø 24.0 mm; 394 kg/km (LSZH), 305 kg/km (PE)	Ø 19.5 mm; 341 kg/km	Ø 26.5 mm; 544 kg/km
Sheath options stated in spec	LSZH, PE	LSZH	LSZH
OD / mass tolerance	±10%	±5%	±5%
Max tensile load(short term)	1320 N	2700 N	2700 N
Crush resistance	500 N / 100 mm	1000 N / 100 mm	1000 N / 100 mm
Repeated bending test load	40 N	150 N	150 N
Twist test load	20 N	150 N	150 N
Minimum bending diameter	Not fixed as a single value (test-method driven)	600 mm (Operation/Installation)	800 mm (Operation/Installation)

HD Patch Panels

Features:

- High port density design helps maximize rack space utilization in data center and telecom environments.
- Front-access layout enables faster installation, inspection, and maintenance with reduced downtime.
- Modular configurations supported (adapter plates / cassettes) with clear labeling and port identification for easy administration; compatible with MPO and LC patching solutions.



Item	Options / Description
Fiber Count	24/48/72/96/144/...
Front Adapter Type	LC/UPC, LC/APC, SC/UPC, SC/APC, MPO/MTP®
Capacity of Cassettes	1U: 3/4/5/6/...
Polarity Support	Type A/Type B/Type C
Supported Fiber Type	OS2/OM3/OM4/OM5
Cassette / Plate Compatibility	MPO-LC cassettes, MPO adapter plates, LC/SC adapter plates
Rack Unit (RU)	1U/2U/3U/4U/...
Panel Style	Sliding drawer / fixed
Performance Grade	Standard / Elite (low-loss)

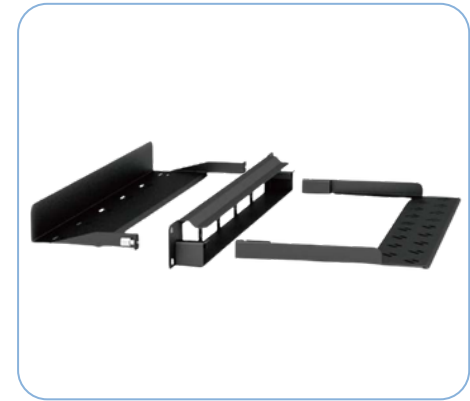
HD Patch Panels



Clip-in Cassette Patch Panel



Push-latch Cassette Patch Panel



Split-frame Cassette Patch Panel

MPO Patch Cords

Features:

- Plug-and-play high-density patching between equipment, cassettes, and patch panels for short-reach links.
- Multiple fiber counts and types available (e.g., 8/12/16/24F; OS2/OM3/OM4/OM5), with polarity options (Type A/B/C).
- Male/Female configurations, plus standard or custom lengths for different routing needs.
- Low-loss grades optional; factory testing and traceability available.



Item	Options / Description
Total Fiber Count	8/12/24/36/48/72/96/144
MPO Connector Format (perinterface)	12F / 24F (connector fiber positions)
Connector End A	SM/UPC, SM/APC, MM/UPC + 12F/24F + Male/Female
Connector End B	SM/UPC, SM/APC, MM/UPC + 12F/24F + Male/Female
Insertion Loss Grade	Standard Loss (≤ 0.7 dB)/ Low Loss (≤ 0.35 dB)
Polarity (TIA-568)	Type A/ Type B / Type C
Cable Construction	Mini Round Bundle / Ribbon / Bare Ribbon
Fiber Type	SM OS2: G.652D / G.657A1/G.657A2; MM: OM3/OM4/OM5
Cable Jacket	OFNP /OFNR/ LSZH

MPO Patch Cords



**Standard MPO Patch
Cord**



**MPO Multi-Leg Patch
Cord (1×N)**

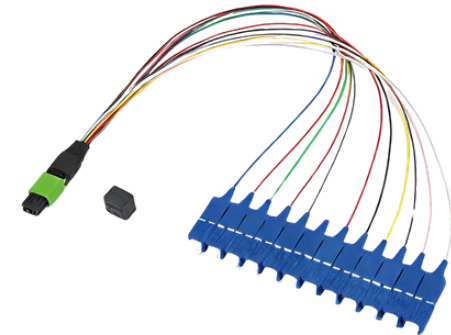


**MPO Multi-Leg Patch
Cord (N×N)**

Module-Based MPO Harness Cables

Features:

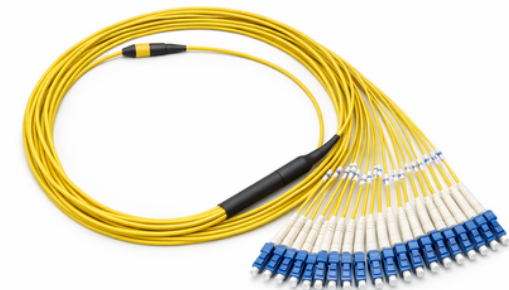
- Integrated module enables fast MPO conversion to mixed connector/fiber interfaces in one assembly.
- Protected interface transition reduces adapters and on-site rework.
- Multiple configurations supported (e.g., MPO ↔ LC/SC/other; OS2/OM2/OM3/OM4/OM5), with standard/custom lengths and jacket options.
- Factory-terminated and tested; low-loss and traceability available.



MPO Fanout/Breakout Harness Cables

Features:

- Direct MPO fanout/breakout to multi-connector branches for flexible equipment and patch-panel interconnects.
- One trunk to multiple endpoints for faster deployment.
- Multiple branch counts and fiber types (OS2/OM3/OM4/OM5), with polarity (Type A/B/C) and Male/Female MPO options.
- Factory-terminated and tested; standard/custom lengths available to match routing needs.



MPO Adapters & Connectors

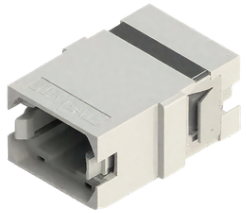
Features:

- High-precision MPO/MTP fast connectors and adapters for field-installable, quick termination, and reliable high-density links.
- Low-loss options available; keyed alignment ensures correct orientation and repeatable connections.
- Multiple fiber counts and interface types supported, including panel-mount adapters; Type A/B/C polarity planning plus clear port ID.



Item		SM Standard, Ferrule	MM Standard, Ferrule
Insertion Loss(dB)	Typical	0.2 (All Fibers)	0.25 (All Fibers)
	Maximum	0.60 (Single Fiber)	0.75 (Single Fiber)
Return Loss(dB)		>20 dB	>60 dB
Exchangeability(dB)		≤0.3 dB	
Durability(dB)		<0.2 (500Matings,per EIA-455-21A)	
Tensile Strength(dB)		≤0.3 (Max 66N)	
Operating Temperature (°C)		-20~+60	
Storage Temperature (°C)		-40~+80	
Polarity		TIA-568-C.3 A,B,C	
Fiber Count		12/24/48/72/96/...	

MPO Connectors & Adapters



**MPO Simplex Adapter
without Flange**



MPO Metal Adapter



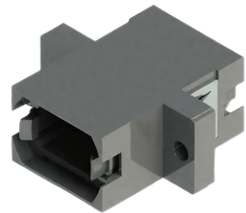
MPO Plastic Adapter



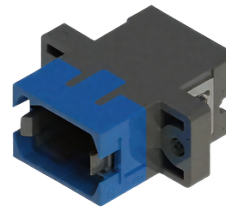
**MPO Connector of
Round Bundle Cable**



**MPO Connector of Flat
Ribbon Cable**



**MPO Simplex Adapter
with Flange**



**MPO Polarity Reversible
Adapter**



**MPO Reverse Key
Adapter**



MPO Keyed Adapter



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