Optipack equipment and trunk harness MTP-LC

Characteristics
- Ready to use "plug and play" cable system
- Round Optipack cable construction
- Low smoke zero halogen (LSFH™)
- Retrofit-able "push-pull" clip on MTP for high packing density
- Low space consumption in ducts and racks
- Easy handling and routing
- Fast and safe installation straight from the reel
- Highest performance singlemode and multimode MTP LC-XD elite connectivity
- Scalable for regular MACs
- Protective pulling sock supplied

Optipack equipment and trunk harnesses provide a transition from MTP connectivity in the backbone to LC duplex connectivity on switches and servers. Instead of using LC patch panels and cords, the harness provides a fast and compact alternative that plugs directly into equipment transceivers.

Many of the data centers today are designed with multimode MTP backbones because this is the most flexible and future-proofed way of adapting from one type of connector to another.

Although LC connectivity is still used for 1G and 10G Ethernet applications and 4G,8G,16G and 32G fiber channel applications, in the future this will change to MPO connectors that deliver higher data rates over parallel fiber lanes.

The most common application for equipment harnesses is connecting high density SAN switches with hundreds of transceiver ports placed in close proximity. An MTP patching field can be placed close to the switch and MTP-LC harnesses make the final connection to the transceivers. This approach not only reduces the amount of cable clutter created by patch cords, but it also provides an MTP interface that can be re-deployed later for higher data rates. Upgrading from 10G to 40G would require the user to disconnect the MTP-LC harness and then replace it with an MTP-MTP patch cord. If the backbone is built correctly from day 1, there will be no need to install new cables to support the emerging data rates.

Equipment harnesses are short cables that are generally only used inside of the switch rack, however in some applications it is preferred to eliminate the MTP patching field altogether and run the cable directly back to the MDA. This approach is less flexible than the equipment harness option but because a connection has been removed from the link, the overall optical performance is better.

Technical data

General specification		
Application		data center equipment connections
Fiber type	OS2	E9/125 low bend (G.657 A2)
	OM3	G50/125-OM3 low bend (IEC 60793-2-10 A1a.2)
	OM4	G50/125-OM4 low bend (IEC 60793-2-10 A1a.3)
Cable type		metal free indoor cable – strain relieved aramid yarn
Cable jacket color	OS2	yellow
	OM3	turquoise
	OM4	heather violet

Construction		
Connectors	A-Side	MTP (female/male)
	B-Side	LC-XD (uniboot)
Furcation/fan-out shortest/longest length	A-Side	no furcation
	B-Side	furcation fan-out LC-XD
Fiber allocation	HUBER+SUHNER specific	neutral straight/neutral pair-flip

Optical performance		Tested acc. to	Option	Values
Insertion loss	MTP	IEC 61300-3-4 B *		< 0.35 dB
	LC	IEC 61300-3-4 B	SM	< 0.30 dB
			OM3	< 0.25 dB
			OM4	< 0.15 dB
Return loss	MTP	IEC 61300-3-6	SM	> 60 dB
			OM3	> 30 dB
			OM4	> 30 dB
	LC	IEC 61300-3-6	SM APC	> 65 dB
			SM PC	> 50 dB
			OM3 PC	> 35 dB
			OM4 PC	> 35 dB

Mechnical characteristics	Tested acc. to	Condition	Base 8, 12, 24
Max. tensile strength	IEC 60794-1-2- E1	during installation	150 N
Minimal bending radius	IEC 60794-1-2- E11	during installation	20 mm
		in service	10 mm

Environmental characteristics	Tested acc. to	Condition	Base 8, 12, 24
Fire propagation	IEC 60332-1-2	on vertical single cable	passed
	IEC 60332-3-24	on vertical cable bundle	passed
2011/65/EC (RoHS)			compliant

* Multimode MT elite ferrule as tested with proposed encircled flux launch condition on 50 µm fiber and 850 nm per IEC 61280-4-1
  Singlemode MT elite ferrule compliant with IEC 61755-3-31/grade B

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Ordering information

MTP Base-8, **female** to 4 × LC duplex, longest fan-out length 22 cm, available with **straight (NS)** and **pair-flipped (NP)** fiber allocation

Fibers	Allocation	Fiber type	Order code	
8	NS	SM	OH08NSL-0B0_ _ _F-0000MF-_022LP	Specify required assembly length in the order code.
		OM3	OH08NSL-0B3_ _ _F-0000MF-_022LP	
		OM4	OH08NSL-0B4_ _ _F-0000MF-_022LP	
	NP	SM	OH08NPL-0B0_ _ _F-0000MF-_022LP	
		OM3	OH08NPL-0B3_ _ _F-0000MF-_022LP	
		OM4	OH08NPL-0B4_ _ _F-0000MF-_022LP	

MTP Base-8, **male** to 4 × LC duplex, longest fan-out length 22 cm, available with **straight (NS)** and **pair-flipped (NP)** fiber allocation

Fibers	Allocation	Fiber type	Order code	
8	NS	SM	OH08NSL-0B0_ _ _F-0000MM-_022LP	Specify required assembly length in the order code.
		OM3	OH08NSL-0B3_ _ _F-0000MM-_022LP	
		OM4	OH08NSL-0B4_ _ _F-0000MM-_022LP	
	NP	SM	OH08NPL-0B0_ _ _F-0000MM-_022LP	
		OM3	OH08NPL-0B3_ _ _F-0000MM-_022LP	
		OM4	OH08NPL-0B4_ _ _F-0000MM-_022LP	

Ordering information

MTP Base-12, **male** to 6 × LC duplex, longest fan-out length 22 cm, available with **straight (AS)** and **pair-flipped (AP)** fiber allocation

Fibers	Allocation	Fiber type	Order code	
12	AS	SM	OH12ASL–0B0___F-0000MM-_022LP	Specify required assembly length in the order code.
		OM3	OH12ASL–0B3___F-0000MM-_022LP	
		OM4	OH12ASL–0B4___F-0000MM-_022LP	
	AP	SM	OH12APL–0B0___F-0000MM-_022LP	
		OM3	OH12APL–0B3___F-0000MM-_022LP	
		OM4	OH12APL–0B4___F-0000MM-_022LP	

MTP Base-12, **female** to 6 × LC duplex, longest fan-out length 22 cm, available with **straight (AS)** and **pair-flipped (AP)** fiber allocation
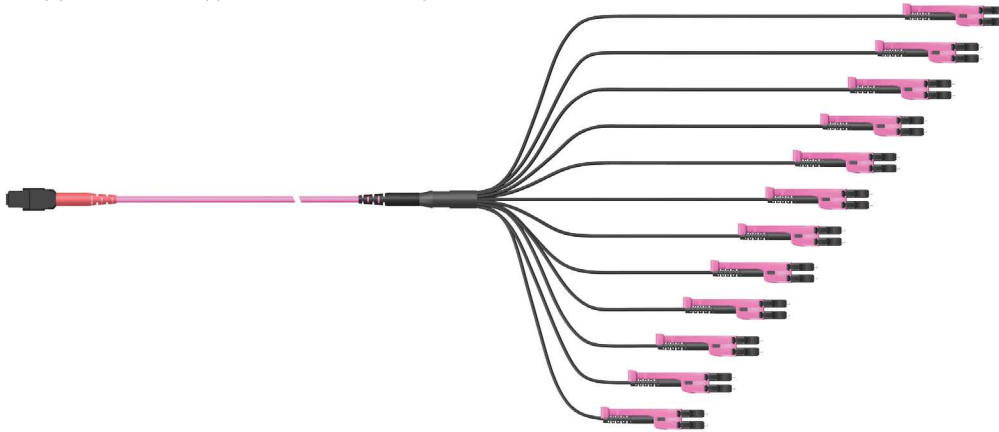

Fibers	Allocation	Fiber type	Order code	
12	AS	SM	OH12ASL–0B0___F-0000MF-_022LP	Specify required assembly length in the order code.
		OM3	OH12ASL–0B3___F-0000MF-_022LP	
		OM4	OH12ASL–0B4___F-0000MF-_022LP	
	AP	SM	OH12APL–0B0___F-0000MF-_022LP	
		OM3	OH12APL–0B3___F-0000MF-_022LP	
		OM4	OH12APL–0B4___F-0000MF-_022LP	

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Ordering information

MTP Base-24, **female** to 12 × LC duplex, fan-out length 70 cm (no staggering), available with **R1** fiber allocation (staggered fan out types available on request)

Fibers	Allocation		Order code	
24	R1	SM	OH24R1L-0B0___F-0000MF-5070LP	Specify required assembly length in the order code.
		OM3	OH24R1L-0B3___F-0000MF-5070LP	
		OM4	OH24R1L-0B4___F-0000MF-5070LP	

MTP Base-24, **male** to 12 × LC duplex, fan-out length 70 cm (no staggering), available with **R1** fiber allocation (staggered fan out types available on request)
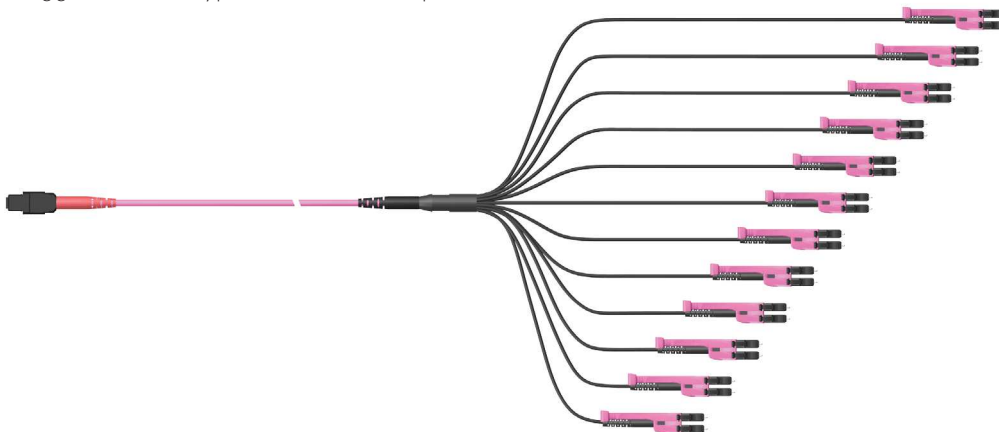
Fibers	Allocation		Order code	
24	R1	SM	OH24R1L-0B0___F-0000MM-5070LP	Specify required assembly length in the order code.
		OM3	OH24R1L-0B3___F-0000MM-5070LP	
		OM4	OH24R1L-0B4___F-0000MM-5070LP	