



# MPO

Fast Fibre Solution  
for Data Centres



# Benefits

The Plug & Play MPO solution of Nexans Cabling Solutions provides a comprehensive line of pre-terminated and pre-tested assemblies to meet the current needs of data centers. The added value of this offer for data centers is flexibility, time saving, but also cost reduction. Installation-time is reduced by 80 % compared to conventional termination methods.



The pre-terminated solutions are easy to configure without the need for special patch cords or special arrangements for the cassettes.

This system also facilitates quick changes and provides easy maintenance required in the current data centers.

## Benefits of Nexans MPO solution

- High density: 4 cassettes with up to 96 connections
- No special polarity components or polarity concerns during link configuration and reconfiguration
- Polarity within system easily maintained by advances in manufacturing
- Sliding patch panel with labeling bar and patch cord guide
- Easy cable installation: no preferential bending
- Small cable reduces need for expensive data center space
- Well defined insertion loss specifications

## Benefits for data center managers and for system designers

- Fast installation with reduced on-site disruption
- Simplified design and management
- Control of costs and optical power budgets
- Overall flexibility allowing simple expansion and reconfiguration
- Fully guaranteed

## Benefits for installers

- Short manufacturing lead times
- Fast installation
- No specialised termination training required
- No consumables, termination tool kits
- No cable or connector scrap
- No termination errors on site
- Delivered fully tested, labeled and documented

## 100 % factory terminated and factory tested

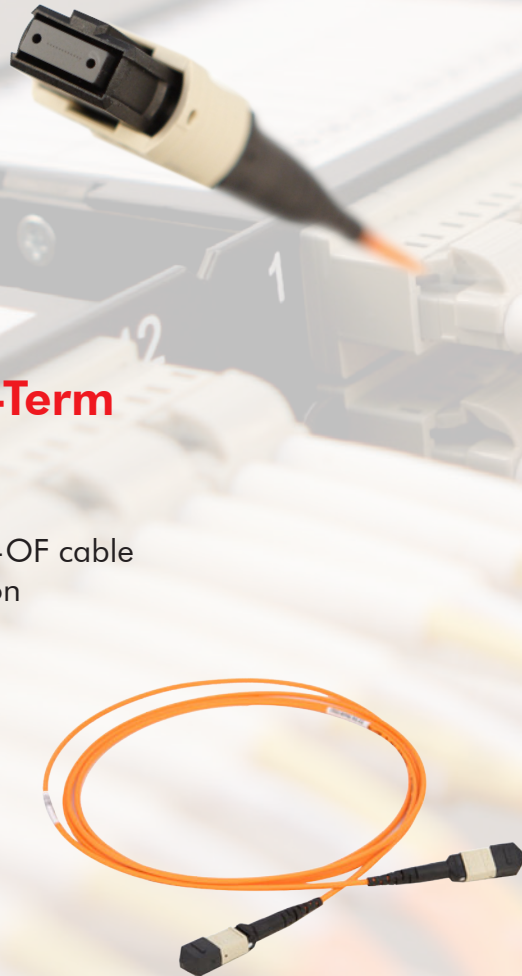
All LANmark-OF MPO-MPO Pre-Term assemblies are fully terminated and tested in a quality assured factory environment.

Each assembly is accompanied by a detailed test report providing detailed information on each termination.

# MPO Concept

## The MPO connector

allows to quickly connect the 12 fibres of the MPO-MPO Pre-Term at the back of each MPO cassette.



## MPO-MPO Pre-Term

- Round flexible cable
- Small diameter
- High quality LANmark-OF cable
- High quality termination

The MPO-MPO Pre-Term links 2 MPO cassettes installed in the Plug&Play patch panels in 2 different distribution racks.



## MPO Cassettes

- Various type of adaptors: LC and SC
- High and medium density
- Only one type of cassette required to maintain polarity



Inside the MPO cassette the fibres are spread out towards the SC/LC connectors at the front.

## Plug&Play patch panel

- High density panel with up to 4 cassettes
- Patch cord management within the same 1 HU
- Sliding patch panel with labeling bar



# High Performing concept; differentiators of our solution

## Polarity method



Nexans solved the customer inconveniences of traditional polarity methods in its own manufacturing. The advanced design of the MPO-MPO pre-term together with a well controlled manufacturing termination process makes the Nexans MPO approach a true plug and play solution. The selected method follows method C of the TIA 568 standard. The continuous use of the same standard patch cords and the same cassettes on both sides of the optical channel demonstrate the ease of implementation and maintenance in a datacenter.

## Optical Insertion Loss

Type	Industry Standard Max IL Attenuation <sup>(1)</sup>	LANmark-OF Max IL Attenuation	LANmark-OF IL typical Attenuation
LC	0.75dB	0.3dB	0.15dB
MPO <sup>(2)</sup>	0.75dB	0.6dB	0.3dB
OM3	3.5dB	3.0dB	2.8dB

(1) Industry Standard : ISO 11801 / IEEE 802.3

High performing LANmark-OF MPO assemblies significantly exceed industry performance standards and improve link loss budget. This added budget can be used to achieve longer distances or increase the number of connections throughout the link. A strategic advantage for data centres and SAN's.

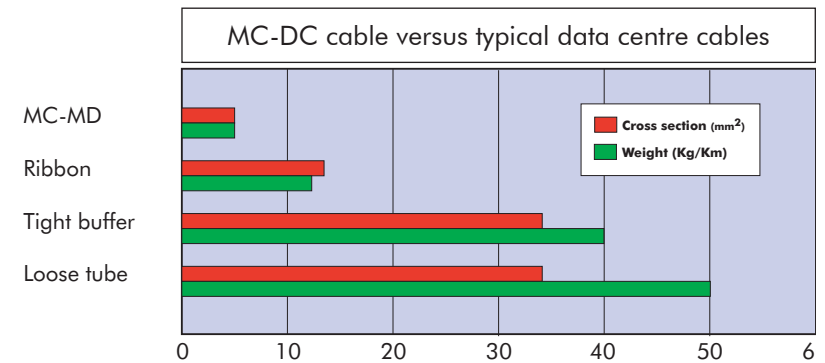
## MPO-MPO Pre-Term

New manufacturing technology based on micro-bundles allowed to create a round, small and flexible cable. This Micro Cable for Data Center (MC-DC) is a key element of the Nexans' MPO concept.

Limiting the airflow disturbance is a key requirement for current data centers since this has a major impact on operational costs. Nexans' MC-DC helps in reducing operational costs by the small design of only 2.5 mm for the Pre-Term.

The round micro bundle enhance ease of installation since it has no preferential bending like traditionally used ribbon cables.

In addition the round cable enables the pair flip required to maintain the polarity within the optical channel.



## Configurations & Warranty

The MPO warranty module contains 2 configurations.

- The standard configuration has 1 MPO cassette in the server rack, 1 MPO cassette in the switch rack and a MPO-MPO Pre-Term in between.
- The second configuration uses a cross connect to represent both server and switch. This optical channel has a total of 4 MPO cassettes.
- Each assembly benefits from the 25 year LANmark-OF warranty program.

Application	1 Gb SX	10 Gb SR
2 MPO cassettes	770 m	300 m
4 MPO cassettes	660 m	210 m

# Product Codification

## Patch panel

N441.2MPP: LANmark-OF Plug&Play Patch Panel Sliding Black  
N441.2MBP: LANmark-OF Plug&Play Blank Plate 5x

## MPO Cassettes

N441.2M24LC3 : LANmark-OF MPO cassette 24 LC OM3  
N441.2M12LC3 : LANmark-OF MPO cassette 12 LC OM3  
N441.2M12SC3 : LANmark-OF MPO cassette 12 SC OM3

## MPO-MPO Pre-Term

N155.MP12SSXXX: LANmark-OF MPO-MPO Pre-Term 12 fibres OM3

XXX: length to be defined by customers

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