

400GBASE-DR2 MDI baseline proposal for 802.3dj

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IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force
March Plenary 2024

Supporters

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- Brian Welch - Cisco
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- Jose Castro – Panduit
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- Earl Parsons – Commscope
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Overview

- 802.3dj needs to define a MDI for two pairs of SMF
- Leverage existing SMF MPO already standardized by industry
- Angled endface (APC) needed to meet 802.3dj return loss performance requirements
- Leverage related language from 802.3bs Clause 124 (four pairs of SMF)
 - 400GBASE-DR4

Proposed 802.3dj text

XXX.xx.x.x Optical lane assignments for 400GBASE-DR2

400GBASE-DR2 shall use a single-row twelve-fiber interface. The two transmit and two receive optical lanes of 400GBASE-DR2 shall occupy the positions depicted in Figure XXX-XX when looking into the MDI receptacle with the connector keyway feature on top. The interface contains four active lanes within twelve total positions. The transmit optical lanes occupy the left-most two positions. The receive optical lanes occupy the right-most two positions. The eight center positions are unused.

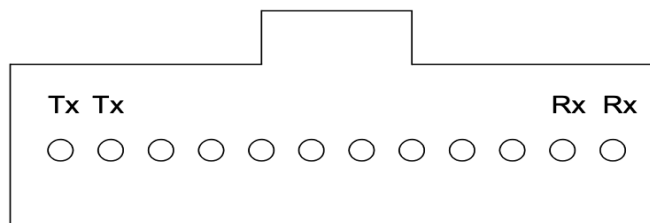


Figure XXX-xx — Optical lane assignments for 400GBASE-DR2

Proposed 802.3dj text (cont'd)

The MDI shall meet the dimensional specifications of IEC 61754-7-1 interface 7-1-9: *MPO device receptacle, angled interface*. The plug terminating the optical fiber cabling shall meet the dimensional specifications of IEC 61754-7-1 interface 7-1-1: *MPO female plug connector, down-angled interface for 2 to 12 fibers*. The MDI shall optically mate with the plug on the optical fiber cabling. Figure XXX-XX shows an MPO female plug connector with down-angled interface, and an MDI as an active device receptacle with angled interface.

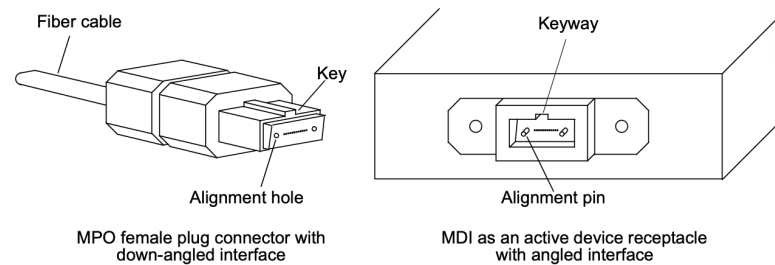


Figure XXX-X – MPO female plug with down-angled interface and MDI active device receptacle with angled interface

The MDI shall meet the interface performance specifications of IEC 61753-021-2 for performance level D/2.

Conclusion

- Proposed language addresses 802.3dj MDI needed for two pairs of SMF
- Breakout implementations and alternative small form-factor optical connectors will continue to be defined in transceiver MSA specifications