

IEEE MDI Considerations for 802.3df

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IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force
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Supporters and their affiliation

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- Earl Parsons, CommScope

Overview

- 802.3df needs to define MDI for eight pairs of SMF
- Leverage existing SMF MPO16 already standardized by industry
 - Angled endface (APC) needed to meet 802.3df return loss performance requirements
- Leverage related language from 802.3cm Cl. 138 (eight pairs of MMF)

Proposed 802.3df text

Normative references

ANSI/TIA-604-18-A:2018, FOCIS 18—Fiber Optic Connector Intermateability Standard—Type MPO-16.

124.11.X.X Optical lane assignments for 800GBASE-DR8 and 800GBASE-DR8-2

800GBASE-DR8 and 800GBASE-DR8-2 shall use a single-row sixteen-fiber interface. The eight transmit and eight receive optical lanes of 800GBASE-DR8 and 800GBASE-DR8-2 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 sixteen active lanes within sixteen total positions. The transmit optical lanes occupy the leftmost eight positions. The receive optical lanes occupy the rightmost eight positions.

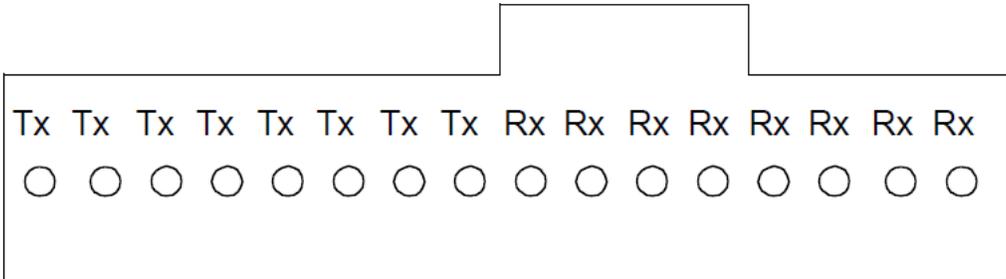


Figure XXX–XX—Optical lane assignments for 800GBASE-DR8 and 800GBASE-DR8-2

Proposed 802.3df text (cont'd)

124.11.X.X MDI requirements for 800GBASE-DR8 and 800GBASE-DR8-2

The MDI shall optically mate with the compatible plug on the optical fiber cabling. The MDI shall meet the interface performance specifications of IEC 61753-021-2 for performance level D/2. 800GBASE-DR8 and 800GBASE-DR8-2 has a single-row sixteen-fiber interface optical lane assignment.

The MDI adapter or receptacle shall meet the dimensional specifications for designation FOCIS 18 A-1-0, or designation FOCIS 18 R-1x16-1-8-1-1-2, as defined in ANSI/TIA-604-18-A. The plug terminating the optical fiber cabling shall meet the dimensional specifications of designation FOCIS 18 P-1x16-1-8-2-1-1, as defined in ANSI/TIA-604-18-A. The MPO-16 female plug connector and MDI are structurally similar to those depicted in Figure 138–8, but with an angled endface, sixteen fibers, an offset keyway, and different pin diameter and location.

Conclusion

- Proposed language addresses 802.3df MDI need for eight pairs of SMF