

Proposed subclause 999.10 on 100G BiDi characteristics of the fiber optic cabling (channel)

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Subclauses 140.10 and 160.10

- 140.10 specifies characteristics of the fiber optic cabling (channel)
 - It includes optical fiber cable, optical fiber connection, and medium dependent interface (MDI)
- 160.10 from 802.3cp is another reference of this specification
 - 160.10 is for 50G BiDi
- It is proposed to reuse these subclauses for 100G BiDi
- Following slides show content reuse and suggested minor changes
 - Black text: reused content from 140.10/160.10
 - Blue text: difference between 140.10 and 160.10
 - Red text: discussion point

Proposed subclause 999.10 (references: subclauses 140.10 and 160.10)

999.10 Characteristics of the fiber optic cabling (channel)

The 100GBASE-BRx fiber optic cabling shall meet the specifications defined in Table 999–12. The fiber optic cabling consists of one or more sections of fiber optic cable and any intermediate connections required to connect sections together.

999.10.1 Optical fiber cable

The optical fiber cable requirements are satisfied by cables containing ITU-T G.652.B (dispersion unshifted), type G.652.D (low water peak, dispersion unshifted), or type G.657.A1 or type G.657.A2 (bend insensitive) fibers or the requirements in Table 999–12 where they differ.

999.10.2 Optical fiber connection

An optical fiber connection, as shown in Figure 999–8, consists of a mated pair of optical connectors.

Reference: Clause 160



999.10.2.1 Connection insertion loss

Connections with different loss characteristics may be used provided the requirements of Table 999–12 are met. The maximum link distance for 100GBASE-BR10 and 100GBASE-BR40 is based on an allocation of 2 dB total connection and splice loss. The maximum link distance for 100GBASE-BR20 is based on an allocation of 5 dB total connection and splice loss.

Proposed subclause 999.10 (references: subclause 140.10 and 160.10)

999.10.2.2 Maximum discrete reflectance

The maximum value for each discrete reflectance shall be less than or equal to the value shown in Table 999–13 corresponding to the number of discrete reflectances above –55 dB within the channel. For numbers of discrete reflectances in between two numbers shown in the table, the lower of the two corresponding maximum discrete reflectance values applies.

Table 999–13—Maximum value of each discrete reflectance

Number of discrete reflectances above –55 dB	Maximum value for each discrete reflectance			Unit
	100GBASE-BR10	100GBASE-BR20	100GBASE-BR40	
1	-22	TBD	TBD	dB
2	-29	TBD	TBD	dB
4	-33	TBD	TBD	dB
6	-35	TBD	TBD	dB
8	-37	TBD	TBD	dB
10	-39	TBD	TBD	dB

References:

Table 160-13 in Clause 160

Table 140-15 in Clause 140

Proposed subclause 999.10 (references: subclause 140.10 and 160.10)

999.10.3 Medium Dependent Interface (MDI) requirements

The 100GBASE-BRx PMD is coupled to the fiber optic cabling at the MDI. The MDI is the interface between the PMD and the “fiber optic cabling” (as shown in Figure 999–8). Examples of an MDI include the following:

- a) Connectorized fiber pigtail
- b) PMD receptacle

when the MDI is a connector plug and receptacle connection, it shall meet the interface performance specifications of IEC 61753-1-1 and IEC 61753-021-2.

NOTE—Transmitter compliance testing is performed at TP2 as defined in 999.5.1, not at the MDI.

Thank you

Any questions?