
802.3bs - 400 Gb/s Task Group

Chip-to-Module Mechanical Interfaces

Chris DiMinico
MC Communications/Panduit/PHY-SI LLC
cdiminico@ieee.org

Purpose

- Add informative annex to P802.3bs/D0.9 providing references for mechanical interface(s) that may be used at the chip-to-module compliance points for CDAUI-16 and CDAUI-8.
 - Connector form factors (e.g., QSFP, SFP) related to connector geometries and signal integrity.
 - Allows compatibility for systems with pluggable module interfaces.

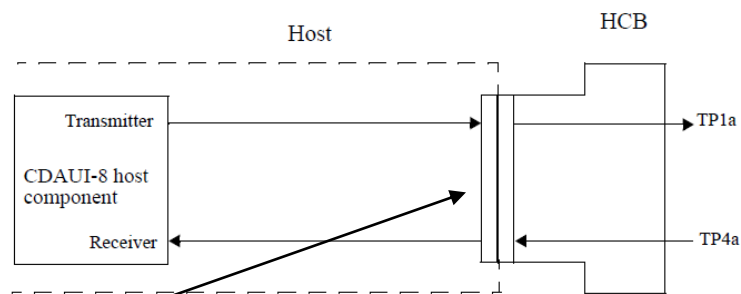


Figure 120E-4—Host CDAUI-8 compliance points

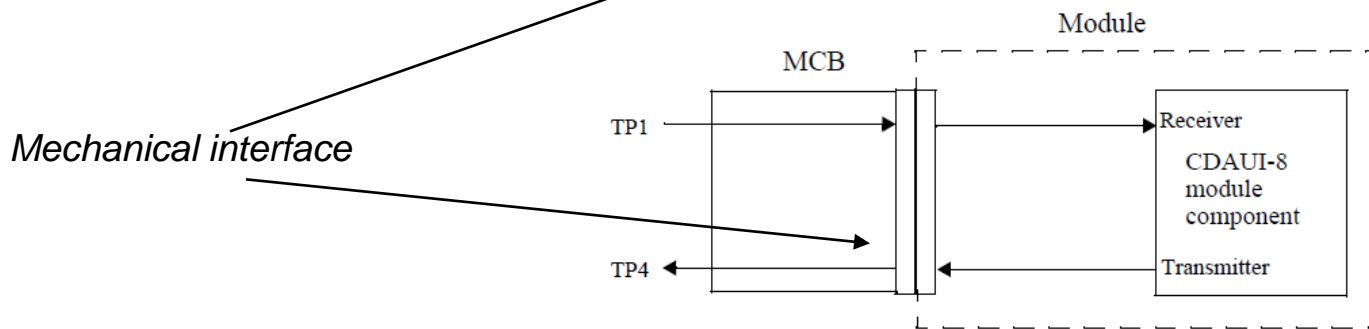


Figure 120E-5—Module CDAUI-8 compliance points

Supporters

- Tom Palkert, Scott Sommers – Molex
- Nathan Tracy, Megha Shanbhag – TE Connectivity
- Adee Ran – Intel
- Jonathan King – Finisar
- Scott Kipp – Brocade
- Mike Dudek – Qlogic
- Jeff Maki – Juniper

Background

120C.4 CDAUI-16 chip-to-module measurement methodology

The CDAUI-16 chip-to-module measurement methodology is as defined in 83E.4 with the following exceptions:

[Editor's note: Add any exceptions due to any change in the BER requirement or 16-wide connector here.] 83E.4 CAUI-4 measurement methodology

•83E.4 CAUI-4 measurement methodology

This subclause describes common measurement tools and methodologies to be used for the CAUI-4 chip-to-module interface. Details of HCB and MCB characteristics are given in 83E.4.1, and details of the eye diagram measurement methodology are given in 83E.4.2.

•83E.4.1 HCB/MCB characteristics

•HCB characteristics are described in 92.11.1 where the HCB performs the equivalent function as the TP2 or TP3 test fixture. The MCB characteristics are described in 92.11.2 where the MCB performs the equivalent functionality as the cable assembly test fixture. Considerations for 802.3bs 400 Gb/s test fixture specifications.

Background

- P802.3bs/D0.9 reference 83E.4 measurement methodology
- 83E.4 references HCB characteristics described in 92.11.1 and MCB characteristics described in 92.11.2.
- Clause 92 type 100GBASE-CR4 MDIs - 4 lanes (one direction)
 - Style-1 - QSFP+ 28 Gb/s 4X Pluggable (QSFP28) receptacle with the mechanical mating interface defined in SFF-8665.
 - Style-2 - Mechanical mating interface defined in CFP4 MSA HW Specification.

Annex 120TBD (informative)

Chip-to-module Attachment Unit Mechanical Interfaces

120TBD.1 Overview (informative)

This annex provides information for CDAUI-16 and CDAUI-8 mechanical interfaces that may be used at the compliance points specified in 120E.2 (CDAUI-8 chip-to-module compliance point definitions) and 120C.4 (CDAUI-16 chip-to-module measurement methodology).

Annex 120TBD (informative)

120TBD.1.1 CDAUI-16 Mechanical Interface

- Style-1 – Style-3 mechanical mating interface defined in CDFP MSA HW Specification.

<http://cdfp-msa.org/CDFPprev3-0-Mar20-2015-released.pdf>

Figure 120TBD-x example mechanical interface

Table 120TBD-x - lane to connector contact mapping

Annex 120TBD (informative)

120TBD.1.2 CDAUI-8 Mechanical Interface

- Style-1 - TBD

Figure 120TBD-x example mechanical interface

Table 120TBD-x - lane to connector contact mapping