

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

CI **FM** SC **FM** P1 L10 # 229
 Grow, Robert RMG Consulting
 Comment Type **E** Comment Status **D** (bucket1)
 From the amendment list starting at line 28, it appears the TF is planning to be included in the current revision project.
 SuggestedRemedy
 Add assigned amendment number 16.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI **FM** SC **FM** P4 L8 # 230
 Grow, Robert RMG Consulting
 Comment Type **E** Comment Status **D** (bucket1)
 IEEE style has changed (2020 IEEE Standards Style Manual, 11.1).
 SuggestedRemedy
 Delete 2nd paragraph of the Editor's Note.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI **FM** SC **FM** P8 L21 # 231
 Grow, Robert RMG Consulting
 Comment Type **E** Comment Status **D** (bucket1)
 The ballot group is now known.
 SuggestedRemedy
 Add WG members list at start of P802.3ck WG ballot.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI **FM** SC **FM** P11 L4 # 232
 Grow, Robert RMG Consulting
 Comment Type **E** Comment Status **D** (bucket1)
 Amendment title missing.
 SuggestedRemedy
 Replace "Amendment title (copy from PAR)" with the title.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI **FM** SC **0** P3 L2 # 226
 Wu, Mau-Lin MediaTek Inc.
 Comment Type **ER** Comment Status **D** (bucket1)
 Annex 163A through Annex 163B are lost here.
 SuggestedRemedy
 Change the sentence to
 "This amendment to IEEE Std 802.3-2018 adds Clause 161 through Clause 163, Annex 120F, Annex 120G, Annex 162A through Annex 162D, and Annex 163A through Annex 163B."
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 [Editor's note: Changed clause from 00 to FM.]
 Resolve using the response to comment #93.

CI **FM** SC **0** P3 L2 # 93
 Kabra, Lokesh Synopsys Inc
 Comment Type **E** Comment Status **D** (bucket1)
 Abstract does not mention addition of Annex 163A and 163B
 SuggestedRemedy
 Annex 120F, Annex 120G, Annex 162A through Annex 162D, Annex 163A and Annex 163B
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 [Editor's note: Changed clause from 00 to FM.]
 Change the first sentence in the abstract to: "This amendment to IEEE Std 802.3-2018 adds Clause 161 through Clause 163, Annex 120F, Annex 120G, Annex 162A through Annex 162D, Annex 163A, and Annex 163B."

CI **00** SC **0** P0 L0 # 71
 Wienckowski, Natalie General Motors
 Comment Type **E** Comment Status **D** (bucket1)
 For all additions to tables, if there are rows before or after the rows shown in the spec, there needs to be a blank, merged row with an elipses in it to indicate all places where there are additional rows not shown. Search for "unchanged rows not shown" to find places where this is needed.
 SuggestedRemedy
 Add additional rows, merged row with an elipses in it, to the top and/or bottom of tables as needed to indicate additional rows that are not shown.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

CI **FM** SC **0** P **13** L **29** # **94**

Kabra, Lokesh Synopsys Inc

Comment Type **E** Comment Status **D** (bucket1)

Abstract does not mention addition of Annex 163A and 163B

SuggestedRemedy

Annex 120F, Annex 120G, Annex 162A through Annex 162D, Annex 163A and Annex 163B

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

[Editor's note: Changed clause from 00 to FM and page from 13 to 14.]

Change the first sentence to: "This amendment includes changes to IEEE Std 802.3-2018 and adds Clause 161 through Clause 163, Annex 120F, Annex 120G, Annex 162A through Annex 162D, Annex 163A, and Annex 163B."

CI **FM** SC **0** P **14** L **29** # **227**

Wu, Mau-Lin MediaTek Inc.

Comment Type **ER** Comment Status **D** (bucket1)

Annex 163A through Annex 163B are lost here.

SuggestedRemedy

Change the sentence to
"This amendment to IEEE Std 802.3-2018 adds Clause 161 through Clause 163, Annex 120F, Annex 120G, Annex 162A through Annex 162D, and Annex 163A through Annex 163B."

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

[Editor's note: Changed clause from 00 to FM.]

Resolve using the response to comment #94.

CI **1** SC **1.1.3.2** P **31** L **18** # **165**

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** Comment Status **D** (bucket1)

"For each of chip-to-chip and chip-to-module interfaces" awkward wording, subject/verb agreement - also leaves open whether the definition is different if other than chip-to-chip or chip-to-module interfaces are used here - which does not seem to be the case. Seems it would be cleaner and clearer just to say "for each interface" and the extra words are unnecessary. This same problem exists 6 places on page 31 lines 18, 35, and 50; page 33, lines 5 and 33, and page 34 line 5

SuggestedRemedy

Change "For each of chip-to-chip and chip-to-module interfaces" to "For each interface" in all 6 instances (page 31 lines 18, 35, 50; page 33 lines 5 & 33; and page 34 line 5)

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Resolve using the response to comments #68, #75, and #76.

CI **1** SC **1.1.3.2** P **31** L **18** # **74**

Huber, Tom Nokia

Comment Type **E** Comment Status **D** (bucket1)

Awkward grammar: "For each of chip-to-chip and chip-to-module interfaces, four widths of CAUI-n/100GAUI-n are defined...".

SuggestedRemedy

The introductory clause seems unnecessary since the preceding sentence already establishes the use of CAUI-n/100GAUI-n for C2C and C2M interfaces. Change to "Four widths of CAUI-n and 100GAUI-n are defined..."

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Resolve using the response to comment #68.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 1 SC 1.1.3.2 P31 L18 # 68

Wienckowski, Natalie General Motors

Comment Type E Comment Status D (bucket1)

Subject/verb agreement (each is singular) & grammar ("of" does not belong).

SuggestedRemedy

Change: For each of chip-to-chip and chip-to-module interfaces
 To: For each chip-to-chip and chip-to-module interface
 The same change is needed on P31L35 & P31L50.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The current wording was intended to convey that chip-to-module and chip-to-chip interfaces are not necessarily the same. However, the wording could be improved.

Change: "For each of chip-to-chip and chip-to-module interfaces"
 To: "For chip-to-chip interfaces and for chip-to-module interfaces"

Cl 1 SC 1.1.3.2 P31 L34 # 75

Huber, Tom Nokia

Comment Type E Comment Status D (bucket1)

Awkward grammar: "For each of chip-to-chip and chip-to-module interfaces, three widths of 200GAUI-n are defined..."

SuggestedRemedy

The introductory clause seems unnecessary since the preceding sentence already establishes the use of 200GAUI-n for C2C and C2M interfaces. Change to "Three widths of 200GAUI-n are defined..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The current wording was intended to convey that chip-to-module and chip-to-chip interfaces are not necessarily the same. However, the wording could be improved.

Change: "For each of chip-to-chip and chip-to-module interfaces"
 To: "For chip-to-chip interfaces and for chip-to-module interfaces"

Cl 1 SC 1.1.3.2 P31 L50 # 76

Huber, Tom Nokia

Comment Type E Comment Status D (bucket1)

Awkward grammar: "For each of chip-to-chip and chip-to-module interfaces, three widths of 400GAUI-n are defined..."

SuggestedRemedy

The introductory clause seems unnecessary since the preceding sentence already establishes the use of 400GAUI-n for C2C and C2M interfaces. Change to "Three widths of 400GAUI-n are defined..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The current wording was intended to convey that chip-to-module and chip-to-chip interfaces are not necessarily the same. However, the wording could be improved.

Change: "For each of chip-to-chip and chip-to-module interfaces"
 To: "For chip-to-chip interfaces and for chip-to-module interfaces"

Cl 1 SC 1.4.36 P33 L5 # 69

Wienckowski, Natalie General Motors

Comment Type E Comment Status D (bucket1)

Subject/verb agreement (each is singular) & grammar ("of" does not belong).

SuggestedRemedy

Change: For each of chip-to-module and chip-to-chip interconnections
 To: For each chip-to-module and chip-to-chip interconnection
 The same change is needed on P33L33 & P34L5.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Resolve using the responses to comments #77, #78, and #79.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 1 SC 1.4.36 P33 L5 # 77

Huber, Tom Nokia
 Comment Type E Comment Status D (bucket1)

Awkward grammar: "For each of chip-to-chip and chip-to-module interfaces, four widths of CAUI-n/100GAUI-n are defined..."

SuggestedRemedy

The introductory clause seems unnecessary since the preceding sentence already establishes the use of CAUI-n/100GAUI-n for C2C and C2M interfaces. Change to "Four widths of CAUI-n and 100GAUI-n are defined..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The current wording was intended to convey that chip-to-module and chip-to-chip interfaces are not necessarily the same. However, the wording could be improved. Change: "For each of chip-to-chip and chip-to-module interfaces"
 To: "For chip-to-chip interfaces and for chip-to-module interfaces"

Cl 1 SC 1.4.36 P33 L10 # 95

Kabra, Lokesh Synopsys Inc
 Comment Type E Comment Status D (bucket1)

Remove full-stop before closing brace

SuggestedRemedy

for 100GAUI-1)

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 1 SC 1.4.87 P33 L33 # 78

Huber, Tom Nokia
 Comment Type E Comment Status D (bucket1)

Awkward grammar: "For each of chip-to-chip and chip-to-module interfaces, three widths of 200GAUI-n are defined..."

SuggestedRemedy

The introductory clause seems unnecessary since the preceding sentence already establishes the use of 200GAUI-n for C2C and C2M interfaces. Change to "Three widths of 200GAUI-n are defined..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The current wording was intended to convey that chip-to-module and chip-to-chip interfaces are not necessarily the same. However, the wording could be improved. Change: "For each of chip-to-chip and chip-to-module interfaces"
 To: "For chip-to-chip interfaces and for chip-to-module interfaces"

Cl 1 SC 1.4.87 P33 L37 # 96

Kabra, Lokesh Synopsys Inc
 Comment Type E Comment Status D (bucket1)

Remove full-stop before closing brace

SuggestedRemedy

200GAUI-2)

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 1 SC 1.4.111 P34 L5 # 79

Huber, Tom Nokia
 Comment Type E Comment Status D (bucket1)

Awkward grammar: "For each of chip-to-chip and chip-to-module interfaces, three widths of 400GAUI-n are defined..."

SuggestedRemedy

The introductory clause seems unnecessary since the preceding sentence already establishes the use of 400GAUI-n for C2C and C2M interfaces. Change to "Three widths of 400GAUI-n are defined..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The current wording was intended to convey that chip-to-module and chip-to-chip interfaces are not necessarily the same. However, the wording could be improved. Change: "For each of chip-to-chip and chip-to-module interfaces"
 To: "For chip-to-chip interfaces and for chip-to-module interfaces"

Cl 1 SC 1.4.111 P34 L9 # 97

Kabra, Lokesh Synopsys Inc
 Comment Type E Comment Status D (bucket1)

Remove full-stop before closing brace

SuggestedRemedy

400GAUI-4)

Proposed Response Response Status W

PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 1 SC 1.5 P 34 L 18 # 159

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,
 Comment Type E Comment Status D (bucket1)

"FEC AM lock" While the abbreviation "AM" has been used for "Alignment Marker" in many multi-lane PHYs, it somehow was never entered in the abbreviations list (at least not that I can find, having checked 802.3-2018, where it is used, and 802.3cd). Because it has other common meanings, and this one is specific to IEEE Std 802.3, it should be in the list... (simple things like FEC are). I plan to submit maintenance on this just to make it clear - but since it is an issue in this draft, you can fix it here...

SuggestedRemedy

Add "AM Alignment Marker" to the list of abbreviations in 1.5 (page 34 of draft)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
 [Editor's note: Changed clause, subclause, page, line from {45,0,44,22} to {1,1.5,34,18}.]
 The acronym AM is rarely used in text in 802.3-2018, 802.3cd-2018, and 802.3ck D2.0. Nor is the acronym ever properly introduced in the subclauses that use it. Normally, the full phrase "alignment marker" is used. So rather than adding yet another acronym to the list, the full phrase should be used in place of the acronym. However, changing instances of AM in Clause 45 would result in differences in nomenclature between Clause 45 and some sublayer clauses in the base specification and amendments.
 In Clause 161 change 1 instance (Figure 161-5) of "AM" with "alignment marker".
 [Editor's note: CC: 1, 45, 161.]

Cl 30 SC 30.5.1.1.16 P 35 L 48 # 157

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,
 Comment Type T Comment Status D (bucket1)

"RS-FEC-Int enabled RS-FEC-Int enabled" - gives absolutely NO useful information in the description. Please at least expand a little or give a cross reference to give the reader a clue. (other places where this abbreviation are used, such as 45.2.1.110.ab, generally do give more information)

SuggestedRemedy

Change the description "RS-FEC-Int enabled" to "Clause 161 Codeword-interleaved Reed-Solomon Forward Error Correction enabled".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
 Resolve using the response to comment #89

Cl 30 SC 30.5.1.1.16 P 35 L 50 # 89

Slavick, Jeff Broadcom
 Comment Type T Comment Status D (bucket1)

aFECmode was updated to include an enumeration for the Interleave FEC found in Cl161, but the text has not been updated.

SuggestedRemedy

Change the BEHAVIOR DEFINED AS: to read as follows:

A read-write value that indicates the mode of operation of the FEC sublayer for forward error correction (see 65.2, Clause 74, Clause 91, Clause 108, and Clause 161).

A GET operation returns the current mode of operation of the PHY. A SET operation changes the mode of operation of the PHY to the indicated value. The enumerations "BASE-R enabled", "RS-FEC enabled" and "RS-FEC-Int enabled" are only used by PHYs which support more than one type of FEC operation. For 25GBASE-CR, 25GBASE CR-S, 25GBASE-KR, and 25GBASE-KR-S PHYs operation in the no-FEC mode maps to the enumeration "disabled", operation in the BASE-R FEC mode maps to the enumeration "BASE-R enabled", and operation in the RS-FEC mode maps to the enumeration "RS-FEC enabled" (see 110.6 and 111.6). For 100GBASE-CR1 and 100GBASE-KR1 PHYs operation in RS-FEC mode maps to the enumeration "RS-FEC enabled" (see 91.6.2f) and operation in interleaved RS-FEC mode maps to the enumeration "RS-FEC-Int enabled" (see 161.6.23).

When Clause 73 Auto-Negotiation is enabled for a 25GBASE-R PHY, a SET operation is not allowed and a GET operation maps to the variables FEC_enable in Clause 74 and FEC_enable in Clause 108. When Clause 73 Auto-Negotiation is enabled for a non-25GBASE-R PHY supporting Clause 74 FEC a SET operation is not allowed and a GET operation maps to the variable FEC_enable in Clause 74. When Clause 73 Auto-Negotiation is enabled for a 100GBASE-R PHY supporting Clause 161 FEC a SET operation is not allowed and a GET operation maps to the variable 100G_RS_FEC_enable in Clause 91 and 100G_RS_FEC_Int_enable in Clause 161.

If a Clause 45 MDIO Interface is present, then this attribute maps to the appropriate FEC control register based upon the PHY type and the FEC operating mode (see 45.2.10.3, 45.2.1.102 and 45.2.1.110).

Proposed Response Response Status W

PROPOSED ACCEPT.
 [Editor's note: Changed comment type from TR to T.]

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 30 SC 30.5.1.1.17 P 36 L 35 # 90
 Slavick, Jeff Broadcom
 Comment Type T Comment Status D (bucket1)
 aFECCorrectedBlocks needs to add the RS-FEC-Int into the laundry list of FEC types
 SuggestedRemedy
 Bring in the last paragraph of 30.5.1.1.17 and change "RS-FEC" to "RS-FEC and RS-FEC-Int"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 [Editor's note: Changed comment type from TR to T.]

Cl 30 SC 30.5.1.1.18 P 36 L 35 # 91
 Slavick, Jeff Broadcom
 Comment Type T Comment Status D (bucket1)
 aFECUncorrectedBlocks needs to add the RS-FEC-Int into the laundry list of FEC types
 SuggestedRemedy
 Bring in the last paragraph of 30.5.1.1.18 and change "RS-FEC" to "RS-FEC and RS-FEC-Int"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 [Editor's note: Changed comment type from TR to T.]

Cl 30 SC 30.6.1.1.5 P 36 L 32 # 5
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status D (bucket1)
 "as specified in Clause 73 (see 73.6.5) and" - I see very little value in adding Clause and then subclause information - subclause information is sufficient
 SuggestedRemedy
 Change to "as specified in 73.6.5 and"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1.110 P 43 L 13 # 158
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,
 Comment Type E Comment Status D (bucket1)
 Description text indicating Clause 91 and Clause 161 should be cross references (2 instances of each)
 SuggestedRemedy
 Change "Clause 91" and "Clause 161" text in descriptions to active cross references.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1.115a P 46 L 13 # 1
 Anslow, Pete Independent
 Comment Type E Comment Status D (bucket1)
 When a new subclause is inserted between two existing subclauses of the same level (e.g., between 45.2.114 and 45.2.115) the new subclause number is the same as the lower of the two with "a" added. This is 45.2.114a in the example. See 2020 IEEE SA Style manual: <https://mentor.ieee.org/myproject/Public/mytools/draft/styleman.pdf#page=40>
 The same principle applies to inserted tables.
 This needs to be corrected for 45.2.1.115a, Table 45–93a, 45.2.1.126a, Table 45–100a
 SuggestedRemedy
 Change the numbering of 45.2.1.115a, Table 45–93a, 45.2.1.126a, and Table 45–100a to be 45.2.1.114a, Table 45–92a, 45.2.1.125a, and Table 45–99a, respectively.

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1.115a P 46 L 37 # 6
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status D (bucket1)
 Lots of unnecessary empty lines in between subclauses, tables, and text blocks.
 SuggestedRemedy
 Please remove all unnecessary white (empty) lines between (for example) 45.2.1.115 and 45.2.1.117 - these continue until at least page 54
 Proposed Response Response Status W
 PROPOSED REJECT.
 The editorial policy in the 802.3ck project is to insert one empty line between each pair of editorial amendments. This is consistent throughout this draft. The intent is make a clear delineation between each new instruction AND to be consistent.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 45 SC 45.2.1.135a P 55 L 11 # 2

Anslow, Pete Independent

Comment Type E Comment Status D (bucket1)

Changes for table footnotes b and c are not shown correctly. Similar issues in Tables 45-103b, 45-103c, and 45-103d.

SuggestedRemedy

In Table 45-103a:
in the row for 1.1120.4:2 underline the added "c"
Underline the whole of table footnotes b and c
In Table 45-103b:
in the row for 1.1220.5:3 underline the added "b"
Underline the whole of table footnote b
In Table 45-103c:
in the row for 1.1320.4:2 underline the added "c"
Underline the whole of table footnotes b and c
In Table 45-103d:
in the row for 1.1420.5:3 underline the added "b"
Underline the whole of table footnote b

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 45 SC 45.2.1.135a P 55 L 12 # 72

Wienckowski, Natalie General Motors

Comment Type T Comment Status D (bucket1)

Unused bit combinations should be "reserved"

SuggestedRemedy

add a row with "0 1 x =Reserved" and
add a row with "1 0 0 =Reserved"
This also needs to be done on P56L7, P57L13, P58L7, & P152L23.

Proposed Response Response Status W
PROPOSED ACCEPT.
[Editor's note: CC: 45, 162 (Table 162-9).]

Cl 45 SC 45.2.1.137a P 56 L 41 # 3

Anslow, Pete Independent

Comment Type E Comment Status D (bucket1)

Table 45-103c concerns register 1.1320, but there are 4 instances of 1.1120 in the table.

SuggestedRemedy

Change 1.1120 to 1.1320 in four places.

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 45 SC 45.2.7.12a.a P 60 L 52 # 92

Slavick, Jeff Broadcom

Comment Type T Comment Status D (bucket1)

The RS-FEC-Int negotiated field is valid for all 100GBASE-P PHYs that supporting negotiating it. But text some "some" so

SuggestedRemedy

Align the text with how RS-FEC negotiated reads. Change the last sentence to read "This bit is set only when RS-FEC-Int operation been negotiated for a 100GBASE-P PHY supporting negotiation of RS-FEC-Int operation."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Change last sentence to: "This bit is set only if RS-FEC-Int operation has been negotiated for a 100GBASE-P PHY supporting negotiation of RS-FEC-Int operation."

Cl 69 SC 69.1.2 P 63 L 6 # 80

Huber, Tom Nokia

Comment Type E Comment Status D (bucket1)

The editing instruction indicates that unchanged items are not included, yet items i) and j) have no changes indicated

SuggestedRemedy

Remove items i) and j), or change the editing instruction to indicate that 'some unmodified items are not included'.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
In the editorial instruction change "(unchanged list items not shown):" to "(some unchanged list items not shown):"

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 69 SC 69.2.3 P 63 L 43 # 98

Kabra, Lokesh Synopsys Inc
 Comment Type E Comment Status D (bucket1)

Typo-error; 200Gb/s mentioned as 100Gb/s

SuggestedRemedy

the PMD defined in Clause 163, and specifies 200Gb/s operation using 4-level PAM over two differential

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
 Change: "The 200GBASE-KR2 embodiment employs the PCS defined in Clause 119, the PMA defined in Clause 120, and the PMD defined in Clause 163, and specifies 100 Gb/s operation using 4-level PAM over two differential paths in each direction."
 To: "The 200GBASE-KR2 embodiment employs the PCS defined in Clause 119, the PMA defined in Clause 120, and the PMD defined in Clause 163, and specifies 200 Gb/s operation using 4-level PAM over two differential paths in each direction."

Cl 69 SC 69.2.3 P 64 L 48 # 81

Huber, Tom Nokia
 Comment Type T Comment Status D (bucket1)

Not part of the new text for table 69-3b, but the title of clause 137 is incorrect in the table

SuggestedRemedy

Change 100GBASE-KR4 PMD to 200GBASE-KR4 PMD

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 80 SC 80.1.4 P 73 L 47 # 7

Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status D (bucket1)

Dead link "Clause 91 or Clause 161"

SuggestedRemedy

Add live hyperlink for these two clause numbers

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 91 SC 91.6 P 85 L 26 # 82

Huber, Tom Nokia
 Comment Type E Comment Status D (bucket1)

The newly inserted row is not marked as such. Other tables with a mix of inserted rows and existing rows have underlined text for the new rows.

SuggestedRemedy

Underline the text of the new row.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 91 SC 91.6.2f P 86 L 5 # 160

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,
 Comment Type E Comment Status D (bucket1)

"For PHYs supporting RS-FEC-Int operation" should have a reference, especially because it would send the reader searching this clause (RS-FEC) for RS-FEC-Int, and not find it.

SuggestedRemedy

change "RS-FEC-Int operation" to "RS-FEC-Int operation (see Clause 161)" similar to other references, where Clause 161 is a cross-ref.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 91 SC 91.6.2f P 86 L 7 # 83

Huber, Tom Nokia
 Comment Type E Comment Status D (bucket1)

Awkward grammar - "When 100G_RS_FEC_Enable variable is set..."

SuggestedRemedy

Add 'the' in front of 10G_RS_FEC_Enable: "When the 100G_RS_FEC_Enable variable is set..."

Proposed Response Response Status W

PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 91 SC 91.7.3 P 87 L 38 # 161
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,
 Comment Type T Comment Status D (bucket1)
 *FINT indicates RS-FEC-Int and should reference clause 161 as the relevant clause for the capability
 SuggestedRemedy
 Add cross-ref to clause 161 under subclause
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 91 SC 91.6 P 85 L 28 # 26
 Laubach, Mark IEEE Member / Self
 Comment Type E Comment Status D (bucket1)
 Line breaking of "threshold" after the "t" doesn't look good.
 SuggestedRemedy
 Perhaps resizing the columns can make it look better or forcing a newline before the "t"?
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Reformat so there is no break in the "threshold".

Cl 93A SC 93A.1.2.3 P 209 L 47 # 111
 Ran, Adeo Cisco
 Comment Type E Comment Status D (bucket1)
 "unless alternate values are provided by the clause that invokes this method"
 The word "alternate" seems odd here, I think "alternative" is more common for this meaning. It can also be simply "other".
 (Note: in section 6, "alternative" appears 13 times and "alternate" appears 3 times, both with the same meaning. This may be handled by maintenance)
 SuggestedRemedy
 Change "alternate" to "alternative".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 93A SC 93A.1.2.4 P 211 L 9 # 112
 Ran, Adeo Cisco
 Comment Type E Comment Status D figure legend (bucket1)
 Figure 93A–2 includes network elements which represent components of the package and device model, but there is no description of these elements; the definitions are scattered through 93A.1.2 and its subclauses (some of which are not in this amendment). To an unexperienced reader it will be much harder than necessary to understand what each element is.
 The suggested remedy is to add a legend to the figure. Alternatively, labels and arrows can be used instead.

SuggestedRemedy
 Add a legend to Figure 93A–2, with text based on the following:
 S^(d) = scattering parameters corresponding to C_d
 S^(l) = scattering parameters corresponding to a transmission line with length z_p
 S^(s) = scattering parameters corresponding to L_s
 (and so on)

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Implement the suggested remedy with editorial license.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 93A SC 93A.5.2 P 214 L 34 # 113

Ran, Adeo Cisco
 Comment Type TR Comment Status D (bucket1)

This amendment uses T_{fx} as a parameter of ERL calculation.

T_{fx} originally appears in Equation (93A-62), which is not included in this amendment (added by 802.3cd), with the text

"T_{fx} is twice the propagation delay in ns associated with the test fixture, obtained by measurement or inspection"

This text does not hold for the cases where the ERL is defined in this amendment; in some cases T_{fx} is defined as 0 or 0.2 ns (regardless of the test fixture), in other cases it is twice the delay between two specified test points (e.g. TP0 and TP0v).

SuggestedRemedy

Add 93A.5.2 and change the text following Equation (93A-62), adding after the quoted sentence:

", unless its value is specified by the clause that invokes this method"

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 116 SC 116.1.2 P 90 L 44 # 84

Huber, Tom Nokia
 Comment Type E Comment Status D (bucket1)

The last part of the text that is new, "for 400GBASE-KR4", is not shown as changed text (with an underline)

SuggestedRemedy

Underline "for 400GBASE-KR4" so all changed text is identified.

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 116 SC 116.1.4 P 92 L 54 # 191

Dudek, Mike Marvell
 Comment Type T Comment Status D (bucket1)

The Optical PMD's are not listed using the new chip to chip and chip to module AUI's

SuggestedRemedy

bring the tables for the 200G and 400G from clause 116 into the document and add the new AUI interfaces to the tables.

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 119 SC 119.6.4.12 P 99 L 41 # 27

Laubach, Mark IEEE Member / Self
 Comment Type E Comment Status D (bucket1)

Line break of "status" after "stat" doesn't look good.

SuggestedRemedy

Perhaps forcing a newline before "status"?

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Reformat so there is no break in "status".

Cl 120 SC 120.5.2 P 102 L 11 # 101

Ran, Adeo Cisco
 Comment Type E Comment Status D (bucket1)

"when the number of physical lanes is 2 or 4" is inconsistent with the remainder of this sentence which has "8 or 4", and with the first paragraph of 120.5.

Other places with "2 or 4" are 120.5.5 (P102 L25), 120.5.7.1 (P103 L12 and L20), and 120.5.11.2 (P104 L16) - in those cases the corresponding 400G PMA is stated as having "4 or 8" lanes. That is an inconsistency in the base document, which may be fixed in the revision project, so I'm not proposing changing those cases now.

SuggestedRemedy

Change "2 or 4" to "4 or 2", at this point only in 102.5.2.

Proposed Response Response Status W
 PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 120 SC 120.7.3 P 106 L 30 # 102
 Ran, Adee Cisco
 Comment Type ER Comment Status D (bucket1)
 In items UNAU and DNAUI, "through Annex 120G" is a newly inserted text.
 SuggestedRemedy
 Mark with underline in both cases.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 120F SC 120F.3.1 P 219 L 16 # 60
 Brown, Matt Huawei
 Comment Type E Comment Status D (bucket1)
 Align terminology with other clauses.
 SuggestedRemedy
 Change "Common-mode return loss" to "Common-mode to common-mode return loss" in Table 120F-1 and in PICS item TC8 in 120F.5.4.1.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 120F SC 120F.3.2.5 P 225 L 22 # 115
 Ran, Adee Cisco
 Comment Type E Comment Status D variable table (bucket1)
 Table 120F-6 has a "reference" column that has identical values for all rows (136.8.11.7.1). This reference is repeated in the text following the table, so it is redundant. Note that the similar Table 120F-3 does not have this column.
 If the reference column is omitted, the "management access" column can be widened to prevent breaking its title, as in Table 120F-3.
 SuggestedRemedy
 delete the "reference" column and adjust the width of remaining columns.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 120F SC 120F.5.4.1 P 232 L 39 # 116
 Ran, Adee Cisco
 Comment Type TR Comment Status D (bucket1)
 Item TC13 feature is "Transmitter precoder request" with no comment, and its status is M. However, the referenced 120F.1 says "Precoding may be enabled and disabled using the precoder request mechanism specified in 135F.3.2.1." (P218 L28), and this mechanism is explicitly optional. So requesting through this mechanism can't be mandatory.
 It may be preferable to add the transmitter precoder request as a major (optional) feature, as done in annex 135F (802.3cd).

SuggestedRemedy
 Change TC13 status from "M" to "O". Consider moving it to 120F.5.3.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Change TC13 status from "M" to "O".

Cl 120F SC 120F.5.4.1 P 232 L 40 # 117
 Ran, Adee Cisco
 Comment Type TR Comment Status D TX EQ control (bucket1)
 Item TC14 is optional and points to 120F.3.1.2, which points to 120F.3.1.4, which is pointed to by item TC15 (mandatory). These two items are one and the same.
 The transmitter control interface is mandatory; only its usage is described with the word "may", but it is not an optional feature. So TC15 is the correct one.
 SuggestedRemedy
 Remove item TC14.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl **120G** SC **120G.1** P **235** L **36** # **221**

Wu, Mau-Lin MediaTek Inc.

Comment Type **E** Comment Status **D** OIF reference (bucket1)

The sentence below refers to CEI-112G-VSR-PAM4 defined in OIF-CEI-05.0 [B55a].
 "The C2M interface is defined using a specification and test methodology that is similar to that used for CEI-112G-VSR-PAM4 defined in OIF-CEI-05.0 [B55a]."
 However, OIF-CEI-05.0 doesn't exist yet.

SuggestedRemedy

Propose to remove this sentence

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.
 With respect to CEI-112G-VSR-PAM4, past OIF liaisons request that IEEE "acknowledge the OIF in any derivative work". For reference, a URL to the latest liaison letter is provided here:
https://www.ieee802.org/3/ck/private/OIF_liaison_letter_IEEE802.3_08Apr21_CEI_Projects.pdf
 Add an editor's note in 120G.1 indicating that the referenced CEI document is expected and that the reference is to be removed at 802.3ck publication time if the CEI document is not yet published.
 In Annex A, change the editor's note to indicate only that the document is expected to be published by OIF and that the bibliography entry is to be removed if the reference in 120G.1 is removed.

Cl **120G** SC **120G.3.1.5** P **239** L **10** # **222**

Wu, Mau-Lin MediaTek Inc.

Comment Type **TR** Comment Status **D** (bucket1)

Vertical eye opening is not used as a specification in 120G, vertical eye closure is used instead. Therefore, the following sentence is not appropriate.
 "Eye height and Vertical eye opening are measured according to the method described in 102G.5.2."

SuggestedRemedy

Change "vertical eye opening" to "vertical eye closure".

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **120G** SC **120G.3.3.3** P **244** L **46** # **233**

Dawe, Piers Nvidia

Comment Type **E** Comment Status **D** TP3/TP4 XTALK (bucket1)

It would be better to put the crosstalk parameters in the stressed input parameters tables rather than scattered through the text.

SuggestedRemedy

Move the peak-to-peak voltage and transition time numbers from the text of 120G.3.3.3.1 and 120G.3.4.1.1 to Table 120G-8 and 120G-11

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Implement the suggested remedy with editorial license.

Cl **120G** SC **120G.3.4.1.1** P **247** L **53** # **21**

Brown, Matt Huawei

Comment Type **ER** Comment Status **D** (bucket1)

Grammar

SuggestedRemedy

Change "Eye height vertical eye closure are measured"
 To "Eye height and vertical eye closure are measured"

Proposed Response Response Status **W**

PROPOSED ACCEPT.
 [Editor's note: Changed line from 43 to 53.]

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 120G SC 120G.3.4.1.1 P 247 L 50 # 131

Ben Artsi, Liav Marvell Technology

Comment Type TR Comment Status D CRU description (bucket1)

Defining a corner frequency for a clock recovery unit (CRU) can be ambiguous due to possible actual implementations of CRU implementations

SuggestedRemedy

Change the definition of a CRU unit with a definition of the effect expected from the CRU. The effect expected is a high frequency filter applied on the jitter of the measured signal. A reference for the wording can be found in 93.8 "The effect of a single-pole high-pass filter with a 3 dB frequency of XMHz is applied to the jitter"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: "A reference CRU with a corner frequency of 4 MHz and slope of 20 dB/decade is used to calibrate the stressed signal using a PRBS13Q pattern."

To: "A reference CRU acting as a high-pass jitter filter with a 3 dB corner frequency of 4 MHz and slope of 20 dB/decade is used to calibrate the stressed signal using a PRBS13Q pattern."

[Editor's note: CC: 162, 120G]

Cl 135 SC 135.1.4 P 109 L 15 # 103

Ran, Adeo Cisco

Comment Type E Comment Status D (bucket1)

In Figure 135-2, in "PMA (4:n)" the letter "n" is not italicized (it is italic everywhere else).

Also, in "PMA (n:p)", "n" is italic but "p" is not (but p is italic in the legend).

Also applies to Figure 120A-8 in 120A.5 where p and n are used but not italicized.

SuggestedRemedy

Change the format of the "n" and "p" to italic, across both figures.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 135 SC 135.1.4 P 109 L 27 # 104

Ran, Adeo Cisco

Comment Type E Comment Status D (bucket1)

The term "PHY" does not appear in the new Figure 135-2, so it is not required in the legend.

SuggestedRemedy

Delete "PHY = PHYSICAL LAYER DEVICE".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 135 SC 135.7.3 P 113 L 6 # 105

Ran, Adeo Cisco

Comment Type TR Comment Status D (bucket1)

PICS item NLA in 802.3cd has only the options 2, 4, or N/A for 100G. This project adds 100GAUI-1 for which the value should be 1.

SuggestedRemedy

Bring in item NLA and add 1 as an optional value.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 136 SC 136.8.11 P 115 L 29 # 24

Marris, Arthur Cadence Design Systems

Comment Type TR Comment Status D control function (bucket1)

Need to point out that the Clause 136 control function is not just for 50G lane PMDs

SuggestedRemedy

Add the following extra paragraph to the end of 136.8.11:

"The PMD control function specified in this clause is not only used by 50 Gb/s per lane PMDs, but also by other PMDs, such as the 100 Gb/s per lane PMDs specified in Clause 162."

Proposed Response Response Status W

PROPOSED REJECT.

By precedent, many subclauses for one PMD are reused or recycled by clauses for other concurrent or later PMDs without any reference to those other clauses. The control function defined in 802.3cd-2018 Clause 136 (CR) does not point out that it is also used by Clause 137 (KR). Clause 162 and Clause 163 do not technically use Clause 136 control function but rather define a new control function with the Clause 136 control function as a starting point and modified with exceptions.

Cl 136 SC 136.8.11.7.2 P 116 L 10 # 106

Ran, Adeo Cisco

Comment Type E Comment Status D (bucket1)

Missing space after "=".

SuggestedRemedy

Insert space.

Proposed Response Response Status W

PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 136 SC 136.8.11.7.2 P 117 L 37 # 128
 Law, David HPE
 Comment Type T Comment Status D (bucket1)
 The action 'start_holdoff_timer' in the QUIET state should read 'start holdoff_timer', that is the underscore between start and holdoff_timer should be a space. See timer conventions in 14.2.3.2 and 'start holdoff_timer' in TIMEOUT state.
SuggestedRemedy
 Change 'start_holdoff_timer' to read 'start holdoff_timer'.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 152 SC 152.6.2a P 119 L 29 # 109
 Ran, Adee Cisco
 Comment Type E Comment Status D (bucket1)
 in 802.3 the word "sublayer" is conventionally used with no hyphen.
SuggestedRemedy
 change "sub-layer" to "sublayer".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 136 SC 136.8.11.7.3 P 116 L 14 # 107
 Ran, Adee Cisco
 Comment Type TR Comment Status D (bucket1)
 In the base document (802.3cd), 136.8.11.7.3 defines holdoff_timer as being started only when entering the TIMEOUT state.
 In this project we added a holdoff_timer also when entering QUIET.
SuggestedRemedy
 Bring in 136.8.11.7.3 and insert "or the QUIET state" after "the TIMEOUT state".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 136 SC 136.9 P 118 L 1 # 108
 Ran, Adee Cisco
 Comment Type ER Comment Status D (bucket1)
 The table to be modified is in 136.14.4.1 "PMD functional specifications", so the current subclause numbering is incorrect.
SuggestedRemedy
 Change the 1st-level subclause number from 9 to 14, including the editorial instruction.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Change subclause number 136.9 to 136.14 and update the editorial instruction appropriately.

Cl 161 SC 161.5.2.6 P 122 L 52 # 162

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type TR Comment Status D (bucket1)

"The alignment markers shall be mapped to am_txmapped<1284:0> in a manner that yields the same result as the following process." Where the process begins and ends isn't really clear in the text since the text just runs in paragraphs of descriptive text intermingled with the text and multiple sets of either pseudocode or alphabetic steps. I THINK it ends at P 123 line 38, but that was only after first thinking it ended at other places a few times.

This section is technically quite important and needs to be crystal clear, hence my comment is technical, as it is currently not clear to those outside the group.

Descriptive, non-process text should be set out, and the process itself should be either all in steps or all in pseudocode, and set out by its own section. (in my remedy I have used the existing text and put it all in text).

Being a little confused by the text, take caution, as I may have gotten it wrong in my proposed remedy.

SuggestedRemedy

Change "same result as the following process" to "same result as the process in 161.5.2.6.1." Insert new section "161.5.2.6.1 Alignment Marker Mapping Process" following line 54, with content from page 123 lines 1 through 10, and add step e) using text from page 123 lines 18 through 21, and step f) using the text at lines 23 ("The variable am_txmapped...") through line 33. Add step g) with text at page 123 lines 34 through 38.

Move descriptive (and non-process requirement) text at page 123 lines 12-17 and page 123 lines 39 -page 124 line 46 (end of the existing section) ahead of the new section with just the process.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

[Editor's note: Proposed response updated on 2021/5/5.]

After some offline discussion and further review, the commenter indicated that the description is clear as is.

However, it was noticed that the wrong variable is being referenced in the text. The variable name should be tx_scrambled_am rather than am_txmapped. In addition, it would be clearer if we referred to a set of processes in the clause instead of a single process.

Change:"The alignment markers shall be mapped to am_txmapped<1284:0> in a manner that yields the same result as the following process."

To: "The alignment markers shall be mapped to tx_scrambled_am<1284:0> in a manner that yields the same result as the processes described in the remainder of this subclause."

Cl 161 SC 161.5.2.9 P 125 L 8 # 163

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type E Comment Status D (bucket1)

"has been FEC encoded, two FEC codewords... each FEC lane... Once the data has been Reed-Solomon encoded and interleaved... FEC lanes... highest FEC lane." - use consistent nomenclature. You go from FEC, to Reed-Solomon, and as much as I love to remember Gus Solomon by name, it suggests there may be 2 different things you're talking about here.

I didn't name it in my remedy, but the editor may wish to review instances of FEC where RS-FEC is meant to be clear - the same thing shows up in 161.5.3.1, 161.5.3.2, and 161.5.3.3. (note RS-FEC is an abbreviation in 802.3-2018 for Reed-Solomon Forward Error Correction)

SuggestedRemedy

Suggest replace instances on lines 8 through 22 of "FEC" with "RS-FEC", and "Reed-Solomon encoded" on line 21 with "RS-FEC encoded".

Additionally suggest editor review usage of "FEC" for possible replacement with RS-FEC elsewhere in clause 161 (I note this doesn't look globally feasible)

Proposed Response Response Status W

PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 161 SC 161.5.3.3 P 127 L 31 # 164

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,
 Comment Type T Comment Status D (bucket1)

"The probability that the decoder fails to indicate a codeword with t+1 errors as uncorrected is not expected to exceed 10–16." This statement is not technically correct without reference to an underlying raw symbol error rate. The probability of a failed decode can be anything if the raw symbol error rate is left unpinned. Since this subclause stands alone and could be reused with different PHYs in different scenarios, it isn't appropriate to pin the raw SER. Additionally, the descriptive sentence is unnecessary.

SuggestedRemedy

Delete the last two sentences of the 2nd paragraph of 161.5.3.3 ("The probability...").

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The symbol error rate of the system dictates the rate at which a codeword with t+1 or more errors occur. The last two sentences constrain the behavior of the decoder when a codeword with t+1 or more errors is seen.

Change:

The probability that the decoder fails to indicate a codeword with t+1 errors as uncorrected is not expected to exceed 10–16. This limit is also expected to apply for t+2 errors, t+3 errors, and so on.

To:

The probability that the decoder fails to indicate a codeword as uncorrected, given t+1 or more errors, is not expected to exceed 10–16.

Cl 162 SC 162.1 P 140 L 7 # 238

Zhang, Bo Inphi
 Comment Type E Comment Status D wording (bucket1)

When -CRx interfaces are first introduced in the overview section of clause 162. It's not clear the definition is properly referenced.

SuggestedRemedy

Suggest provide linkage of the definition of -CRx with -CRx interfaces when they are first introduced.

Proposed Response Response Status W

PROPOSED REJECT.

It is not clear what the comment is concerned with. The nomenclature used here is consistent with other PMD clauses.

Cl 162 SC 162.1 P 140 L 13 # 154

Kochuparambil, Beth Cisco
 Comment Type E Comment Status D wording (bucket1)

Annex 162D is the only description that restates the PMD. CR1, CR2, and CR4 seem to already be implied.

SuggestedRemedy

Remove "100GBASE-CR1, 200GBASE-CR2, and 400GBASE-CR4" which would leave "Annex 162D describes host and cable assembly types."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 162 SC 162.1 P 140 L 26 # 99

Kabra, Lokesh Synopsys Inc
 Comment Type E Comment Status D (bucket1)

Typo-error for Clause number corresponding to RS/CGMII functions

SuggestedRemedy

Correct Clause number to "81" instead of "80" in row 1 and row 2 of Table 162-1

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 162 SC 162.1 P 141 L 23 # 176

Dawe, Piers Nvidia
 Comment Type E Comment Status D PMD tables (bucket1)

Tables 162-2 and 162-3 are essentially the same, and it benefits the reader to see that.

SuggestedRemedy

Combine into one table with columns for clause/annex no., description for 200G, description for 400G, and required/optional status. Similarly for tables 163-2 and 3.

Proposed Response Response Status W

PROPOSED REJECT.

Combining the two tables results in a less readable format since for most sublayers there is a unique row for each rate. Only RS and AN rows are common to both. The suggested remedy does not improve the quality of the draft.

[Editor's note: CC: 162, 163]

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 162 SC 162.1 P 142 L 41 # 156
 Kochuparambil, Beth Cisco
 Comment Type E Comment Status D (bucket1)
 MAC = MEDIA ACCESS CONTROL is listed twice in the key.
 SuggestedRemedy
 Remove 1 of the MAC definitions
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162 SC 162.7 P 146 L 28 # 193
 Dudek, Mike Marvell
 Comment Type E Comment Status D (bucket1)
 Draft should be consistent format for the PMD control and status registers.
 SuggestedRemedy
 Delete the "to" to match table 162-5.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162 SC 162.7 P 147 L 34 # 192
 Dudek, Mike Marvell
 Comment Type E Comment Status D (bucket1)
 Improve English
 SuggestedRemedy
 change "provide" to "provided"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162 SC 162.8.11 P 151 L 24 # 144
 Kochuparambil, Beth Cisco
 Comment Type E Comment Status D control function (bucket1)
 Current text: "The terminal count of max_wait_timer as specified in 136.8.11.7.3 is 12s."
 Given a value is specified within the clause/statement makes the phrase "specified in 136[. . .]" incorrect.
 SuggestedRemedy
 Change "specified" to "defined" or "described"
 This is a semi-pervasive issue.

Proposed Response Response Status W
 PROPOSED REJECT.
 Clause 162 is specifying a value that is different from the value specified in Clause 136.

Cl 162 SC 162.9.3.1 P 155 L 31 # 194
 Dudek, Mike Marvell
 Comment Type T Comment Status D (bucket1)
 There are now five preset conditions
 SuggestedRemedy
 Change "three" to "five"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Resolve using the response to comment 136.

Cl 162 SC 162.9.3.1 P 155 L 31 # 136
 Hidaka, Yasuo Credo Semiconductor, Inc.
 Comment Type T Comment Status D (bucket1)
 The number of initial conditions was increased from three to five.
 SuggestedRemedy
 Change "three initial conditions" to "five initial conditions".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 162 SC 162.9.3.1.1 P 155 L 47 # 145

Kochuparambil, Beth

Cisco

Comment Type E Comment Status D (bucket1)

"M should be an integer not less than 32"
May be easier for the reader to avoid the double negative.

SuggestedRemedy

Change "not less than"
to "greater than or equal to"

Proposed Response Response Status W

PROPOSED ACCEPT.
[Editor's note: Change page from 154 to 155.]

Cl 162 SC 162.9.3.1.1 P 155 L 44 # 132

Ben Artsi, Liav

Marvell Technology

Comment Type TR Comment Status D CRU description (bucket1)

Defining a corner frequency for a clock recovery unit (CRU) can be ambiguous due to possible actual implementations of CRU implementations

SuggestedRemedy

Change the definition of a CRU unit with a definition of the effect expected from the CRU. The effect expected is a high frequency filter applied on the jitter of the measured signal. A reference for the wording can be found in 93.8 "The effect of a single-pole high-pass filter with a 3 dB frequency of XMHz is applied to the jitter"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Resolve using the response to comment 129.
[Editor's note: This appears to be a duplicate of comment 129.]

Cl 162 SC 162.9.3.1.1 P 155 L 44 # 129

Ben Artsi, Liav

Marvell Technology

Comment Type TR Comment Status D CRU description (bucket1)

Defining a corner frequency for a clock recovery unit (CRU) can be ambiguous due to possible actual implementations of CRU implementations

SuggestedRemedy

Change the definition of a CRU unit with a definition of the effect expected from the CRU. The effect expected is a high frequency filter applied on the jitter of the measured signal. A reference for the wording can be found in 93.8 "The effect of a single-pole high-pass filter with a 3 dB frequency of XMHz is applied to the jitter"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Change "A reference CRU with a corner frequency of 4 MHz and slope of 20 dB/decade is used to calibrate the stressed signal using a PRBS13Q pattern." to "A reference CRU acting as a high-pass jitter filter with a high-pass 3 dB corner frequency of 4 MHz and slope of 20 dB/decade is used to calibrate the stressed signal using a PRBS13Q pattern."
[Editor's note: CC: 162, 120G]

Cl 162 SC 162.9.3.1.3 P 157 L 6 # 146

Kochuparambil, Beth

Cisco

Comment Type E Comment Status D (bucket1)

Initial is capitalized mid sentence, however is lower case in Table 162-11's title.

SuggestedRemedy

Make "Initial" lower case

Proposed Response Response Status W

PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 162 SC 162.9.3.4 P 158 L 38 # 130

Ben Artsi, Liav Marvell Technology

Comment Type TR Comment Status D CRU description (bucket1)

Defining a corner frequency for a clock recovery unit (CRU) can be ambiguous due to possible actual implementations of CRU implementations

SuggestedRemedy

Change the definition of a CRU unit with a definition of the effect expected from the CRU. The effect expected is a high frequency filter applied on the jitter of the measured signal. A reference for the wording can be found in 93.8 "The effect of a single-pole high-pass filter with a 3 dB frequency of XMHz is applied to the jitter"

Proposed Response Response Status W

PROPOSED REJECT.

The detailed description of the CRU is provided in 120D.3.1.8.2. This exception merely suggests changing the value of that corner frequency. So no further detailed description is required here.

Cl 162 SC 162.9.3.5 P 158 L 46 # 147

Kochuparambil, Beth Cisco

Comment Type E Comment Status D (bucket1)

Sentence is poor english

SuggestedRemedy

Change "Parameters that do not appear in Table 162-12 take values from Table 162-18." to " Take parameter values that do not appear in Table 162-12 from Table 162-18."

Do the same for
162.9.4.5, pg 164, ln 40 and 162.11.3, pg 167, ln 26
163.9.2.1.2, 163.9.2.2, 163.9.3.2
163.10.3
120F.3.1.1, 120F.3.2.1, 120F.4.3
162B.1.3.2

Proposed Response Response Status W

PROPOSED REJECT.

The suggested remedy does not improve the quality of the draft.

Cl 162 SC 162.9.4.3.3 P 162 L 42 # 198

Dudek, Mike Marvell

Comment Type E Comment Status D (bucket1)

93A.1.2.1 and 93A.1.2.4 have been brought into this amendment.

SuggestedRemedy

Make these references standard hot links.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 162 SC 162.9.4.6 P 164 L 46 # 168

Dawe, Piers Nvidia

Comment Type E Comment Status D (bucket1)

Most such RL equations are graphed out to help the user see what is meant.

SuggestedRemedy

Please illustrate this receiver differential to common-mode return loss too. This would be best done in in Figure 162-4, presently "Transmitter common mode to differential return loss" so that the reader can compare the two.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement the suggested response with editorial license.

Cl 162 SC 162.9.4.6 P 165 L 2 # 58

Brown, Matt Huawei

Comment Type E Comment Status D (bucket1)

For Equation (162-9) specifying a limit for receiver differential to common-mode return loss there is no graph illustrating the limit.

SuggestedRemedy

Add figure with graph for Equation (162-9).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Resolve using the response to comment 168.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 162 SC 162.9.4.6 P 165 L 2 # 173
 Dawe, Piers Nvidia
 Comment Type E Comment Status D (bucket1)
 Italic >=
 SuggestedRemedy
 Non-italic >= Also 162-10, 162-11, 162-11, possibly others.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162 SC 162.9.4.6 P 165 L 9 # 199
 Dudek, Mike Marvell
 Comment Type E Comment Status D (bucket1)
 It would be helpful to have a graph showing this equation.
 SuggestedRemedy
 Either add a separate graph or reference figure 162-4 and change the figure title to Transmitter common mode to differential return loss and Receiver differential to common mode return loss.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Resolve using the response to comment #168.

Cl 162 SC 162.11.3 P 167 L 25 # 200
 Dudek, Mike Marvell
 Comment Type E Comment Status D (bucket1)
 93A.5 should be a hot link
 SuggestedRemedy
 fix it.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162 SC 162.11.3 P 167 L 49 # 149
 Kochuparambil, Beth Cisco
 Comment Type E Comment Status D CA COM Tfx (bucket1)
 The location of the Tfx not is not consistent with other clauses (namely 162.9.4.5 & 162.9.3.5)
 SuggestedRemedy
 Move this note to line 28 (after the description of where to find the parameters)
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Each of the referenced notes are intended to be an informative note against each table and thus should be placed immediately after each table. The note in 162.11.3 is in the intended location and is consistent with notes for Table 120G-2 and Table 120G-6. The note in 162.9.4.5 is in the wrong location.
 Change the location of the note in 162.9.4.5 for to be after Table 162-12.

Cl 162 SC 162.11.4 P 168 L 31 # 59
 Brown, Matt Huawei
 Comment Type E Comment Status D (bucket1)
 Change Figure title to be consistent with text.
 SuggestedRemedy
 Change title to "Cable assembly differential to common-mode return loss"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 162 SC 162.11.5 P 168 L 37 # 18

Brown, Matt Huawei

Comment Type E Comment Status D CL-IL difference (bucket1)

In a previous draft, a new parameter was added to constrain the CR channel differential to common-mode conversion loss. The term used to identify this parameter is: "difference between the cable assembly differential to common-mode conversion loss and the cable assembly insertion loss". The purpose of this parameter might not be immediately clear to a new reader of this standard and would benefit from a brief explanation.

SuggestedRemedy

Add an explanation of the purpose of this parameter. Perhaps: "This parameter constrains the amount of common-mode noise present at the transmitter that is converted to differential noise at the receiver relative to the signal level at the receiver."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

At P168 L35 (at beginning of subclause), add sentence "The cable assembly differential to common-mode conversion loss is specified relative to the insertion loss."

[Editor's note: This comment response was updated 2021/5/17.]

Cl 162 SC 162.11.5 P 169 L 20 # 67

Brown, Matt Huawei

Comment Type E Comment Status D (bucket1)

Change Figure 162-7 title to be consistent with text.

SuggestedRemedy

Change title to "Cable assembly differential to common-mode conversion loss"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

[Editor's note: this comment was updated on 2021/5/18.]

The commenter intended to point to Figure 162-6 at page 168 line 31.

However, it is also noted that the title of Figure 162-7 is incorrect in two ways. First "cable assembly" should be move to the head of the figure title and the parameter name must be updated.

For figure 162-6, implement the suggested remedy.

For Figure 162-7, change the title to "Cable assembly differential to common-mode conversion loss to insertion loss difference"

Cl 162 SC 162.11.7 P 169 L 39 # 202

Dudek, Mike Marvell

Comment Type E Comment Status D (bucket1)

93A.1 is in this amendment. It should be a hot link

SuggestedRemedy

fix it.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 162 SC 162.11.7 P 170 L 18 # 50

Ghiasi, Ali Ghiasi Quantum/Inphi

Comment Type ER Comment Status D (bucket1)

Unit for Zc should be ohms not Farad

SuggestedRemedy

Change to ohms

Proposed Response Response Status W

PROPOSED ACCEPT.

[Editor's note: Changed subclause from 162.11.7.1 to 162.11.7.]

Cl 162 SC 162.11.7.2 P 174 L 8 # 36

Ghiasi, Ali Ghiasi Quantum/Inphi

Comment Type TR Comment Status D MDI nomenclature (bucket1)

Table 162-20 should be updated with MDI supporting 112G

SuggestedRemedy

Please replace SFP+ with SFP112
SFP-DD with SFP-DD112
QSFP+ with QSFP112

Proposed Response Response Status W

PROPOSED REJECT.

Resolve using the response to comment #45.

[Editor's note: CC: 162, 162C]

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 162 SC 162.14.3 P 176 L 31 # 86
 Huber, Tom Nokia
 Comment Type T Comment Status D (bucket1)
 Status for implementing the 100G FECs should be CR1 rather than CR2
 SuggestedRemedy
 Change CR2 to CR1
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162 SC 162.14.4.3 P 178 L 43 # 219
 Wu, Mau-Lin MediaTek Inc.
 Comment Type ER Comment Status D (bucket1)
 The 'Feature' of 'TC5' is not correct.
 SuggestedRemedy
 Change "Differential mode to common-mode output return loss" to "Common-mode to differential output return loss" for the 'Feature' of 'TC5'.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162A SC 162A.5 P 263 L 28 # 25
 Laubach, Mark IEEE Member / Self
 Comment Type E Comment Status D (bucket1)
 "usingEquation" needs a space
 SuggestedRemedy
 Change to "using Equation"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162B SC 162B.1.3.1 P 269 L 1 # 217
 Haser, Alex Molex
 Comment Type T Comment Status D (bucket1)
 IL_MTFref(26.56 GHz) does not match the 6.60 dB specified in 162B.1 (page 266 line 20).
 SuggestedRemedy
 Update Equation 162B-5; change coefficient out front from 0.9505 to 0.942 to get correct 6.60 dB value at 26.56 GHz
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162B SC 162B.1.3.4 P 271 L 26 # 64
 Brown, Matt Huawei
 Comment Type E Comment Status D (bucket1)
 Align terminology with other clauses.
 SuggestedRemedy
 Change "common-mode return loss" to "Common-mode to common-mode return loss" in four places and in PICS item TF5.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 162C SC 162C.1 P 277 L 20 # 45
 Ghiasi, Ali Ghiasi Quantum/Inphi
 Comment Type TR Comment Status D MDI nomenclature (bucket1)
 Table 162C-1 should be updated with MDI supporting 112G
 SuggestedRemedy
 Please replace SFP+ with SFP112
 SFP-DD with SFP-DD112
 QSFP+ with QSFP112
 Proposed Response Response Status W
 PROPOSED REJECT.
 MDI names align with 1.3 normative references in 802.3ck and the base standard.

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

CI 162C SC 162C.2.4 P 283 L 41 # 237

Zhang, Bo

Inphi

Comment Type T Comment Status D MDI nomenclature (bucket1)

QSFP+ is meant for 4x10G 40G pluggable connector transceivers. I believe this section is meant for QSFP families such as QSFP28, QSFP56, QSFP-DD etc.

SuggestedRemedy

Suggest replace QSFP+ with QSFP families. Also please provide similar references to the 'QSFP+' such as those in section 1.3 normative references footnotes.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

QSFP+ reference is already a normative reference in base standard subclause 1.3 as requested in the suggested remedy. However, the reference text should be updated to point to the relevant QSFP+ specification.

Change: "connectors meeting the requirements of (QSFP+)"

To: "connectors meeting the requirements of SFF-8665"

Also, for SFP+ on page 281, line 6...

Change: "meeting the requirements of (SFP+)"

To: "meeting the requirements of SFF-8432"

Resolve using the response to comment #45.

CI 162D SC 162D.1 P 289 L 14 # 216

DiMinico, Christopher

MC Communications

Comment Type ER Comment Status D (bucket1)

There are six MDI connector "receptacles" distinguished uniquely by name, referring to them by "type" is unnecessary.

SuggestedRemedy

P289; Line 14 delete "types of" in the sentence "There are six types of MDI connectors "receptacles" specified for hosts."

P289; Line 32 change sentence to "This enables multiple cable assembly types with different combinations of the plug connectors at each end."

P290; Line 4 in Table 162D-2 delete "type" two places "Receptacle/Plug type"

P290; Line 32 in Table 162D-3 delete "type" two places "Receptacle/Plug type"

P291; Line 20 in Table 162D-4 delete "type" two places "Receptacle/Plug type"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 163 SC 163.1 P 181 L 9 # 220

Wu, Mau-Lin

MediaTek Inc.

Comment Type E Comment Status D (bucket1)

There are no descriptions for Annex 163B in the paragraph.

SuggestedRemedy

Add the following sentence at the end of the 1st paragraph of 163.1 Overview.
"Annex 163B provides informative information of an example test fixture meeting the requirements for TP0v"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

With editorial license implement the following.

Remove the last sentence of the first paragraph.

Insert a second paragraph as follows:

"There are two associated Annexes. Annex 163A provides measurement methods and test points for backplane and chip-to-chip interfaces. Annex 163B provides information on an example test fixture."

[Editor's note: CC: 163, 120F]

CI 163 SC 163.1 P 181 L 24 # 100

Kabra, Lokesh

Synopsys Inc

Comment Type E Comment Status D (bucket1)

Typo-error for Clause number corresponding to RS/CGMII functions

SuggestedRemedy

Correct Clause number to "81" instead of "80" in row 1 and row 2 of Table 162-2

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 163 SC 163.9.2 P 187 L 40 # 110

Ran, Adeo

Cisco

Comment Type E Comment Status D (bucket1)

Numerical values in standards are exact, so there should be no trailing zeros after the decimal point. This is the common practice in 802.3 (see https://www.ieee802.org/3/WG_tools/editorial/requirements/words.html#numbers).

SuggestedRemedy

Change "1.0" to "1".

Proposed Response Response Status W

PROPOSED ACCEPT.

[Editor's note: CC: 163, 162]

EE P802.3ck D2.0 100/200/400 Gb/s Electrical Interfaces Task Force Initial Working Group ballot comment

Cl 163 SC 163.9.3.4 P 191 L 48 # 151

Kochuparambil, Beth

Cisco

Comment Type E Comment Status D (bucket1)

There are 2 different "Test 1 and Test 2" in the interference tolerance test. In the interference tolerance test description and in step h for COM.

SuggestedRemedy

Change the interference tolerance test cases to "Setup 1" and "Setup 2" in both the procedure and the table.

Do similar for 120F.

Proposed Response Response Status W

PROPOSED REJECT.

The wording is consistent with previous clauses. The difference in context is clear in the text by reference to the two different tables.

[Editor's node: CC: 163, 120F]

Cl 163 SC 163.13.3 P 200 L 13 # 87

Huber, Tom

Nokia

Comment Type T Comment Status D (bucket1)

Status for implementing the clause 135 PMA should be KR1 rather than KR

SuggestedRemedy

Change KR to KR1

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 163B SC 163B.2 P 297 L 25 # 225

Wu, Mau-Lin

MediaTek Inc.

Comment Type ER Comment Status D (bucket1)

Equation (163-1) is the wrong reference. It shall be "Equation (163B-1)".

SuggestedRemedy

Change "Equation (163-1)" to "Equation (163B-1)" in the following sentence.

"The insertion loss of the example test fixture is approximated by Equation (163-1) which is illustrated in Figure 163B-1."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl A SC A P 205 L 8 # 4

Anslow, Pete

Independent

Comment Type E Comment Status D OIF reference (bucket1)

"OIF-CEI-05, ..." should appear in the bibliography after "[B55] OIF-CEI-04.0, ..."

SuggestedRemedy

Change the numbering from [B22a] to [B55a]

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Comment #221 proposes to remove the only reference to OIF-CEI-05.0. If that reference is removed then remove this bibliography entry. If the reference is not removed, then implement the suggested remedy.