

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

CI 114 SC 114.6.2 P 35 L 42 # i-1
 Laubach, Mark Broadcom Limited
 Comment Type E Comment Status D
 Add a period at end of sentence for footnote "d".
 SuggestedRemedy
 As per comment.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 114 SC 114.6.1 P 33 L 47 # i-2
 Laubach, Mark Broadcom Limited
 Comment Type E Comment Status D
 Lowercase "M" and "A" in lines 47 and 49.
 SuggestedRemedy
 As per comment.
 Proposed Response Response Status W
 PROPOSED REJECT.

The convention established by prior standards is to capitalize "M" and "A" in the transmit characteristics table (see Table 87-7 or Table 88-7 in 802.3-2015 Section6).

CI 114 SC 114.6.1 P 33 L 50 # i-3
 Laubach, Mark Broadcom Limited
 Comment Type E Comment Status D
 "TDP" is used here before being defined in next table row entry. Define it here, modified following line to use "TDP" only.
 SuggestedRemedy
 As per comment.
 Proposed Response Response Status W
 PROPOSED REJECT.

The use of the abbreviation TDP and its definition in the transmit characteristics table follows the example established by prior standards (see Table 87-7 or Table 88-7 in 802.3-2015 Section6).

CI 114 SC 114.7.3 P 37 L 11 # i-4
 Laubach, Mark Broadcom Limited
 Comment Type E Comment Status D
 OMA was defined on page 33. Just "OMA" here (will be consistent with not spelling out on line 21). Same line 13 for "TDP".
 SuggestedRemedy
 As per comment.
 Proposed Response Response Status W
 PROPOSED REJECT.

The names in the table follow the convention established by prior standards (see Table 87-11 or Table 88-11 of 802.3-2015 Section 6).

CI 114 SC 114.7.3 P 37 L 26 # i-5
 Laubach, Mark Broadcom Limited
 Comment Type E Comment Status D
 Remove "(OMA)" from title, already has been defined.
 SuggestedRemedy
 As per comment.
 Proposed Response Response Status W
 PROPOSED REJECT.

Title follows convention established by prior standards (see Clause 88.8.4).

CI 114 SC 114.7.3 P 37 L 33 # i-6
 Laubach, Mark Broadcom Limited
 Comment Type E Comment Status D
 Remove "(TDP)" from title, already has been defined.
 SuggestedRemedy
 As per comment.
 Proposed Response Response Status W
 PROPOSED REJECT.

Title follows convention established by prior standards (see Clause 88.8.5).

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

CI 114 SC 114.7.3 P 37 L 34 # i-7
Laubach, Mark Broadcom Limited

Comment Type E Comment Status D
Be consistent with line 28, change "Transmitter and dispersion penalty (TDP)" to "TDP".

SuggestedRemedy
As per comment.

Proposed Response Response Status W
PROPOSED REJECT.

Title follows convention established by prior standards (see Clause 88.8.5).

CI 114 SC 114.7.10 P 39 L 9 # i-8
Laubach, Mark Broadcom Limited

Comment Type E Comment Status D
Add period to end of line for "a".

SuggestedRemedy
As per comment.

Proposed Response Response Status W
PROPOSED ACCEPT.

CI 114 SC 114.7.10 P 39 L 22 # i-9
Laubach, Mark Broadcom Limited

Comment Type TR Comment Status D
<ital>f</ital> needs to be defined for use in Table 114-10 What does "f" represent?

SuggestedRemedy
Define "f", Add a table footnote?

Proposed Response Response Status W
PROPOSED REJECT.

"f" represents frequency, which is understood. Established standards with similar tables also do not define it, since it is understood. For example, see Table 95-11 in Subclause 95.8.8, which is referred to in Subclause 114.7.10.

CI 114 SC 114.12.4.1 P 43 L 6 # i-10
Laubach, Mark Broadcom Limited

Comment Type TR Comment Status D
Value/Comment needs text for CF1 and CF2.

SuggestedRemedy
As per comment.

Proposed Response Response Status W
PROPOSED REJECT.

Follows example of established standards where this field is left blank for CF1 and CF2. See Subclause 88.12.4.1 or Subclause 95.12.4.1 as examples.

CI 114 SC 114.12.4.2 P 44 L 6 # i-11
Laubach, Mark Broadcom Limited

Comment Type TR Comment Status D
Value/Comment needs text for CM1.

SuggestedRemedy
As per comment.

Proposed Response Response Status W
PROPOSED REJECT.

Follows example of established standards where this field is left blank for CM1. See Subclause 88.12.4.2 or Subclause 95.12.4.2 as examples.

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

CI 114 SC 114.12.4.5 P 45 L 12 # i-12
Laubach, Mark Broadcom Limited

Comment Type **TR** Comment Status **D**

Value/Comment needs text for COM4, COM5, COM7, COM8, and COM9.

SuggestedRemedy

As per comment.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Following the example of 100GBASE-LR4, the Value/Comment field of COM4, COM5, COM7, and COM8 specifies "Each lane" to indicate that the measurement should be performed for each of the four lanes comprising the PMD (see Subclause 88.12.4.5). 25GBASE-LR and 25GBASE-ER only have a single lane, and the convention in this case is to leave this field blank (see Subclause 112.11.4.4). So these require no change.

For COM9, the Subclause 114.7.10 references Subclause 95.8.8. Subclause 95.8.8 applies to a four lane PMD, and contains specifications regarding agressor lanes, which do not apply to a single lane PMD. The Value/Comment field should remain blank, but the new item below should be inserted in the list in 114.7.10.

"g) The conditions for receiver agressor lanes do not apply."

CI 114 SC 114.12.4.5 P 45 L 7 # i-13
Laubach, Mark Broadcom Limited

Comment Type **TR** Comment Status **D**

I did not find a normative reference for "TIA/EIA-455-127-A" in IEEE Std. 802.3-2015 Clause 1.3. I also did not find it added by any of the ammendments listed in the front matter on pages 12-13. Please add the normative reference as an insert for Clause 1.3. (Note: I found the same problem with 802.by-2016. Should have been caught there.)

SuggestedRemedy

As per comment.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

CI 114 SC 114.7.3 P 37 L 7 # i-14
Laubach, Mark Broadcom Limited

Comment Type **T** Comment Status **D**

"-" is not a cross reference to a related subclasse for "Side mode suppression ratio". I did find a value of 30dB in 114.6.1 in Table 114-6. Change the dash to a cross reference to "114.6.1"?

SuggestedRemedy

As per comment.

Proposed Response Response Status **W**

PROPOSED REJECT.

Follows convention established by prior similar standards that do not list related subclause for side mode suppression ratio (see Table 88-11).

CI 1 SC 1.4.64ca P 18 L 8 # i-15
Anslow, Peter Ciena Corporation

Comment Type **E** Comment Status **D**

The rules for numbering inserted subclauses can be found at:
http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html#numb
According to item 3a), the newly inserted 25GBASE-ER should be 1.4.64c1 and 25GBASE-LR should be 1.4.64e1

SuggestedRemedy

Renumber 1.4.64ca to 1.4.64c1
Renumber 1.4.64ea to 1.4.64e1

Proposed Response Response Status **W**

PROPOSED ACCEPT.

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

CI 45 SC 45.2.1.6 P 20 L 16 # i-16
Anslow, Peter Ciena Corporation

Comment Type E Comment Status D

IEEE Std 802.3bv-2017 replaced the reserved row for 1 1 0 1 0 x with:
1 1 0 1 0 1 = reserved
1 1 0 1 0 0 = BASE-H PMA/PMD

SuggestedRemedy

In the editing instruction change: "(as modified by IEEE Std 802.3bq-2016)" to "(as modified by IEEE Std 802.3bq-2016 and IEEE Std 802.3bv-2017)"
Change the row for 1 1 0 1 0 1 to "1 1 0 1 0 1 = 25GBASE-LR PMA/PMDreserved", where "1 1 0 1 0 1 =" is not underlined, "25GBASE-LR PMA/PMD" is underlined and "reserved" is in strikethrough font.
Remove the rows for 1 1 0 1 0 0 and 1 1 0 1 0 x

Proposed Response Response Status W
PROPOSED ACCEPT.

CI 114 SC 114.6.1 P 34 L 15 # i-17
Anslow, Peter Ciena Corporation

Comment Type E Comment Status D

In "5x10-5" the x character should be a multiply sign (Ctrl-q 0) not an x.
Same issue on page 35, line 36

SuggestedRemedy

In "5x10-5" change the x character to a multiply sign (Ctrl-q 0).
Make the same change on page 35, line 36.

Proposed Response Response Status W
PROPOSED ACCEPT.

CI 114 SC 114.7.6 P 38 L 31 # i-18
Anslow, Peter Ciena Corporation

Comment Type E Comment Status D

The note should have paragraph tag "Note" (which will reduce the font size)

SuggestedRemedy

Apply paragraph tag "Note" to the note.

Proposed Response Response Status W
PROPOSED ACCEPT.

CI 114 SC 114.6.3 P 36 L 13 # i-19
Lewis, Jon Dell

Comment Type E Comment Status D

The text "40a" is not in line with other text in the table line.

SuggestedRemedy

Correct vertical spacing in that table cell.

Proposed Response Response Status W
PROPOSED ACCEPT.

CI 0 SC 0 P L # i-20
Perry, Lisa

Comment Type G Comment Status D

This draft meets all editorial requirements.

SuggestedRemedy

Proposed Response Response Status W
PROPOSED ACCEPT.

CI 45 SC 45.2.1.8 P 20 L 52 # i-21
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type TR Comment Status D

"PMD Transmit Disable" function is made available for both "25GBASE-LR and 25GBASE-ER" respectively. If "DISABLE" feature is included, where is the "ENABLE" attribute? Why is it not needed?

SuggestedRemedy

Proposed Response Response Status W
PROPOSED REJECT.

The normal state is for the transmitter to be enabled. When it is not disabled, it is enabled.

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

CI 78 SC 78.1.4 P 22 L 6 # i-22
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type G Comment Status D

"PHY types optionally supporting EEE" appeared in alignment with the "EEE" column designations in "Table 105-2" for all "Nomenclatures".

SuggestedRemedy

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 105 SC 105.5 P 25 L 28 # i-23
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type GR Comment Status D

Quote as: "cShould there be a discrepancy between this table and the delay requirements of the relevant sublayer clause, the sublayer clause prevails." This 'Note c' is not necessary should "Table 105-3" is correctly aligned with Sub-clause "114.3" in this document. Suggest deleting notation as shown.

SuggestedRemedy

Delete Note c as: "cShould there be a discrepancy between this table and the delay requirements of the relevant sublayer clause, the sublayer clause prevails."

Proposed Response Response Status W

PROPOSED REJECT.

"Note c" already exists in established standards. For example, see Table 80-5, which has an identical note. Also, "Note c" already exists in Table 105-3, to which these new rows are being added.

CI 108 SC 108.5.3.2 P 26 L 17 # i-24
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type ER Comment Status D

Last sentence applies to "25GBASE-R RS-FEC" where "25GBASE-SR, 25GBASE-LR, and 25GBASE-ER PHY" are covered. That seemed to coordinate with "Table 105-2" as "Mandatory". However, "25GBASE-CR and 25GBASE-KR" have the same mandatory requirement as indicated in "Table 105-2" but were not included in this last sentence. Suggest the suitable addition as shown for Table 105-2 alignment.

SuggestedRemedy

Last sentence revision as: "This option shall not be used when the 25GBASE-R RS-FEC sublayer is used to form part of a 25GBASE-CR, 25GBASE-KR, 25GBASE-SR, 25GBASE-LR, or 25GBASE-ER PHY."

Proposed Response Response Status W

PROPOSED REJECT.

"Mandatory" in Table 105-2 indicates that RS-FEC is required. However, the sentence in Clause 108.5.3.2 realtes to the option of having the RS-FEC perform error detection without error correction. This option is not allowed for only 25GBASE-SR, 25GBASE-LR, and 25GBASE-ER.

CI 108 SC 108.7.3 P 27 L 10 # i-25
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type GR Comment Status D

Add the corresponding "Subclause" references on "**LR and *ER" rows in the 'Table' of Subclause "108.7.3" for completeness.

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

The table in 108.7.3, to which this is being added, already has *KR, *CR, and *SR, and these also leave the Subclause reference blank. For consistency, *LR and *ER should follow this convention.

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

CI 114 SC 114.5.5 P 32 L 23 # i-26
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type ER Comment Status D

"PMD Reset Function" should be labeled "(OPTIONAL)" to coordinate with the "Table" in Subclause "114.12.4.1" as per "Item CF11" if such.

SuggestedRemedy

Rewrite as: "114.5.5 PMD reset function (optional)"

Proposed Response Response Status W

PROPOSED REJECT.

Follows convention established in prior standards (see Clause 88.5.6 and CF12 in Clause 88.12.4.1).

CI 114 SC 114.6.1 P 34 L 9 # i-27
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type TR Comment Status D

Should the "RIN20OMA(max)" value in "Table 114-6" coordinate with Subclause "114.7.7 b)" in Page 38, Line 37?

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

Subclause 114.7.7 describes the definition of RIN20OMA and its measurement methodology. The value in Table 114-6 specifies the maximum value that is allowed when measured as described in 114.7.7. So the clause is correct as written.

CI 114 SC 114.6.3 P 36 L 15 # i-28
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type TR Comment Status D

The value of "Channel Insertion Loss (max)" for "25GBASE-ER (30km)" in "Table 114-8" should match the same item in Page 40, Line 7 of "Table 114-11". "Table 114-8" showed "15 dB" compared to "18 dB" in "Table 114-11".

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

The maximum channel insertion loss value for 30 km in Table 114-11 includes the additional insertion loss allowed given in Table 114-8. The sum is 18 dB (channel loss of 15 dB + additional insertion loss of 3 dB). See Table 88-14 as a prior example.

CI 114 SC 114.9 P 39 L 39 # i-29
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type ER Comment Status D

Add and define "INS" marking of cable to align with the "**INS" row of "Table" in Subclause "114.12.3" Page 42, Line 11.

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

No remedy suggested. Comment meaning unclear. Clause follows example of prior standards (see Subclauses 88.10 and 88.12.3 in 802.3-2015 Section 6).

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

CI 114 SC 114.12.4.1 P 43 L 32 # i-30
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type G Comment Status D

In "Status" column of "Table" in Subclause "114.12.4.1, Item CF11", what is "MD:O"? If "O" stands for "optional", then it partly aligns with other provisions in this document depending on the meaning of "MD".

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

No change is requested. In answer to the question, per Subclause 114.12.3, "MD" indicates "MDIO capability". "O" indicates "optional". "CF11" specifies that PMD reset shall be as described in Subcalse 114.5.5 if MDIO capability exists and if "PMD_reset" is asserted.

CI 114 SC 114.12.4.2 P 44 L 6 # i-31
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type G Comment Status D

In "Status" column of "Table" in Subclause "114.12.4.2, Item CM1", what is "MD:M"? If "O" stands for "manadatory", then it partly aligns with other provisions in this document depending on the meaning of "MD".

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

No change is requested. In answer to the question, per Subclause 114.12.3, "MD" indicates MDIO capability. "CM1" relates to the management register set, and "MD:M" indicates that the register set is mandatory if there is MDIO capability.

CI 114 SC 114.12.3 P 42 L 6 # i-32
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type GR Comment Status D

In the "Table" of Subclause "114.12.3", the "*" -asterisk" sign must be defined as notation of this "Table".

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

This is covered in Subclase 114.12.1, which directs readers to Clause 21 for detailed descriptions of symbols used in PICS proforma. In particular, Subclase 21.6 states, "Each item whose reference is used in a conditional symbol is indicated by an asterisk in the Item column."

CI 114 SC 114.7.5.1 P 37 L 48 # i-33
BUCANEG, DEMETRIO JR Hawaiian Electric Com

Comment Type TR Comment Status D

Item "e) RIN of less than -138 dB/Hz" must be the correct value for the "RIN20OMA(max)" of "Table 114-6" in Page 34, Line 9. If so, please synchronize magnitude for alignment and disregard references to item "b)" in Subclause "114.7.7". Add reference statement to this effect.

SuggestedRemedy

Proposed Response Response Status W

PROPOSED REJECT.

RIN of less than -138 dB/Hz corresponds to the requirements of the high quality reference transmitter for measuring TDP. The RIN20OMA spec of -130 dB in Table 114-6 is the specification required of an actual transmitter.

P802.3cc D3.0 25 Gb/s Ethernet Over Single Mode Fiber Initial Sponsor ballot comments

Cl **114** *SC* **114.6.1** *P* **34** *L* **7** # **i-34**
Dawe, Piers J G Mellanox Technologie

Comment Type **TR** *Comment Status* **X**

The 25GBASE-LR extinction ratio limit should be relaxed to allow low cost transmitters that operate over a wide temperature range. The limit should be lower than 10GBASE-LR because the laser has to run faster. This can be done here because 25GBASE-LR has better receiver reflectance and TDP than 10GBASE-LR. The receiver is protected from overload by limits on max OMA and max average power that mean that the highest power in 0, 1 or average is not affected by this change.

SuggestedRemedy

Change 3.5 dB to 3 dB

Proposed Response *Response Status* **W**
DISCUSS

Cl **114** *SC* **114.6.1** *P* **34** *L* **7** # **i-35**
Dawe, Piers J G Mellanox Technologie

Comment Type **T** *Comment Status* **X**

The 25GBASE-ER extinction ratio limit should be relaxed to allow low cost transmitters that operate over a wide temperature range. The APD receiver is protected from overload by limits on max OMA, max average power and min IL, that mean that the highest power in 0, 1 or average is not affected by this change.

SuggestedRemedy

Change 4 dB to 3.5 dB

Proposed Response *Response Status* **W**
DISCUSS

Cl **FM** *SC* **FM** *P* **11** *L* **3** # **i-36**
Grow, Robert RMG Consulting

Comment Type **G** *Comment Status* **D**

This boxed paragraph is included in the published standard therefore, it should not use the draft name.

SuggestedRemedy

Change IEEE P802.3cc-20xx to IEEE Std 802.3cc-20xx.

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

Cl **FM** *SC* **FM** *P* **13** *L* **25** # **i-37**
Grow, Robert RMG Consulting

Comment Type **G** *Comment Status* **D**

The corrigendum has been published and should be in the list.

SuggestedRemedy

IEEE Std 802.3TM-2015/Cor 1-2017

This corrigendum clarifies which lane of the media dependent interface (MDI) of a multi-lane Physical Layer entity (PHY) is used as the timestamping reference point.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **114** *SC* **114.6.3** *P* **36** *L* **9** # **i-38**
Jones, Peter Cisco Systems, Inc.

Comment Type **TR** *Comment Status* **X**

Looking at "Table 114-8--25GBASE-LR and 25GBASE-ER illustrative link power budgets", the link budget doesn't allocate penalty for MPI MPI penalty is only negligible if just the PMD reflectance's are included. If any 35 dB RL or 26 dB RL connectors are included, MPI penalty becomes significant.

See the presentation from Jonathon King to the 802.3cc AdHoc meeting 10 May 2017, king_03cc_01_0517 (was 25GBASE-LR-ER-MPI-2017may.pdf) for the data behind this comment.

SuggestedRemedy

If connector reflections are to be accounted for, then in 114.6.3, add an allocation for MPI penalty, the amount will depend on the number and RL of connectors assumed.

Proposed Response *Response Status* **W**

DISCUSS