

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

**Cl FM**    **SC FM**                    **P1**            **L10**            # **38**  
 Grow, Robert                            RMG Consulting  
**Comment Type**    **E**            **Comment Status**    **D**  
     This project has been assigned a number by the WG Chair.  
**SuggestedRemedy**  
     Add assigned amendment number 15.  
**Proposed Response**            **Response Status**    **W**  
     PROPOSED ACCEPT.

**Cl FM**    **SC FM**                    **P1**            **L28**            # **39**  
 Grow, Robert                            RMG Consulting  
**Comment Type**    **E**            **Comment Status**    **D**  
     As amendment 15 replace list.  
**SuggestedRemedy**  
     "as amended by IEEE Std 802.3cb-2018, IEEE Std 802.3bt-2018, IEEE Std 802.3cd-2018, IEEE Std 802.3cn-2019, IEEE Std 802.3cg-2019, IEEE Std 802.3cq-2020, IEEE Std 802.3cm-2020, IEEE Std 802.3ch-2020, IEEE Std 802.3ca-2020, IEEE Std 802.3cr-2021, IEEE Std 802.3cu-2021, IEEE Std 802.3cv-20xx, IEEE Std 802.3ct-20xx, and IEEE Std 802.3cp-20xx."  
**Proposed Response**            **Response Status**    **W**  
     PROPOSED ACCEPT.

**Cl FM**    **SC FM**                    **P1**            **L28**            # **13**  
 Zimmerman, George                    CME Consulting/ADI, APL Gp, Cisco, CommScope,  
**Comment Type**    **E**            **Comment Status**    **D**  
     Insert updated list of published amendments.  
**SuggestedRemedy**  
     Update list of amendments considered before this (from chief editor)  
**Proposed Response**            **Response Status**    **W**  
     PROPOSED ACCEPT IN PRINCIPLE.  
  
     See comment #38

**Cl FM**    **SC FM**                    **P1**            **L29**            # **59**  
 Wienckowski, Natalie                    General Motors  
**Comment Type**    **E**            **Comment Status**    **D**  
     Missing additional ammendments in the list.  
**SuggestedRemedy**  
     Change: IEEE Std 802.3cd-201x, and XXX  
     To: IEEE Std 802.3cd-2018, IEEE Std 802.3cn-2019, IEEE Std 802.3cg-2019, IEEE Std 802.3cq-2020, IEEE Std 802.3cm-2020, IEEE Std 802.3ch-2020, IEEE Std 802.3ca-2020, IEEE Std 802.3cr-2021, IEEE Std 802.3cu-2021, IEEE Std 802.3cv-20xx, IEEE Std 802.3ct-20xx, and IEEE Std 802.3cp-20xx.  
**Proposed Response**            **Response Status**    **W**  
     PROPOSED ACCEPT IN PRINCIPLE.  
  
     See comment #38

**Cl FM**    **SC FM**                    **P4**            **L7**            # **40**  
 Grow, Robert                            RMG Consulting  
**Comment Type**    **E**            **Comment Status**    **D**  
     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.

**Cl FM**    **SC FM**                    **P8**            **L9**            # **24**  
 Ewen, John                                Marvell  
**Comment Type**    **E**            **Comment Status**    **D**  
     I believe Jon Lewis is the WG Secretary at the beginning of WG ballot.  
**SuggestedRemedy**  
     Change "Pete Anslow" to "Jon Lewis"  
**Proposed Response**            **Response Status**    **W**  
     PROPOSED ACCEPT.

## Proposed Responses

## IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

**Cl FM**    **SC FM**                      **P8**                      **L16**                      # **41**  
 Grow, Robert                                      RMG Consulting  
**Comment Type**    **E**                      **Comment Status**    **D**  
 The ballot group is now known.  
**SuggestedRemedy**  
 Add WG members list at start of P802.3cs WG ballot.  
**Proposed Response**                      **Response Status**    **W**  
 PROPOSED ACCEPT.

**Cl FM**    **SC FM**                      **P11**                      **L43**                      # **60**  
 Wienckowski, Natalie                                      General Motors  
**Comment Type**    **E**                      **Comment Status**    **D**  
**SuggestedRemedy**  
 Change: IEEE Std 802.3cd™-201x  
 To: IEEE Std 802.3cd™-2018  
**Proposed Response**                      **Response Status**    **W**  
 PROPOSED ACCEPT.

**Cl FM**    **SC FM**                      **P11**                      **L49**                      # **61**  
 Wienckowski, Natalie                                      General Motors  
**Comment Type**    **E**                      **Comment Status**    **D**  
 Add additional ammendments per 802.3 WG FM template version 4.5.  
**SuggestedRemedy**  
 Add: IEEE Std 802.3cn™-2019  
 Amendment 4—This amendment includes changes to IEEE Std 802.3-2018 and adds 50 Gb/s, 200 Gb/s, and 400 Gb/s Physical Layer specifications and management parameters for operation over single-mode fiber with reaches of at least 40 km.  
 IEEE Std 802.3cg™-2019  
 Amendment 5—This amendment includes changes to IEEE Std 802.3-2018 and its amendments and adds Clause 146 through Clause 148 and Annex 146A and Annex 146B. This amendment adds 10 Mb/s Physical Layer specifications and management parameters for operation on a single balanced pair of conductors.  
 IEEE Std 802.3cq™-2020  
 Amendment 6—This amendment includes editorial and technical corrections, refinements, and clarifications to Clause 33 and related portions of the standard.  
 IEEE Std 802.3cm™-2020  
 Amendment 7—This amendment includes changes to IEEE Std 802.3-2018 and adds Clause 150. This amendment adds Physical Layer (PHY) specifications and management parameters for 400 Gb/s operation on four pairs (400GBASE-SR4.2) and eight pairs (400GBASE-SR8) of multimode fiber, over reaches of at least 100 m.  
 IEEE Std 802.3ch™-2020  
 Amendment 8—This amendment includes changes to IEEE Std 802.3-2018 and adds Clause 149, Annex 149A, Annex 149B, and Annex 149C. This amendment adds physical layer specifications and management parameters for operation at 2.5 Gb/s, 5 Gb/s, and 10 Gb/s over a single balanced pair of conductors.  
 IEEE Std 802.3ca™-2020  
 Amendment 9—This amendment to IEEE Std 802.3-2018 extends the operation of Ethernet passive optical networks (EPONs) to multiple channels of 25 Gb/s providing both symmetric and asymmetric operation for the following data rates (downstream/upstream): 25/10 Gb/s, 25/25 Gb/s, 50/10 Gb/s, 50/25 Gb/s, and 50/50 Gb/s. This amendment specifies the 25 Gb/s EPON Multi-Channel Reconciliation Sublayer (MCRS), Nx25G-EPON Physical Coding Sublayers (PCSs), Physical Media Attachment (PMA) sublayers, and Physical Medium Dependent (PMD) sublayers that support both symmetric and asymmetric data rates while maintaining backward compatibility with already deployed 10 Gb/s EPON equipment. The EPON operation is defined for distances of at least 20 km, and for a split ratio of at least 1:32.  
 IEEE Std 802.3cr™-2021  
 Amendment 10—This amendment includes changes to IEEE Std 802.3-2018 and adds Annex J. This amendment replaces references to the IEC 60950 series of standards (including IEC 60950-1 "Information technology equipment—Safety—Part 1: General requirements") with appropriate references to the IEC 62368 "Audio/video, information and

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

communication technology equipment" series and makes appropriate changes to the standard corresponding to the new references.

IEEE Std 802.3cu™-2021

Amendment 11—This amendment includes changes to IEEE Std 802.3-2018 and adds Clause 151. This amendment adds Physical Layer (PHY) specifications and management parameters for 100 Gb/s and 400 Gb/s operation over single-mode fiber, based on 100 Gb/s per wavelength optical signaling.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **FM** SC **FM** P11 L49 # 14

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

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

Insert updated abstracts of published amendments

SuggestedRemedy

Update abstracts with current frontmatter template

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #61

Cl **FM** SC **FM** P11 L50 # 62

Wienckowski, Natalie General Motors

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

Add description of this amendment.

SuggestedRemedy

Change: IEEE Std 802.3xx™-20xx

This amendment includes [complete]

To: IEEE Std 802.3cs™-202x

This amendment to IEEE Std 802.3-2018 specifies physical layers and management parameters for increased-reach point-to-multipoint Ethernet optical subscriber access (Super-PON).

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **FM** SC **FM** P11 L50 # 42

Grow, Robert RMG Consulting

Comment Type **ER** Comment Status **D**

Outdated front matter Introduction.

SuggestedRemedy

Include amendment descriptions for amendments 4 through 11 as published in amendment 11, IEEE Std 802.3cv-20xx as in P802.3cv/D3.1, IEEE Std 802.3ct-20xx as in P802.3ct/D3.3, IEEE Std 802.3cp/D3.1, and write a description for IEEE Std 802.3cs-20xx.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comments #61 and #62

Cl **FM** SC **FM** P11 L51 # 29

Marris, Arthur Cadence Design Systems

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

There is noo decription of IEEE Std 802.3cs™-20xx

SuggestedRemedy

Please add a brief description of this amendment

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #62

Cl **00** SC **0** P L # 68

Wienckowski, Natalie General Motors

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

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. There are also rows with elipses in each cell of a row where the cells need to be merged.

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.

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 00 SC 0 P L # 73

Wienckowski, Natalie General Motors  
Comment Type E Comment Status D

SuggestedRemedy

Remove all blank pages, e.g. P34

Proposed Response Response Status W  
PROPOSED ACCEPT.

Cl 00 SC 0 P1 L # 54

Lewis, Jon Dell  
Comment Type E Comment Status D

Frame template is old and includes Pete Anslow as the 802.3 secretary and only a few amendments.

SuggestedRemedy

Update to the latest Frame template.

Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.

See comments #24, #61, and #62

Cl 00 SC 0 P96 L1 # 57

Lewis, Jon Dell  
Comment Type E Comment Status D

blank page

SuggestedRemedy

remove blank page

Proposed Response Response Status W  
PROPOSED ACCEPT.

Cl 00 SC 0 P110 L1 # 58

Lewis, Jon Dell  
Comment Type E Comment Status D

blank page

SuggestedRemedy

remove blank page

Proposed Response Response Status W  
PROPOSED ACCEPT.

Cl 1 SC 1.3 P20 L8 # 88

Huber, Tom Nokia  
Comment Type T Comment Status D

ITU-T G.698.2 has already been added as a normative reference by P802.3ct

SuggestedRemedy

Delete the text indicating that ITU-T G.698.2 should be added as a reference.

Proposed Response Response Status W  
PROPOSED ACCEPT.

Cl 1 SC 1.3 P20 L8 # 93

Anslow, Pete Independent  
Comment Type ER Comment Status D

G.698.2 is being added to 1.3 by P802.3ct, which is expected to be approved ahead of .3cs.

SuggestedRemedy

Remove the entry for G.698.2 from 1.3

Proposed Response Response Status W  
PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 1 SC 1.4 P20 L14 # 94

Anslow, Pete Independent

Comment Type E Comment Status D

The editing instructions for the items in 1.4 are missing.  
 The definition for Dispersion Compensation Module (DCM): should be 1.4.231a  
 1.4.245c was inserted by IEEE Std 802.3ca-2020, but changes from this are not shown  
 with change marks.

SuggestedRemedy

Add three editing instructions (one before each definition):  
 Insert the following new definition after 1.4.231 "differential skew":  
 Change 1.4.245c (inserted by IEEE Std 802.3ca-2020) as follows:  
 Insert the following new definition after 1.4.275 "frame loss ratio":

Renumber the definition for Dispersion Compensation Module (DCM): to 1.4.231a  
 Show the changes with respect to 1.4.245c as inserted by IEEE Std 802.3ca-2020 with  
 change marks.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 1 SC 1.4 P20 L14 # 89

Huber, Tom Nokia

Comment Type E Comment Status D

There are no editing instructions indicated in the clause. It appears that 1.4.232a and  
 1.4.275a are new terms to be inserted, and that 1.4.245c (as inserted by 802.3ca) should  
 be replaced by the new text.

SuggestedRemedy

Add editing instructions

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #94

Cl 1 SC 1.4 P20 L15 # 23

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

Comment Type E Comment Status D

Missing editing instructions

SuggestedRemedy

on line 15 add editing instruction "Change 1.4.232a and 1.4.245c, inserted by IEEE Std  
 802.3ca-2020, as follows:" Add strikeout and underlines to show the actual change from  
 the text inserted by 802.3ca-2020  
 on line 24 add editing instruction, "Insert 1.4.275a after 1.4.275 as follows:"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

1.4.232a was not inserted by 802.3ca - there was no DCM in there

See comment #94

Cl 1 SC 1.4 P20 L15 # 43

Grow, Robert RMG Consulting

Comment Type ER Comment Status D

Missing editing instruction.

SuggestedRemedy

Insert the following new definition after 1.4.232

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #94

Cl 1 SC 1.4 P20 L18 # 44

Grow, Robert RMG Consulting

Comment Type ER Comment Status D

Missing editing instruction. EQT is already defined in IEEE Std 802.3ca-2020. The  
 instruction probably should be a Change (with appropriate change marks to the base text),  
 but because there are no change marks, perhaps a Replace is intended.

SuggestedRemedy

Replace 1.4.245c (inserted by IEEE Std 802.3ca-2020) with the following:

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #94

## Proposed Responses

## IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 1 SC 1.4 P20 L24 # 46  
 Grow, Robert RMG Consulting  
 Comment Type ER Comment Status D  
 Missing editing instruction.  
 SuggestedRemedy  
 Insert the following new definition after 1.4.275  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #94

Cl 1 SC 1.4.245c P20 L19 # 45  
 Grow, Robert RMG Consulting  
 Comment Type TR Comment Status D  
 Though IEEE Std 802.3ca-2020 got published with some of the noted faults. This definition uses the unexpanded/undefined acronym/term No expansion of EQT or EQ is found anywhere in the draft, 802.3ca, (I can't find it used in P802.3cp/D3.1). EQT also does not appear to be a "unit of measurement" as it is equated to 6.4ns on an XGMII, doesn't that make it a variable?  
 SuggestedRemedy  
 I wish I had the expertise to suggest a replacement definition, but as is it certainly doesn't help me to understand the specifications in either 802.3ca or this draft.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 EQT is used in 164.2.4.1.1 (as an example).  
 See comment #94 for updates to editorial instructions

Cl 1 SC 1.5 P20 L30 # 26  
 Lusted, Kent Intel Corporation  
 Comment Type TR Comment Status D  
 The use of the abbreviation "PON" for Passive Optical Network is used 392 times in the current draft. However, the term is not listed as a abbreviation in Clause 1.5. Given the pervasive use of "PON", add it as an abbreviation.  
 SuggestedRemedy  
 Add "PON: Passive Optical Network" to Clause 1.5.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 1 SC 1.5 P20 L31 # 47  
 Grow, Robert RMG Consulting  
 Comment Type E Comment Status D  
 We do have some acronyms with numbers, so order is alphanumeric.  
 SuggestedRemedy  
 Insert the following new abbreviations into the list, in alphanumeric order:  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1 P23 L3 # 16  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type E Comment Status D  
 Header is missing space between 45.2.1 and PMA/MD  
 SuggestedRemedy  
 Add space between section number and PMA/PMD registers  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1 P23 L5 # 30  
 Marris, Arthur Cadence Design Systems  
 Comment Type E Comment Status D  
 802.3cd was published in 2018  
 SuggestedRemedy  
 Throughout the document change 802.3cd to "802.3cd-2018"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

CI 45 SC 45.2.1 P23 L5 # 66  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 cg was published in 2019  
 SuggestedRemedy  
 Change: IEEE 802.3cg-201x  
 To: IEEE 802.3cg-2019  
 And P26L21  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1 P23 L5 # 67  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 cd was published in 2019  
 SuggestedRemedy  
 Change: IEEE 802.3cd  
 To: IEEE 802.3cd-2018  
 And P26L20  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1 P23 L13 # 63  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 Why are some unchanged rows included? Why isn't there a merged row with elipses at the end of the table?  
 SuggestedRemedy  
 Delete the 2nd through 5th rows in the table shown as they aren't changed. Add a row after the last row with the cells merged and put an elipses in it.  
 Update the editorial instruction to say (unchanged rows not shown).  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #95

CI 45 SC 45.2.1 P23 L13 # 95  
 Anslow, Pete Independent  
 Comment Type E Comment Status D  
 The rows that are not changed in Table 45-3 should not be shown.  
 Cross-reference missing in the row for 1.1003  
 SuggestedRemedy  
 Remove body rows 2, 3, 4, and 5 from the table.  
 Add an ellipsis row after the existing last row.  
 Add a cross-reference to 45.2.1.134b in the Subclause column of the row for 1.1003  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1 P23 L19 # 15  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type E Comment Status D  
 Table 45-3 entry for 1.1003 is missing the subclause entry  
 SuggestedRemedy  
 Add 45.2.1.134b to subclause for 1.1003  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1 P23 L19 # 52  
 Nicholl, Shawn Xilinx  
 Comment Type TR Comment Status D  
 Table 45-3 row "1.1003" is missing an entry in the Subclause column  
 SuggestedRemedy  
 Propose to add "45.2.1.134b" in the Subclause column for the row corresponding to register address 1.1003  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

CI 45 SC 45.2.1.23a P23 L23 # 31  
 Marris, Arthur Cadence Design Systems  
 Comment Type E Comment Status D  
 Editing instruction should be "Change"  
 SuggestedRemedy  
 Change editing instruction to: "Change 45.2.1.23a as modified by IEEE Std 802.3ca-2020 as follows:"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.23a P23 L23 # 17  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type E Comment Status D  
 "Update" isn't an editing instruction - "Change" is, and 45.2.1.23a was inserted by IEEE 802.3ca; However, also, this instruction isn't changing the main clause, but the subclauses.  
 SuggestedRemedy  
 Change editing instruction to "Change 45.2.1.23a, inserted by IEEE Std 802.3ca-2020:"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #31

CI 45 SC 45.2.1.23a P23 L23 # 49  
 Grow, Robert RMG Consulting  
 Comment Type E Comment Status D  
 Incorrect editing instruction ("update" is not a defined instruction).  
 SuggestedRemedy  
 Change 45.2.1.23a (inserted by IEEE Std 802.3ca-2020) as follows:  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #31

CI 45 SC 45.2.1.23a.1 P23 L31 # 50  
 Grow, Robert RMG Consulting  
 Comment Type ER Comment Status D  
 Base text is not as published in IEEE Std 802.3ca-2020 (i.e., line 31).  
 SuggestedRemedy  
 Update with correct base text.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.23a.2 P23 L39 # 51  
 Grow, Robert RMG Consulting  
 Comment Type ER Comment Status D  
 If a change, this subclause should not reuse a subclause number in IEEE Std 802.3ca-2020.  
 SuggestedRemedy  
 Renumber to 45.2.1.23a.1a.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.23a.2 P23 L40 # 96  
 Anslow, Pete Independent  
 Comment Type ER Comment Status D  
 Clause 45 level 5 headings about bit functions always contain the bit numbers.  
 SuggestedRemedy  
 Change the heading from:  
 "Super-PON PMA/PMD transmit channel" to:  
 "Super-PON PMA/PMD transmit channel (1.29.9:6)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.



Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

CI 45 SC 45.2.1.23a.2 P23 L40 # 53  
 Nicholl, Shawn Xilinx  
 Comment Type TR Comment Status D  
 Missing the bit references in 45.2.1.23a.2 heading.  
 SuggestedRemedy  
 Propose to change "45.2.1.23a.2 Super-PON PMA/PMD transmit channel" to "45.2.1.23a.2 Super-PON PMA/PMD transmit channel (1.29.9:6)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.23a.2 P23 L42 # 18  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type TR Comment Status D  
 "The Super-PON PMA/PMD operating transmit channel (see 164.2.2) is selected using bits 9 to 6." says nothing about how the transit channel is encoded, and 164.2.2 only gives hints from Table 164-1. From these, and 45.2.1.134b.5 that this is a 4 bit number, 0 to 15.  
 SuggestedRemedy  
 Insert new second sentence (after "9 to 6."), "The Super-PON operating transmit number is a four-bit number, 0 to 15, represented by bits 9 to 6, as an unsigned integer with bit 9 the most significant bit."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.134b P25 L27 # 97  
 Anslow, Pete Independent  
 Comment Type T Comment Status D  
 In the last row of Table 45-103b, "1.1003.2:0" should be "1.1003.3:0"  
 SuggestedRemedy  
 In the last row of Table 45-103b, change "1.1003.2:0" to "1.1003.3:0"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.134b.5 P26 L11 # 65  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 Only new text that is a "change" should be underlined. The whole section is inserted.  
 SuggestedRemedy  
 Remove the underline under 164.2.2. Also on P26L16.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.231.3 P23 L40 # 64  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 It isn't clear that 45.2.1.23a.3 used to be 45.2.1.23a.2 in the IEEE Std 802.3ca-2020. The numbering used doesn't match the instructions for inserted clause numbering.  
 SuggestedRemedy  
 Change 45.2.1.23a.2 to 45.2.1.23a.2.a and Change 45.2.1.23a.3 back to 45.2.1.23a.2 as it was in ca.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.3.8.ba P28 L5 # 98  
 Anslow, Pete Independent  
 Comment Type E Comment Status D  
 IEEE Std 802.3ca-2020 has already extended the bit range for "PCS type selection" to 3.7.4:0, so this should not be shown as a change here.  
 SuggestedRemedy  
 Remove the change marks for the changes to this table already made by IEEE Std 802.3ca-2020  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.3.8.bb P28 L51 # 99  
 Anslow, Pete Independent  
 Comment Type T Comment Status D  
 "25/10GBASE-SP PCS type" should be "10/2.5GBASE-SP PCS type" (2 places)  
 SuggestedRemedy  
 Change "25/10GBASE-SP PCS type" to "10/2.5GBASE-SP PCS type" (2 places)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Cl 45 SC 45.2.3.41 P29 L17 # 69  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 There should not be empty table rows.  
 SuggestedRemedy  
 Delete one of the empty rows. Merge the cells in the other row and put an elipses in it.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 45 SC 45.2.3.41 P29 L19 # 33  
 Marris, Arthur Cadence Design Systems  
 Comment Type TR Comment Status D  
 The entries in Table45-213 are blank  
 SuggestedRemedy  
 Either delete the table body so just the changes to the table title are shown or fill the table in  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #69

Cl 45 SC 45.2.3.42 P29 L40 # 70  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 There is a row with content, so I assume there were changes, but no changes are marked.  
 SuggestedRemedy  
 Clearly mark the changes to be made with underline and strikethrough in the table rows.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 Changes are limited to the table caption

Cl 45 SC 45.2.3.43 P30 L10 # 71  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 There is a row with content, so I assume there were changes, but no changes are marked.  
 SuggestedRemedy  
 Clearly mark the changes to be made with underline and strikethrough in the table rows.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 Changes are on page 30, lines 13 and 16 and marked with underline already.

Cl 45 SC 45.2.3.44 P30 L35 # 72  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 There is a row with content, so I assume there were changes, but no changes are marked.  
 SuggestedRemedy  
 Clearly mark the changes to be made with underline and strikethrough in the table rows.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 Changes are on page 30, lines 37 and 41 and marked with underline already.

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.3.45a.12 P34 L1 # 56  
 Lewis, Jon Dell  
 Comment Type E Comment Status D  
 blank page  
 SuggestedRemedy  
 remove blank page  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 45 SC Table 45-3 P23 L13 # 48  
 Grow, Robert RMG Consulting  
 Comment Type E Comment Status D  
 Unnecessary rows included,  
 SuggestedRemedy  
 Only include the bottom two rows.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #95

Cl 56 SC 56.1 P35 L13 # 19  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type E Comment Status D  
 Figure 56-5b should be an active cross reference  
 SuggestedRemedy  
 make "Figure 56-5b" an active cross reference.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 56 SC 56.1.2 P35 L28 # 74  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 Item c) was added by ca so a reference to this is needed.  
 SuggestedRemedy  
 In the editorial instructions Add: (as modified by IEEE Std 802.3ca-2020)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #90

Cl 56 SC 56.1.2 P35 L29 # 90  
 Huber, Tom Nokia  
 Comment Type T Comment Status D  
 Since the item being added is item d), clearly EFM supports more than two systems.  
 Moreover, 802.3ca already modified this introductory sentence to add a third system.  
 SuggestedRemedy  
 Change the editing instruction to say "Change the first paragraph and lettered list in 56.1.2  
 (as modified by 802.3ca) as follows:"  
 Change the end of the sentence introducing the bullet list to align with the text in 802.3ca  
 by replacing "two systems" with "the following systems"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P38 L4 # 100  
 Anslow, Pete Independent  
 Comment Type E Comment Status D  
 In the heading row for Table 56-3, "200" should be "164"  
 SuggestedRemedy  
 In the heading row for Table 56-3, change "200" to "164"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

## Proposed Responses

## IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 56 SC 56.1.3 P38 L5 # 25  
 Ewen, John Marvell  
 Comment Type E Comment Status D  
 Incorrect clause reference in Table 56-3  
 SuggestedRemedy  
 Change "200" to "164"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 67 SC 67 P39 L6 # 20  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type E Comment Status D  
 Editing instruction should be Insert, not "Add", and unchanged rows are not shown.  
 SuggestedRemedy  
 Change editing instruction to "Insert new row at end of existing Table 67-1 as follows (unchanged rows not shown):"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 67 SC 67.2 P39 L22 # 21  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type E Comment Status D  
 Editing instruction should be Insert, not "Add" (note - I am making this comment to catch this repeated issue, and will not further comment on it unless the form of the editing instruction gets complex in the resolution).  
 SuggestedRemedy  
 Change editing instruction to "Insert" from "Add" - editor to scrub document for editing instructions which say other than "Insert", "Change", "Delete", or "Replace" as detailed on page 19, lines 35 to 43.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164 P40 L1 # 22  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
 Comment Type E Comment Status D  
 Missing editing instruction  
 SuggestedRemedy  
 add editing instruction "Insert Clause 164 and Annexes 164A, 164B, and 164C as follows:"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164.1 P40 L42 # 36  
 Gorshe, Steve Microchip Technology  
 Comment Type E Comment Status D  
 The use of "multiplexed" twice in this sentence could be confusing, especially since this paragraph is talking about the downstream direction, ("getting to the ODN fiber").  
 SuggestedRemedy  
 It may be cleaner/clearer to say "are multiplexed, amplified and finally multiplexed combined with the upstream wavelengths..."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164.1 P41 L3 # 91  
 Huber, Tom Nokia  
 Comment Type E Comment Status D  
 The wording with "from... to ... going through ..." is a bit awkward.  
 SuggestedRemedy  
 Change "... a variety of implementations are possible for ONUs, from ONUs supporting a single channel, to fully tunable ONUs able to support all channels, going through partially tunable ONUs able to support a contiguous subset of the defined channels."  
 to  
 "... a variety of implementations are possible for ONUs, including ONUs that support a single channel, fully tunable ONUs able to support all channels, and partially tunable ONUs that support a contiguous subset of the defined channels."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

## Proposed Responses

## IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 164 SC 164.2.2 P41 L35 # 75

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

Tables can't have empty cells.

## SuggestedRemedy

In all blank table cells put an Em dash.  
Also P50L8

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 164 SC 164.2.2 P41 L39 # 27

Lusted, Kent Intel Corporation

Comment Type TR Comment Status D

The table 164-1 Super-PON PMD naming convention has a note (b) associated with parameter "g", the PMD FSR set. The table says that the allowed values are [1,2] while the note says "This amendment defines the use of FSR set 1. FSR set 2 is reserved for a future amendment". And table Table 164-4 on page 47, line 6 has values for FSR set 2. Therefore, the note (b) contradicts the document.

## SuggestedRemedy

Either update the note (b) for Table 164-1 or remove the FSR set 2 content from the document.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Remove footnote b)

Cl 164 SC 164.2.4.2 P44 L45 # 92

Huber, Tom Nokia

Comment Type T Comment Status D

The term 'black link approach' was defined in P802.3ct; the applicability of the definition to P802.3cs should be considered. The existing definition (from 802.3ct) assumes each direction of transmission has its own TP2 and TP3, whereas in this clause downstream uses TP2/TP3 while upstream uses TP6/TP7. The existing definition also references the term 'DWDM channel', which also only refers to TP2/TP3.

## SuggestedRemedy

Modify the definitions of "black link approach" and "DWDM channel" to include TP6 and TP7 also:

Insert a new editing instruction to update 1.4.160a, as inserted by P802.3ct, to read:

1.4.160a black link approach: The specification of the input, output, and transfer characteristics of the unidirectional transmission path from TP2 to TP3 or from TP6 to TP7 for a given DWDM channel within a DWDM black link, without specifying how the transmission path is implemented. (See, for example, IEEE Std 802.3, Clause 154, Figure 154-3)

Insert a new editing instruction to update 1.4.237b to read as follows:

1.4.237b DWDM channel: DWDM channel: The transmission path from a transmitting DWDM PHY (TP2 or TP6) to a receiving DWDM PHY (TP3 or TP7).

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 164 SC 164.2.4.2 P44 L45 # 35

Gorshe, Steve Microchip Technology

Comment Type ER Comment Status D

The term "black link" is used in several places in the draft. It is nominally introduced in section 164.2.4.2 (pp. 44, line 45), but not defined. This is an ITU-T term and its meaning may not be familiar to readers of IEEE 802.3.

## SuggestedRemedy

It would be a good idea to explain the concept here, including that "black link" comes conceptually from "black box." The ITU-T definition can be found in clause 5.1 of ITU-T Recommendation G.698.1 or G.698.2, and an appropriate paraphrase of that definition should be added here.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #92

## Proposed Responses

## IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 164 SC 164.2.9.3 P51 L40 # 28

Lusted, Kent Intel Corporation

Comment Type TR Comment Status D

The text specifies that the center wavelength measurement is with "appropriate PRBS or a valid Super-PON signal, or another representative test pattern". Yet, there is no point to which PRBS patterns are appropriate nor what constitutes a representative test pattern. This makes it difficult if not impossible to correlate test results among different suppliers because the term "appropriate" and "representative" is subjective.

## SuggestedRemedy

Explicitly state which PRBS patterns or other test patterns may be used for the measurement.

Proposed Response Response Status W

PROPOSED REJECT.

No specific proposal included. Discussion at TF level needed.

Cl 164 SC 164.2.9.12.1 P53 L8 # 76

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

subject/verb agreement

## SuggestedRemedy

Change: The data transmitted may be any valid 256B/257B symbols.  
To: The data transmitted may be any valid 256B/257B symbol.  
Also on P54L32

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 164 SC 164.2.9.12.1 P53 L38 # 77

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

typo - that should be than

## SuggestedRemedy

Change: is considerably shorter than the Ton value under measurement.  
To: is considerably shorter than the Ton value under measurement.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 164 SC 164.2.9.12.2 P53 L41 # 78

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

This is not a complete sentence. I provided a suggestion, but I don't know if this is the goal of adjusting the delay or not.

## SuggestedRemedy

Change: The delay to the scope trigger is adjusted until the point that the received signal meets all its specified conditions.

To: The delay to the scope trigger is adjusted until the point that the received signal meets all its specified conditions is located at zero.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 164 SC 164.2.9.12.2 P53 L44 # 79

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

I'm not sure what it means to "reassure conformance".

## SuggestedRemedy

Change: reassuring conformance 15% of the steady state values.

To: measuring conformance from 15% of the steady state values.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 164 SC 164.2.9.12.2 P53 L45 # 80

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

strange use of the word conformed

## SuggestedRemedy

Change: Notice that only the steady state optical OFF power must be conformed when measuring

To: Notice that only the steady state optical OFF power must be verified when measuring

Proposed Response Response Status W

PROPOSED ACCEPT.

Proposed Responses

IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

CI 164 SC 164.2.9.13.1 P54 L28 # 81

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

Extraneous words that may cause confusion. A moment is 90 seconds long.

SuggestedRemedy

Change: rx\_settling is defined to be the time between the moment when the optical power at TP7 (as in Figure 164-6) reaches the conditions specified in 164.2.9.12.1 for Ton and the moment after which the electrical

Change: rx\_settling is defined to be the time between when the optical power at TP7 (as in Figure 164-6) reaches the conditions specified in 164.2.9.12.1 for Ton and when the electrical

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 164 SC 164.2.9.13.2 P55 L36 # 82

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

Noun/pronoun agreement - parameters are plural and its is singular

SuggestedRemedy

Change: parameters of the reference transmitter, at TP6 and therefore at TP7, reach within 15% of its steady state  
 To: parameters of the reference transmitter, at TP6 and therefore at TP7, reach within 15% of their steady state

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 164 SC 164.2.9.13.2 P55 L43 # 83

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

Incorrect use of "especially"

SuggestedRemedy

Change: Especially the Trx\_settling time must be met  
 To: Specifically, the Trx\_settling time must be met

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 164 SC 164.2.9.13.2 P55 L50 # 84

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

SuggestedRemedy

Change "assuring" to "verifying"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 164 SC 164.2.9.21 P56 L35 # 85

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

Incorrect article

SuggestedRemedy

Change: A ONU  
 To : An ONU

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 164 SC 164.2.9.22 P56 L43 # 86

Wienckowski, Natalie General Motors

Comment Type E Comment Status D

Not a complete sentence. Seems to be a definition of the title.

SuggestedRemedy

Change: Maximum difference in optical insertion loss between all channels over upstream wavelengths.  
 To: The maximum power excursion is the maximum difference in optical insertion loss between all channels over upstream wavelengths.

Proposed Response Response Status W

PROPOSED ACCEPT.

## Proposed Responses

## IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

Cl 164 SC 164.2.9.23 P56 L47 # 87  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 Not a complete sentence. Seems to be a definition of the title.  
 SuggestedRemedy  
 Change: Maximum allowed change in gain/loss of the ODN in the upstream direction  
 To: The burst-mode gain excursion is the maximum allowed change in gain/loss of the ODN in the upstream direction  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164.2.12.9 P62 L # 37  
 Gorshe, Steve Microchip Technology  
 Comment Type E Comment Status D  
 Is there any intention of filling in the "Value/Comment" column?  
 SuggestedRemedy  
 Following the links to the subclauses seems to indicate that this information could be added to several of the rows.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 There were no plans to copy text from the clause into PICS.

Cl 164 SC 164.3.5 P70 L1 # 55  
 Lewis, Jon Dell  
 Comment Type E Comment Status D  
 Title for PICS has incorrect reference  
 SuggestedRemedy  
 replace "r 200A.1" with "164.3"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164.3.5 P70 L1 # 101  
 Anslow, Pete Independent  
 Comment Type E Comment Status D  
 In the heading for 164.3.5, "200A.1" should be a cross reference to "164.3"  
 SuggestedRemedy  
 In the heading for 164.3.5, change "200A.1" to a cross reference to "164.3"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164.4.5.2 P79 L1 # 106  
 DeSanti, Claudio Dell Technologies  
 Comment Type E Comment Status D  
 Heading: change it from "Generic RS" to "Generic MCRS"  
 SuggestedRemedy  
 as suggested  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164.5.3.6.3 P83 L43 # 102  
 DeSanti, Claudio Dell Technologies  
 Comment Type E Comment Status D  
 Incorrect table number  
 SuggestedRemedy  
 it should be table 164-11  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 164 SC 164.5.3.6.6 P84 L37 # 103  
 DeSanti, Claudio Dell Technologies  
 Comment Type E Comment Status D  
 Incorrect table number  
 SuggestedRemedy  
 it should be table 164-12  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.



## Proposed Responses

## IEEE P802.3cs D2.0 SuperPON Task Force Initial Working Group ballot comments

*Cl* 164    *SC* 164.5.3.9.1    *P*88    *L*15    # 104  
 DeSanti, Claudio    Dell Technologies  
*Comment Type*    **E**    *Comment Status*    **D**  
 Incorrect table number  
*SuggestedRemedy*  
 it should be table 164-13  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* 164    *SC* 164.5.3.9.2    *P*89    *L*4    # 105  
 DeSanti, Claudio    Dell Technologies  
*Comment Type*    **E**    *Comment Status*    **D**  
 Incorrect table number  
*SuggestedRemedy*  
 it should be table 164-14  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* many    *SC* many    *P*many    *L*    # 34  
 Gorshe, Steve    Microchip Technology  
*Comment Type*    **E**    *Comment Status*    **D**  
 While "Super-PON" is a great name for the project and Task Force, is it the best name to use in the 802.3 text? Using this term may causes problems with future higher PON extensions. For example, is the next higher capacity enhancement to be called something like "Super-Duper-PON"?  
*SuggestedRemedy*  
 Perhaps, per the definition used in the draft, it would be better to refer it to as something like "AWDM-PON" for amplified WDM PON.  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* Table    *SC* Table 45–26a    *P*24    *L*11    # 32  
 Marris, Arthur    Cadence Design Systems  
*Comment Type*    **T**    *Comment Status*    **D**  
 Should leave bits 6 and 7 reserved in case more PMA/PMDs are specified in the future  
*SuggestedRemedy*  
 Change "1.29.9:6" to "1.29.11:8"  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.