

IEEE P802.3bz D1.0 2.5/5GBASE-T 1st Task Force review comments

CI 45 SC 45.2.1.4 P 33 L 28 # 142  
 Jones, Peter Cisco

Comment Type T Comment Status D EZ

Looking at 45.2.1.4 PMA/PMD speed ability (Register 1.4) Table 45-6—PMA/PMD speed ability register bit definitions as amended by 802.3bx, it looks like each new speed needs a subclause, e.g.

45.2.1.4.1 100G capable (1.4.9)  
 When read as a one, bit 1.4.9 indicates that the PMA/PMD is able to operate at a data rate of 100 Gb/s.  
 When read as a zero, bit 1.4.9 indicates that the PMA/PMD is not able to operate at a data rate of 100 Gb/s.

SuggestedRemedy

Add 45.2.1.4.x clauses that read like  
 45.2.1.4.n 2.5G capable (1.4.13)  
 When read as a one, bit 1.4.13 indicates that the PMA/PMD is able to operate at a data rate of 2.5 Gb/s.  
 When read as a zero, bit 1.4.13 indicates that the PMA/PMD is not able to operate at a data rate of 2.5 Gb/s.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
 (see 174)

CI 45 SC 45.2.1.10 P 36 L 13 # 150  
 Lo, William Marvell Semiconductor

Comment Type TR Comment Status D EZ

Need to add text to the new 1.11.14 bit

SuggestedRemedy

45.2.1.10.1a 2.5G/5G extended abilities (1.11.14)  
 When read as a one, bit 1.11.14 indicates that the PMA/PMD has 2.5G/5G extended abilities listed in register 1.21. When read as a zero, bit 1.11.14 indicates that the PMA/PMD does not have 2.5G/5G extended abilities.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 45 SC 45.2.7.10.4d P 49 L 41 # 153  
 Lo, William Marvell Semiconductor

Comment Type TR Comment Status D EZ

The link to 113.4.2.5.10 is incorrect  
 The same problem also occurs in line 48

SuggestedRemedy

The link should be change to to 126.4.2.5.10 in both instances

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 45 SC 45.2.7.11.7d P 51 L 24 # 154  
 Lo, William Marvell Semiconductor

Comment Type T Comment Status D EZ

Add a clarifying sentence since fast retrain ability is not advertised during auto-neg.  
 Also applies to 45.2.7.11.7e

SuggestedRemedy

Add following to both places at end of both paragraphs.

This bit is valid only after link is established.

Proposed Response Response Status W

PROPOSED ACCEPT.  
 BQ

CI 45 SC 45.2.7.14a P 53 L 5 # 155  
 Lo, William Marvell Semiconductor

Comment Type TR Comment Status D EZ

The paragraph in line 5 to 7 should be deleted for 2 reasons

- 1) It should not be 2.5G and 5G specific since bits 2 to 15 can be used for EEE abilities for other PHYs in the future.
- 2) EEE ability in 2.5G and 5GBASE=T are exchanged during training and not with next pages.

SuggestedRemedy

Delete paragraph in line 5 to 7 and replace with the following:

EEE advertisement 2 register is a continuation of EEE advertisement 1 register.

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 78 SC 78.3 P 63 L # 161  
 Lo, William Marvell Semiconductor

Comment Type TR Comment Status D EZ

P8023\_D3p2\_SECTION6.pdf page 40 line starting in line 26 makes a blanket statement about EEE capabilities being exchanged during Auto-Negotiation. This is not true for 2.5/5/40GBASE-T

The suggested remedy does not include the 40GBASE-T text.

*SuggestedRemedy*

Change line 26 from  
 The EEE capability shall be advertised....  
 to  
 With the exception of 2.5GBASE-T and 5GBASE-T the EEE capability shall be advertised....

Add to the end of the first paragraph:  
 The EEE capability for 2.5GBASE-T and 5GBASE-T shall be advertised during link training according to clause 126.4.2.5.10.

Add to the end of the second paragraph:  
 The same applies to 2.5GBASE-T and 5GBASE-T except the EEE capabilities are exchanged and resolved during link training instead of during Auto-Negotiation.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
 Include 40GBASE-T text as well  
 BQ

Cl 125 SC 125.2.1 P 67 L 48 # 162  
 Lo, William Marvell Semiconductor

Comment Type ER Comment Status D EZ

Reference to clause 44 is incorrect

*SuggestedRemedy*

Change Clause 44 to Clause 46

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 126 SC 126.3.2.2.16 P 95 L 33 # 165  
 Lo, William Marvell Semiconductor

Comment Type TR Comment Status D EZ

Cut and paste error from 802.bq. Does not apply to 802.3bz  
 There is no transcoding step aggregating 3208 bits.

*SuggestedRemedy*

Change:  
 frame tx\_aggregated<3207:0> is scrambled to tx\_scrambled<3207:0> with  
 to  
 frame is scrambled to with

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
 See comment 179

Cl 126 SC 126.3.5.3 P 105 L 33 # 166  
 Lo, William Marvell Semiconductor

Comment Type T Comment Status D EZ

Need to zero out info field

*SuggestedRemedy*

Change:  
 as is shown in Figure 126–11  
 to:  
 as is shown in Figure 126–11 with the exception that the InfoField consists of a sequence of 128 zeros.

Proposed Response Response Status W

PROPOSED ACCEPT.  
 (track resolution of same comment in 802.3bq)

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CI 45 SC 45.1 P 31 L # 172  
 Lo, William Marvell Semiconductor  
 Comment Type T Comment Status D EZ  
 802.3-2012\_SECTION4.pdf page 43 or  
 P8023\_D3p2\_SECTION4.pdf page 44 line 16  
 Need to change  
 Implementations that operate at speeds of 10 Gb/s and above.  
 to  
 Implementations that operate at speeds of 2.5 Gb/s and above.  
 SuggestedRemedy  
 See above  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.4.1a P 33 L 39 # 174  
 Lo, William Marvell Semiconductor  
 Comment Type TR Comment Status D EZ  
 Need to add text to the new 1.4.14 and 1.4.13 bits  
 SuggestedRemedy  
 45.2.1.4.1a 5G capable (1.4.14)  
 When read as a one, bit 1.4.14 indicates that the PMA/PMD is able to operate at a data rate of 5 Gb/s. When read as a zero, bit 1.4.14 indicates that the PMA/PMD is not able to operate at a data rate of 5 Gb/s.  
 45.2.1.4.1b 2.5G capable (1.4.13)  
 When read as a one, bit 1.4.13 indicates that the PMA/PMD is able to operate at a data rate of 2.5 Gb/s. When read as a zero, bit 1.4.13 indicates that the PMA/PMD is not able to operate at a data rate of 2.5 Gb/s.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.1.3 P 73 L 17 # 175  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 the boxes indicating EEE are supposed to be dashed lines, this also applies to Figure 126-4 on page 79  
 SuggestedRemedy  
 change boxes to dashed lines  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 (beat on frame)

CI 126 SC 126.1.3.2 P 75 L 8 # 176  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 "The latter occurs when either one or both of the PHYs that share a link segment are not operating reliably."  
 This sentence is not entirely accurate and was incorrectly carried forward from Clause 40 into Clause 55.  
 SuggestedRemedy  
 delete the sentence  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Recommend commenter file maintenance request on clause 55 as well  
 BQ

CI 126 SC 126.3.2.2.15 P 95 L 28 # 178  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 there is no transcoder  
 SuggestedRemedy  
 delete "transcoder/"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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CI 126 SC 126.3.2.2.16 P 95 L 33 # 179  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 There is no transcoder, so this text was incorrectly carried over from 802.3bq.  
 SuggestedRemedy  
 replace "The payload of the PCS PHY frame tx\_aggregated<3207:0> is scrambled to tx\_scrambled<3207:0> with a self-synchronizing scrambler."  
 with "The payload of the PCS PHY frame is scrambled with a self-synchronizing scrambler."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.3.4.1 P 102 L 9 # 180  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 Figure 126-11 is missing these symbols: n, Sa\_n, Sb\_n, Sc\_n, Sd\_n, TA\_n, TB\_n, TC\_n, TD\_n  
 refer to Figure 55-13 for comparison  
 SuggestedRemedy  
 add these symbols back in the figure  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Also missing in 802.3bq (both clause 55 and 113)  
 BQ

CI 126 SC 126.3.6.2.2 P 108 L 31 # 181  
 McClellan, Brett Marvell  
 Comment Type E Comment Status D EZ  
 fr\_sigtype and definition has extra indentation  
 SuggestedRemedy  
 change to match indendation of the other variables.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.3.6.4 P 118 L 33 # 183  
 McClellan, Brett Marvell  
 Comment Type E Comment Status D EZ  
 Figure 126-18 has several line breaks with hyphens in the middle of variables and may confuse the reader. The line breaks do not occur in Figure 55-20.  
 SuggestedRemedy  
 eliminate the line breaks.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.4.2.5.10 P 128 L 34 # 184  
 McClellan, Brett Marvell  
 Comment Type E Comment Status D EZ  
 missing space  
 SuggestedRemedy  
 change "PMA\_Coeff\_Exchstate" to "PMA\_Coeff\_Exch state"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.4.2.5.11 P 128 L 46 # 185  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 text uses ~= to indicate 'not equal to'. Is this defined in 802.3?  
 SuggestedRemedy  
 change '~=' to 'not equal to'  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change to '~=' to 'is not equal to'  
 BQ

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CI 46 SC 46.1 P 59 L 11 # 186  
 McClellan, Brett Marvell  
 Comment Type E Comment Status D EZ  
 missing space  
 SuggestedRemedy  
 change "to10 Gb/s" to "to 10 Gb/s"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.7 P 160 L 5 # 190  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 effective data rate per lane is 625 Mb/s for 2.5GBASE-T and 1250 for 5GBASE-T  
 SuggestedRemedy  
 change "626" to "625" and "1626" to "1250"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 46 SC 46.1.3 P 59 L 30 # 187  
 McClellan, Brett Marvell  
 Comment Type E Comment Status D EZ  
 inconsisten use of comma with 'and'  
 SuggestedRemedy  
 change "10 Gb/s, 5 Gb/s and 2.5 Gb/s"  
 to "10 Gb/s, 5 Gb/s, and 2.5 Gb/s"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Editor to check and align with IEEE style guide (use comma)

CI 126 SC 126.7.2 P 160 L 1 # 191  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 missing 5GBASE-T  
 SuggestedRemedy  
 change "Table 126-19 lists the supported cabling types and distances."  
 to "Table 126-19 lists the 5GBASE-T supported cabling types and distances."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.6.2 P 159 L 36 # 189  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 Register 7.33 is not called the "2.5GBASE-T status register or the 5GBASE-T status register"  
 SuggestedRemedy  
 change "2.5GBASE-T status register or the 5GBASE-T status register" to "MultiGBASE-T AN status register"  
 also applies to line 43  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 28D SC 28D.9 P 189 L 20 # 193  
 McClellan, Brett Marvell  
 Comment Type T Comment Status D EZ  
 parameters are also exchanged during link training in the Infocfield.  
 SuggestedRemedy  
 add "and information provided by theexchange of Infocfields during link training."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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Cl 113A SC 113A.2 P 191 L 27 # 194  
Moffitt, Bryan CommScope

Comment Type E Comment Status D EZ  
Clarity that the Annex 40B clamp can be used with Annex 113 instructions

SuggestedRemedy

change  
"(Note – The larger inner diameter clamp is described here; see Annex 40B for the description of an alternate clamp for use with smaller diameter cable types)."  
to  
(Note – A larger inner diameter clamp is described here; see Annex 40B for the description of an alternate clamp to be used with this methodology on smaller diameter cable types).

Proposed Response Response Status W  
PROPOSED ACCEPT.  
BQ

Cl 113A SC 113A.2 P 193 L 43 # 195  
Moffitt, Bryan CommScope

Comment Type E Comment Status D EZ  
This is not shown in the figure

SuggestedRemedy

replace:  
"As shown in Figure 113A–2 the inner conductor on the bottom half of the clamp extends slightly (~0.1mm)above the dielectric to ensure there is good electrical connection"  
With:  
"The inner conductor on the bottom half of the clamp extends slightly (~0.1mm) above the dielectric to ensure there is good electrical connection"

Proposed Response Response Status W  
PROPOSED ACCEPT.  
BQ

Cl 113A SC 113A.3 P 195 L 3 # 203  
Moffitt, Bryan CommScope

Comment Type E Comment Status D EZ  
Item j) refers to nothing and appears to be an editing mistake

SuggestedRemedy

delete j)

Proposed Response Response Status W  
PROPOSED ACCEPT.  
BQ

Cl 113A SC 113A.3 P 195 L 24 # 204  
Moffitt, Bryan CommScope

Comment Type E Comment Status D EZ  
redundant with page 194 line 54

SuggestedRemedy

delete:  
The signal generator shall be capable of providing a sine wave signal of 1 MHz to 2000 MHz.

Proposed Response Response Status W  
PROPOSED ACCEPT.  
BQ

Cl 126 SC 126.3 P 87 L 18 # 218  
Zimmerman, George CME Consulting

Comment Type E Comment Status D EZ  
Minor clean up on figures brought from 10GBASE-T. See 802.3bq D2p2 ballot comments 157-163 by Stephen Trowbridge. (BQ)

SuggestedRemedy

Clean up figures aligned with BQ resolution of comments

Proposed Response Response Status W  
PROPOSED ACCEPT.

Cl 126 SC 126.3.2.2.21 P 98 L 28 # 223  
Zimmerman, George CME Consulting

Comment Type E Comment Status D EZ  
"a analogous manner" should be "an analogous manner" (802.3bq d2p2 comment 220 from Alon Regev)

SuggestedRemedy

change "a analogous manner" to "an analogous manner" (align with bq)

Proposed Response Response Status W  
PROPOSED ACCEPT.

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CI 126 SC P 108 L 45 # 224  
 Zimmerman, George CME Consulting  
 Comment Type E Comment Status D EZ  
 it's should be its (802.3bq d2p2 comment 221 from Alon Regev)  
 SuggestedRemedy  
 see comment, align with bq  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.2.4.5.15 P 131 L 40 # 225  
 Zimmerman, George CME Consulting  
 Comment Type T Comment Status D EZ  
 rem\_rcvr status (line break) should be rem\_rcvr\_status (802.3bq d2p2 comment 227 from Alon Regev)  
 SuggestedRemedy  
 change rem\_rcvr status to rem\_rcvr\_status (align with BQ)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.3.6.2.2 P 108 L 16 # 226  
 Zimmerman, George CME Consulting  
 Comment Type T Comment Status D EZ  
 "!tx\_refresh\_active" should be "!tx\_refresh\_active" (802.3bq d2p2 comment 226)  
 SuggestedRemedy  
 change to !tx\_refresh\_active (remove space between tx and underscore)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 126 SC 126.4.6.3 P 144 L 20 # 227  
 Zimmerman, George CME Consulting  
 Comment Type T Comment Status D EZ  
 maxwait\_time\_done should be maxwait\_timer\_done (802.3bq d2p2 comment 228 by Alon Regev)  
 start\_link\_fail\_sig\_timer should be start link\_fail\_sig\_timer (126.4.6.5) (bq comment 229)  
 PMA\_CONFIG.indicate should be PMA\_CONFIG.indication (2 instances) (bq comment 230)  
 SuggestedRemedy  
 see comment, align with bq resolutions  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 30 SC 30.3.2.1.2 P 25 L 12 # 231  
 Zimmerman, George CME Consulting  
 Comment Type T Comment Status D EZ  
 Remove unchanged legacy text and reformat clause 30 edits per 802.3bq ballot comment 164 from David Law  
 SuggestedRemedy  
 See 802.3bq D2p2 response to comment 164  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 30 SC 30.3.2.1.2 P 25 L 9 # 233  
 Zimmerman, George CME Consulting  
 Comment Type E Comment Status D EZ  
 The editing instruction should appear under the subclause heading of the subclause they apply to, not above (see pdf page 57 and 58 of 2014 IEEE-SA Standards Style Manual). This seems to have been followed throughout the draft, except in the case of the Clause 30 changes and some Clause 45 chnages. (802.3bq D2p2 comment 168 by David Law)  
 SuggestedRemedy  
 Ensure editing instruction are under the subclause heading of the subclause they apply to.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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Cl 30 SC 30.2.1 P 25 L 10 # 234  
 Zimmerman, George CME Consulting

Comment Type T Comment Status D EZ

Rather than just listing a cross-reference to the subclause where the register can be found to support this attribute, suggest that the behaviour be updated to follow the more usual format (see subclause 30.5.1.1.22 'aSNROpMarginChnID' for an example). (802.3bq d2p2 comment 169 by David Law)

*SuggestedRemedy*

Editor to review clause 30 editing instructions for format and change as appropriate. (align with BQ)

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 45 SC 45.2.1.6 P 33 L 54 # 235  
 Zimmerman, George CME Consulting

Comment Type E Comment Status D EZ

note for Table 45-7 needs to stay with table.

*SuggestedRemedy*

change frame properties to keep table and note together on same page.

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 45 SC 45.2.1 P 32 L 2 # 236  
 Zimmerman, George CME Consulting

Comment Type E Comment Status D EZ

in editorial instructions, "through" is misspelled as "though" (802.3bq d2p2 comment 219 by Alon Regev)

*SuggestedRemedy*

Change "1.145 though 1.146" to "1.145 through 1.146" (align with bq)

Proposed Response Response Status W

PROPOSED ACCEPT.