

CI **FM** SC **FM** P1 L29 # R1-6

Wienckowski, Natalie

General Motors Company

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

IEEE Std 802.3cm was approved by the IEEE-SA Standards Board on 30 JAN 2020.

*SuggestedRemedy*

Change 802.3cm-20xx to 802.3cm-2020. Also make this change on P13 L13.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested is a non-substantive change that improves the clarity of the draft.

Implement the Proposed Change.

CI **FM** SC **FM** P1 L29 # R1-5

Wienckowski, Natalie

General Motors Company

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

IEEE Std 802.3cq was approved by the IEEE-SA Standards Board on 30 JAN 2020.

*SuggestedRemedy*

Change 802.3cq-20xx to 802.3cq-2020. Also make this change on P13 L8.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested is a non-substantive change that improves the clarity of the draft.

Implement the Proposed Change.

CI **0** SC **0** P L # R1-7

Berger, Catherine

Editorial Coordination

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

This draft meets all editorial requirements.

*SuggestedRemedy*

Proposed Response Response Status **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI **45** SC **45.2.1.193.5** P39 L39 # R1-9

Tu, Mike

Broadcom

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

The PHY Capability Bits (including PrecodingSel and interleave request bits) are specified in 149.4.2.4.5.

*SuggestedRemedy*

Make changes to the following: 1. Page 39, 45.2.1.193.5, line 39, from "(see 149.4.2.4.4)" to "(see 149.4.2.4.5)". 2. Page 40, 45.2.1.194.1, line 51, from "149.4.2.4.4" to "149.4.2.4.5". 3. Page 41, 45.2.1.194.2, line 8, from "149.4.2.4.4" to "149.4.2.4.5". 4. Page 41, 45.2.1.194.4, line 19, from "149.4.2.4.4" to "149.4.2.4.5". 5. Page 41, 45.2.1.195.1, line 47, from "149.4.2.4.1" to "149.4.2.4.5".

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested corrects an error in the draft.

Implement the Proposed Change.

CI **45** SC **45.2.1.194.5** P41 L27 # R1-3

Wienckowski, Natalie

General Motors Company

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

Correct the implementation of comment i-56 to add text to 45.2.1.195.1.

*SuggestedRemedy*

Remove the text accidentally added to 45.2.1.194.5. Add a new paragraph to 45.2.1.195.1 stating, "The values of L = 2 and L = 4 are not defined for 2.5GBASE-T1 PHYs, and the value of L = 4 is not defined for 5GBASE-T1 PHYs. Bits 1.2312.12:11 will indicate whatever value is received from the link partner, but if the undefined values are received, the requested interleaver depth is out of scope of this standard and may not be supported by the local PHY."

Proposed Response Response Status **W**

PROPOSED ACCEPT.

CI 45 SC 45.2.1.194.5 P41 L27 # R1-10

Tu, Mike Broadcom

Comment Type E Comment Status D late

This paragraph belongs to 45.2.1.195.1.

*SuggestedRemedy*

Move this paragraph (line 27 to 30) to line 48 of the same page.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement the solution to R1-3, copied below.

Remove the text accidentally added to 45.2.1.194.5. Add a new paragraph to 45.2.1.195.1 stating, "The values of L = 2 and L = 4 are not defined for 2.5GBASE-T1 PHYs, and the value of L = 4 is not defined for 5GBASE-T1 PHYs. Bits 1.2312.12:11 will indicate whatever value is received from the link partner, but if the undefined values are received, the requested interleaver depth is out of scope of this standard and may not be supported by the local PHY."

CI 45 SC 45.2.1.195 P42 L8 # R1-4

Wienckowski, Natalie General Motors Company

Comment Type T Comment Status D registers

Comment i-56 mentioned that "Reserved" should be changed to "undefined" in Table 45-155d but the "Proposed Change" neglected to include this.

*SuggestedRemedy*

Change "Reserved" to "undefined" for the values 01 and 10 in the description of bits 1.2312.12:11 in Table 45-155d.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 45 SC 45.2.1.196.3 P43 L49 # R1-11

Tu, Mike Broadcom

Comment Type T Comment Status D late

"During normal operation, bit 1.2313.11 is set to zero, and the precoder is set according to the value of PrecoderSel received from the link partner, and bits 1.2313.10:9 are ignored." Is this a requirement to set bit 1.2313.11 to 0 in normal operation? However, the description in 45.2.1.196.2 implies 1.2313.11 may be set to either 0 or 1, even in normal operations. From previous discussions with George, I recall the intention was to allow bit 1.2313.11=1 even in normal operation in order to test the PHY transmitter.

*SuggestedRemedy*

Delete the last two sentences in this paragraph, from line 47 to line 50. "For testing purposes, the precoder ..... , and bits 1.2313.10:9 are ignored."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested improves reader understanding of the draft. 45.2.1.196.3, P43 L39: Delete: "During normal operation, bit 1.2313.11 is set to zero, and the precoder is set according to the value of PrecoderSel received from the link partner, and bits 1.2313.10:9 are ignored."

CI 45 SC 45.2.1.196.4 P44 L6 # R1-12

Tu, Mike Broadcom

Comment Type T Comment Status D late

Test mode 2 is described in 149.5.2.3.1 and 149.5.2.3.2.

*SuggestedRemedy*

Change "149.5.2.3" to "149.5.2.3.1 and 149.5.2.3.2".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested corrects an error in the draft.

Implement the Proposed Change.

CI 149 SC 149.3.2.2.22 P109 L22 # R1-13

Zimmerman, George ADI, APL Group, Aquantia, BMW, Cisco, CommScop  
 Comment Type T Comment Status D late

"Following this event, the PMA transmits the sleep signal starting at the beginning of the next superframe to indicate to the link partner that it is transitioning to the LPI transmit mode." - the transmission isn't necessarily aligned to the next superframe.

*SuggestedRemedy*

delete "starting at the beginning of the next superframe"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested improves reader understanding of the draft.

Change: Following this event, the PMA transmits the sleep signal starting at the beginning of the next superframe to indicate to the link partner that it is transitioning to the LPI transmit mode.

To: Following this event, the PMA transmits the sleep signal to indicate to the link partner that it is transitioning to the LPI transmit mode.

CI 149 SC 149.3.7.2.2 P119 L54 # R1-8

Zimmerman, George ADI, APL Group, Aquantia, BMW, Cisco, CommScop  
 Comment Type T Comment Status D EEE

(I realize that this comment may be out of scope)

There seems to be a problem in the EEE transmit state diagram with regards to the transition from SEND\_SLEEP to SEND\_ALERT. tx\_lpi\_req is generated by the PCS 64B/65B Transmit state machine at any symbol boundary when it receives the LPI request. In Figure 149-20, tx\_lpi\_req is further qualified with rs\_fec\_frame\_done in the EEE transmit state machine so that transition from TX\_NORMAL to SEND\_SLEEP occurs on any RS-FEC frame boundary. During the 8 RS-FEC frames that the EEE transmit state machine stays in the SEND\_SLEEP state, tx\_lpi\_req could go false, While this tx\_lpi\_req transition is aligned to tx\_alert\_start\_next, the EEE transmit state machine may have only completed four RS-FEC frames of SEND\_SLEEP, so the transition to SEND\_ALERT will be delayed for an additional four RS-FEC frames. This delay would cause SEND\_ALERT to transmit ALERT outside of the specified ALERT window.

149.3.2.2.22 that states "PMA transmits the sleep signals starting at the beginning of the next superframe", but this doesn't address the problem as the size of the superframe changes based on the interleave, and as shown in the example above even though the SEND\_SLEEP did start on a 4 RS-FEC superframe boundary, ALERT was still transmitted incorrectly.

To prevent this potential misalignment, the transition to SEND\_SLEEP needs to be aligned to the start of ALERT, which according to 149.3.6.1 "shall start at the beginning of any eight PHY frame boundary starting at the beginning of the frame following a refresh PHY frame". Aligning the transition to SEND\_SLEEP would ensures that the lpi\_sleep\_timer completes and the EEE state machine transitions to SEND\_ALERT that the ALERT transmission is properly aligned.

*SuggestedRemedy*

Add the following variable to 149.3.7.2.2, in alphanumeric order: (page 119 line 54)

tx\_sleep\_start\_next

A Boolean value. This variable is set TRUE during the seventh RS-FEC frame in every group of eight RS-FEC frames, where the group of eight RS-FEC frames start with the RS-FEC frame after refresh.

In Figure 149-20 (page 129 line 9)

Change the transition from TX\_NORMAL to SEND\_SLEEP to the following:

tx\_lpi\_req \*  
 rs\_fec\_frame\_done \*  
 tx\_sleep\_start\_next

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested

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corrects an error in the draft.

Implement the Proposed Change.

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Cl **149** SC **149.9.1** P**179** L**8** # **R1-1**  
 Wienckowski, Natalie General Motors Company  
 Comment Type **E** Comment Status **D** EZ

The editor's note regarding the maintenance task force is no longer needed. P802.3cr has started WG ballot and the text currently in this section does not need any additional changes.

*SuggestedRemedy*

Delete Editor's Note: The equivalent text in other clauses of IEEE Std 802.3 is under consideration for revision by the maintenance task force. This clause should be revised to align with the output of that effort.

*Proposed Response* Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3ch/D3.0 and IEEE P802.3ch/D3.1 or the unsatisfied negative comments from the previous ballot. Hence it is not within the scope of the recirculation ballot. However, the change suggested is a non-substantive change that improves the clarity of the draft.

Implement the Proposed Change.

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Cl **149B** SC **149B.3.2** P**205** L**10** # **R1-2**  
 Wienckowski, Natalie General Motors Company  
 Comment Type **E** Comment Status **D** EZ

Remove the word "ensure" added by comment i-76. The reason for the recommendation is not required.

*SuggestedRemedy*

Change: It is recommended that this status is set for a minimum of 100 milliseconds to ensure reception by the link partner management entity. To: It is recommended that this status is set for a minimum of 100 milliseconds. This same change should also be made on P205 L20 (149B.3.3), P205 L29 (149B.3.4), and P205 L40 (149B.3.5).

*Proposed Response* Response Status **W**

PROPOSED ACCEPT.