Cl **45**   *SC* **45.2.1.242**   *P* **31**   *L* **1**   # 126

Wienckowski, Natalie   General Motors

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

As there are no changes in this subclause it can be removed.

SuggestedRemedy

Remove 45.2.1.242 and all subcluases.
P28L15, change 45.2.1.242 to green as the subsection it references is removed.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.243**   *P* **32**   *L* **18**   # 127

Wienckowski, Natalie   General Motors

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

As there are no changes in this subclause it can be removed.

SuggestedRemedy

Remove 45.2.1.243 and all subcluases.
P28L16, change 45.2.1.243 to green (and remove the hyperlink) as the subsection it references is removed.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.245.1**   *P* **34**   *L* **51**   # 125

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **A**

The addition of L=8 exclusions is not consistent with the original text.

SuggestedRemedy

Change the text to the following.
-x- indicates to strikethrough "x"
_y_ indicates to underline "y"
The values of L=2_,_ -and- L=4_, and L=8_ are not defined for 2.5GBASE-T1 PHYs, -and- the value_s_ of L=4 _and L=8 are_ -is- not defined for 5GBASE-T1 PHYs_, and the value of L=8 is not defined for 10GBASE-T1 PHYs._

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2.1.247**   *P* **36**   *L* **35**   # 128

Wienckowski, Natalie   General Motors

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

As there are no changes in this subclause it can be removed.

SuggestedRemedy

Remove 45.2.1.247 and all subcluases.
P28L22, change 45.2.1.243 to green (and remove the hyperlink) as the subsection it references is removed.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.248**   *P* **37**   *L* **1**   # 129

Wienckowski, Natalie   General Motors

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

As there are no changes in this subclause it can be removed.

SuggestedRemedy

Remove 45.2.1.248 and all subcluases.
P28L23, change 45.2.1.243 to green (and remove the hyperlink) as the subsection it references is removed.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.249**   *P* **37**   *L* **23**   # 130

Wienckowski, Natalie   General Motors

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

As there are no changes in this subclause it can be removed.

SuggestedRemedy

Remove 45.2.1.249 and all subcluases.
P28L24, change 45.2.1.243 to green (and remove the hyperlink) as the subsection it references is removed.

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 Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **45**   Page 1 of 7
SC **45.2.1.249**   5/17/2022 9:51:27 AM

Cl **45**   *SC* **45.2.1.250**   *P* **37**   *L* **43**   # 131

Wienckowski, Natalie   General Motors

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

As there are no changes in this subcluase it can be removed.

SuggestedRemedy

Remove 45.2.1.250 and all subcluases.
P28L25, change 45.2.1.243 to green (and remove the hyperlink) as the subsection it references is removed.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.83**   *P* **39**   *L* **1**   # 132

Wienckowski, Natalie   General Motors

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

As there are no changes in this subclause it can be removed.

SuggestedRemedy

Remove 45.2.3.83 and all subclauses.
P39L20, change 45.2.3.83 to green as the subsection it references is removed.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.84**   *P* **39**   *L* **21**   # 114

Wienckowski, Natalie   General Motors

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

As there are no changes in this subclause it can be removed.

SuggestedRemedy

Remove 45.2.3.84 and all subclauses.
P39L21 change 45.2.3.84 to green (and remove the hyperlink) as the subsection it references is removed.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.3.1**   *P* **72**   *L* **42**   # 134

Tu, Mike   Broadcom

Comment Type **E**   *Comment Status* **A**

On the lower left corner of Figure 165-2, it should be changed to "25 GIGABIT MEDIA INDEPENDENT INTERFACE".

SuggestedRemedy

Change from "25GMII GIGABIT MEDIA INDEPENDENT INTERFACE" to "25 GAGABIT MEDIA INDEPENDENT INTERFACE"

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change from
"25GMII GIGABIT MEDIA INDEPENDENT INTERFACE"
to
"25 GIGABIT MEDIA INDEPENDENT INTERFACE"

Cl **165**   *SC* **165.1.3.2**   *P* **73**   *L* **5**   # 135

Tu, Mike   Broadcom

Comment Type **T**   *Comment Status* **A**

The baud rate is 14062.5 Mbd

SuggestedRemedy

Change from "14 0625.5 Mbd" to "14 062.5 Mbd"

Response   *Response Status* **C**

ACCEPT.

Cl **165**   *SC* **165.3.5**   *P* **101**   *L* **17**   # 136

Tu, Mike   Broadcom

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

Add a "space" character between L = 8 and superframe.

SuggestedRemedy

Change from "L = 8superframe" to "L = 8 superframe"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 2 of 7
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **165.3.5**   5/17/2022 9:51:27 AM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.9**   *P* **118**   *L* **4**   # 115

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9 and put the following text in 165.3.9:
The MultiGBASE-T1 PCS level operations, administration, and maintenance (OAM) provides an optional mechanism useful for monitoring link operation such as exchanging PHY link health status and message exchange. When OAM is implemented, behavior shall conform to 143.9, including the state diagrams in Figure 149–24 and Figure 149–25.
The OAM frame data is carried in the OAM 10-bit field described in 165.3.2.2.14 for the normal power data mode and 165.3.6.3 for low power mode.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9 and put the following text in 165.3.9:
The MultiGBASE-T1 PCS level operations, administration, and maintenance (OAM) provides an optional mechanism useful for monitoring link operation such as exchanging PHY link health status and message exchange. When OAM is implemented, behavior is defined in 149.3.9, including the state diagrams in Figure 149–24 and Figure 149–25.
The OAM frame data is carried in the OAM 10-bit field described in 165.3.2.2.14 for the normal power data mode and 165.3.6.3 for low power mode.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 3 for resulting text

Cl **165**   *SC* **165.3.9.1**   *P* **118**   *L* **29**   # 116

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9 and put the following text in 165.3.9.1:
The definitions for OAM are as defined in 165.3.9.1 for OAM frame, OAM symbol, OAM message, and OAM status.
OAM field: A 10-bit field in each PHY frame reserved for the OAM symbol as described in 165.3.2.2.14 or in each refresh cycle as described in 165.3.6.3.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9 and put the following text in 165.3.9.1:
The definitions for OAM are as defined in 165.3.9.1 for OAM frame, OAM symbol, OAM message, and OAM status.
OAM field: A 10-bit field in each PHY frame reserved for the OAM symbol as described in 165.3.2.2.14 or in each refresh cycle as described in 165.3.6.3.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 4 for resulting text

Cl **165**   *SC* **165.3.9.2**   *P* **118**   *L* **48**   # 117

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9.2, except 165.3.9.2.1 and put the following text in 165.3.9.2:
The MultiGBASE-T1 OAM shall function as defined in 149.3.9.2 except the MultiGBASE-T1 OAM frame structure as defined in 165.3.9.2.1.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9.2, except 165.3.9.2.1 and put the following text in 165.3.9.2:
The MultiGBASE-T1 OAM functions are defined in 149.3.9.2 except for the MultiGBASE-T1 OAM frame structure as defined in 165.3.9.2.1.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 5 for resulting text

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 3 of 7
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **165.3.9.2**   5/17/2022 9:51:27 AM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.9.2.1**   *P* **118**   *L* **48**   # 118

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9.2.1 and put the following text in 165.3.9.2.1:
The MultiGBASE-T1 OAM frame structure shall follow 149.3.9.2.1 with the addition of the rule with 8x interleaving defined here:
  8x interleaving -- insert 0 to 7 dummy OAM symbols into the superframe for alignment before continuing.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace 165.3.9.2.1 as shown in Wienckowski_3cy_01_05_17_22a.pdf, slide 6

Cl **165**   *SC* **165.3.9.2.1**   *P* **119**   *L* **8**   # 138

Tu, Mike   Broadcom

Comment Type   **T**   *Comment Status* **A**

Need to include the case for L=8 interleaving.

SuggestedRemedy

Change this paragraph to:
"When the PCS frame is operating in interleaved mode of 2x, 4x, or 8x, the first symbol (OAM<0>) shall be inserted in the first RS frame in the superframe so that the full OAM frame can be packed into eight superframes in the 2x interleaved mode, into four superframes in the 4x interleaved mode, and into two superframes in the 8x interleaved mode."

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace 165.3.9.2.1 as shown in Wienckowski_3cy_01_05_17_22.pdf, slide 6

Cl **165**   *SC* **165.3.9.2.1**   *P* **119**   *L* **27**   # 137

Tu, Mike   Broadcom

Comment Type   **T**   *Comment Status* **A**

Insert the case for "8x interleaving".

SuggestedRemedy

Insert a new paragraph "8x interleaving == insert 0 to 7 dummy OAM symbols into the superframe for alignment before continuing."

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace 165.3.9.2.1 as shown in Wienckowski_3cy_01_05_17_22.pdf, slide 6

Cl **165**   *SC* **165.3.9.3**   *P* **124**   *L* **49**   # 119

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9.3 and put the following text in 165.3.9.3:
The state diagram variable to OAM register mapping shall be as defined in 149.3.9.3.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9.3 and put the following text in 165.3.9.3:
See 149.3.9.3.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 7 for resulting text

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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 Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **165**
SC **165.3.9.3**

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5/17/2022 9:51:27 AM

Cl **165**   *SC* **165.3.9.4.3**   *P* **126**   *L* **10**   # 120

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9.4.3 and put the following text in 165.3.9.4.3:
The MultiGBASE-T1 OAM variables shall be those defined in 149.3.9.4.3 except those defined below.
Keep rx_boundary and tx_boundary definitions as they currently are in D1.1.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9.4.3 and put the following text in 165.3.9.4.3:
See 149.3.9.4.3 except for the variables defined below.
Keep rx_boundary and tx_boundary definitions as they currently are in D1.1.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 8 for resulting text

Cl **165**   *SC* **165.3.9.4.4**   *P* **130**   *L* **23**   # 121

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9.4.4 and put the following text in 165.3.9.4.4:
The counters shall be as defined in 149.3.9.4.4.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9.4.4 and put the following text in 165.3.9.4.4:
See 149.3.9.4.4.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 9 for resulting text

Cl **165**   *SC* **165.3.9.4.5**   *P* **130**   *L* **41**   # 122

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9.4.5 and put the following text in 165.3.9.4.5:
The functions shall be as defined in 149.3.9.4.5.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9.4.5 and put the following text in 165.3.9.4.5:
See 149.3.9.4.5.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 10 for resulting text

Cl **165**   *SC* **165.3.9.4.6**   *P* **131**   *L* **41**   # 123

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete all the content in 165.3.9.4.6 and put the following text in 165.3.9.4.6:
The state diagrams shall be as defined in 149.3.9.4.6.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the content in 165.3.9.4.6 and put the following text in 165.3.9.4.6:
See 149.3.9.4.6.

See Wienckowski_3cy_01_05_17_22a.pdf, slide 11 for resulting text

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 Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **165**
SC **165.3.9.4.6**

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5/17/2022 9:51:27 AM

Cl **165**   *SC* **165.4.2.4.9**   *P* **138**   *L* **52**   # 139

Tu, Mike   Broadcom

Comment Type   **T**   *Comment Status*   **A**

    Copy from Table 149-13.

SuggestedRemedy

    Cope from Table 149-13.

Response   *Response Status*   **C**

    ACCEPT IN PRINCIPLE.

    Replace content in "165.4.2.4.9 PMA MDIO function mapping" to read "See 149.4.2.4.9."

Cl **165**   *SC* **165.4.2.4.9**   *P* **139**   *L* **6**   # 140

Tu, Mike   Broadcom

Comment Type   **T**   *Comment Status*   **A**

    Copy from Table 149-14.

SuggestedRemedy

    Copy from Table 149-14.

Response   *Response Status*   **C**

    ACCEPT IN PRINCIPLE.

    Replace content in "165.4.2.4.9 PMA MDIO function mapping" to read "See 149.4.2.4.9."

Cl **165**   *SC* **165.4.2.4.10**   *P* **139**   *L* **38**   # 141

Tu, Mike   Broadcom

Comment Type   **T**   *Comment Status*   **A**

    Copy the "Maximum time (ms)" column from Table 149-15, with " / S" removed.

SuggestedRemedy

    Copy the "Maximum time (ms)" column from Table 149-15, with " / S" removed.

Response   *Response Status*   **C**

    ACCEPT IN PRINCIPLE.

    Per comment + change "Startup timing maximums" to "Startup timing maxima"

Cl **165**   *SC* **165.4.2.5**   *P* **140**   *L* **5**   # 142

Tu, Mike   Broadcom

Comment Type   **T**   *Comment Status*   **A**

    Copy the "Maximum time (ms)" column from Table 149-16, with " / S" removed.

SuggestedRemedy

    Copy the "Maximum time (ms)" column from Table 149-16, with " / S" removed.

Response   *Response Status*   **C**

    ACCEPT IN PRINCIPLE.

    Per comment + change "Startup timing maximums" to "Startup timing maxima"

Cl **165**   *SC* **165.4.2.7**   *P* **144**   *L* **7**   # 143

Brett McClellan   Marvell

Comment Type   **T**   *Comment Status*   **A**

    I realize the EEE text has not been formally accepted yet, however this text on the refresh monitor makes reference to a specific time period and also a variable rate option ("1.536/S ms") which might be missed when making updates to the EEE text. This period should be made TBD for now.

SuggestedRemedy

    change "1.536/S" to "TBD"

Response   *Response Status*   **C**

    ACCEPT IN PRINCIPLE.

    Delete "(nominally equal to 1.536/S ms)"

Cl **165**   *SC* **165.4.2.7**   *P* **146**   *L* **52**   # 144

Brett McClellan   Marvell

Comment Type   **T**   *Comment Status*   **A**

    I realize the EEE text has not been formally accepted yet, however this text on lpi_refresh_rx_timer makes reference to a specific time period and also a variable rate option ("1.536/S ms") which might be missed when making updates to the EEE text. This period should be made TBD for now.

SuggestedRemedy

    change "1.536/S" to "TBD"

Response   *Response Status*   **C**

    ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 6 of 7

COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **165.4.2.7**   5/17/2022 9:51:27 AM

SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.8.2.1**   *P* **169**   *L* **13**   # 133

Gardner, Andrew   Analog Devices

Comment Type   **T**   *Comment Status*   **A**

MDI RL mask (154-42) requires 20dB of loss between 10MHz and 280S. This requirement may be limiting for PoDL inductors that need to meet a more aggressive high frequency RL requiremenent.

SuggestedRemedy

Change the first line of the MDI return loss requirement (165-42) to be: 20-20*log10(50/f)dB between 5<=f<50 where f is in MHz. Change the second line of the MDI return loss requirement (165-42) to be: 20dB between 50<=f<280S where f is in MHz. This change would allow the use of PoDL inductors with OCL>1uH.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Changes per comment + update Figure 165–50

Cl **165B**   *SC* **165B**   *P* **193**   *L* **1**   # 124

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status*   **A**

As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.

SuggestedRemedy

Delete Annex 165B as this is not needed as we are now referring to Clause 149 which refers to Annex 149B.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Change per comment + roll in Annex 149B, and strike the following text in 149B.1: " Clause 149"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165B**   Page 7 of 7
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **165B**   5/17/2022 9:51:27 AM
SORT ORDER: Clause, Subclause, page, line