

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

<i>CI</i>	<b>FM</b>	<i>SC</i>	<b>FM</b>	<i>P</i>	<b>8</b>	<i>L</i>	<b>12</b>	#	166
Wienckowski, Natalie				IVN Solutions LLC / Ethernovia					
<i>Comment Type</i>	<b>E</b>	<i>Comment Status</i>	<b>D</b>					<i>EZ</i>	
need to update officers and Editors									
<i>SuggestedRemedy</i>									
Replace "Jon Lewis" with "Natalie Wienckowski" for TF Chair.									
Replace "Natalie Wienckowski" with "Steve Gorshe" for TF Vice-Chair.									
Add "Valarie Maguire" as Clause Editor.									
<i>Proposed Response</i>			<i>Response Status</i>	<b>W</b>					
PROPOSED ACCEPT.									

<i>CI</i>	<b>FM</b>	<i>SC</i>	<b>FM</b>	<i>P</i>	<b>10</b>	<i>L</i>	<b>32</b>	#	167
Wienckowski, Natalie				IVN Solutions LLC / Ethernovia					
<i>Comment Type</i>	<b>E</b>	<i>Comment Status</i>	<b>D</b>					<i>EZ</i>	
add "dm"									
<i>SuggestedRemedy</i>									
Change: IEEE Std 802.3xx-20xx									
To: IEEE Std 802.3dm-202x									
<i>Proposed Response</i>			<i>Response Status</i>	<b>W</b>					
PROPOSED ACCEPT.									

<i>CI</i>	<b>FM</b>	<i>SC</i>	<b>FM</b>	<i>P</i>	<b>13</b>	<i>L</i>	<b>1</b>	#	7
Maguire, Valerie				Copperopolis; aff'l w/ CME Consulting, Microchip, an					
<i>Comment Type</i>	<b>E</b>	<i>Comment Status</i>	<b>D</b>					<i>EZ</i>	
Insert Amendments 10 through 12									
<i>SuggestedRemedy</i>									
Insert:									
IEEE Std 802.3da™-2026									
Amendment 10—This amendment includes changes to IEEE Std 802.3-2022 and adds Clause 188 through Clause 189. This amendment adds Physical Layer specifications and management parameters for enhancement of multidrop 10 Mb/s operation based on the 10BASE-T1S PHY specified in Clause 147 of IEEE Std 802.3-2022, and specifies optional provision of power over single balanced pair mixing segments. Additionally, this amendment includes additions and changes to Clause 148 to automatically allocate node IDs (Dynamic PLCA).									
IEEE Std 802.3dk™-20xx									
Amendment 11—This amendment includes changes to IEEE Std 802.3-2022 and adds Clause 168. This amendment adds Physical Layer specifications and management parameters for 100 Gb/s Ethernet optical interfaces for bidirectional operation over a single strand of single-mode fiber.									
IEEE Std 802.3dg™-20xx									
Amendment 12—This amendment to IEEE Std 802.3-2022 specifies additions and appropriate modifications to add 100 Mb/s Physical Layer (PHY) specifications and management parameters for operation, and associated optional provision of power, over a single balanced pair of conductors.									
<i>Proposed Response</i>			<i>Response Status</i>	<b>W</b>					
PROPOSED ACCEPT.									

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 1 SC 1.4 P 30 L 35 # 2

Maguire, Valerie Copperopolis; affl w/ CME Consulting, Microchip, an  
 Comment Type E Comment Status D EZ  
 Missing Abbreviatons for ACT and TDD

SuggestedRemedy

Insert:

ACT Asymmetric Coded Transceiver  
 TDD Time Division Duplex

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Insert:

ACT Asymmetric Concurrent Transmission  
 TDD Time Division Duplex

Cl 1 SC 1.4.88 P 30 L 20 # 322

Shen, David Infineon  
 Comment Type E Comment Status D EZ

Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).

SuggestedRemedy

Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with 100 Mb/s in the reverse direction).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).

To: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with 100 Mb/s in the reverse direction).

Cl 30 SC 30.3.2.1.2 P 31 L 27 # 20

Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo

SuggestedRemedy

change '100M+2.5GBASE-T1/V1' to '100M+5GBASE-T1/V1'

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 30 SC 30.3.2.1.2 P 31 L 29 # 21

Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo

SuggestedRemedy

change '100M+2.5GBASE-T1/V1' to '100M+5GBASE-T1/V1'

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 30 SC 30.3.2.1.2 P 31 L 38 # 22

Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo

SuggestedRemedy

change '100M+2.5GBASE-T1/V1' to '100M+10GBASE-T1/V1'

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 30 SC 30.3.2.1.2 P 31 L 40 # 23

Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo

SuggestedRemedy

change '100M+2.5GBASE-T1/V1' to '100M+10GBASE-T1/V1'

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 30 SC 30.3.2.1.3 P 32 L 6 # 24  
 Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo  
 SuggestedRemedy  
 change '100M+2.5GBASE-T1/V1' to '100M+5GBASE-T1/V1'  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 30 SC 30.3.2.1.3 P 32 L 8 # 25  
 Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo  
 SuggestedRemedy  
 change '100M+2.5GBASE-T1/V1' to '100M+5GBASE-T1/V1'  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 30 SC 30.3.2.1.3 P 32 L 15 # 26  
 Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo  
 SuggestedRemedy  
 change '100M+2.5GBASE-T1/V1' to '100M+10GBASE-T1/V1'  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 30 SC 30.3.2.1.3 P 32 L 17 # 27  
 Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo  
 SuggestedRemedy  
 change '100M+2.5GBASE-T1/V1' to '100M+10GBASE-T1/V1'  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 30 SC 30.5.1.1.2 P 32 L 33 # 168  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 Replace references to Clause 200 with references to Clause 201 and Clause 202.  
 SuggestedRemedy  
 Duplicate the groups in 30.5.1.1.2 to include reference to Clause 201 and Clause 202 and remove the reference to Clause 200, similar to what was done for 30.3.2.1.3.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 30 SC 30.5.1.1.2 P 32 L 33 # 160  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 Eliminate links to Clause 200  
 SuggestedRemedy  
 Make copies of all tiems and create links to Clause 201 and to Clause 202.  
 Proposed Response Response Status Z  
 PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.  
 Duplicate of #168

Cl 30 SC 30.6.1.1 P 33 L 15 # 161  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 Delete -V1 rows as Clause 98 Auto-Negotiation doesn't apply to -V1.  
 SuggestedRemedy  
 Delete rows in lines 15, 16, 25, 26, 35, and 36.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 45 SC 45.2.1 P 34 L 23 # 152

Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D Registers

PMA/PMD type selection BASE-T1 needs to be changed to BASE-T1/V1

*SuggestedRemedy*

Bring 45.2.1.6 and 45.2.1.6.3 headings into the draft.  
 Do the following with the appropriate editorial instructions and underline/strikethrough.  
 Bring Table 45-7 into the draft and Change the row: 0 1 1 1 1 0 1 = BASE-T1 PMA/PMDb  
 To: 0 1 1 1 1 1 = BASE-T1/V1 PMA/PMDb  
 Change note b: If BASE-T1 is selected, bits 1.2100.3:0 are used to differentiate which BASE-T1 PMA/PMD is selected.  
 To: If BASE-T1/V1 is selected, bits 1.2100.4:0 are used to differentiate which BASE-T1/V1 PMA/PMD is selected.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1 P 35 L 15 # 154

Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D Registers

Need to add -V1 ability and Asymmetric -T1 ability to Register 1.18

*SuggestedRemedy*

Do the following with the appropriate editorial instructions and underline/strikethrough.  
 Bring 45.2.1.16 BASE-T1 PMA/PMD extended ability register (1.18)  
 and Change it to: 45.2.1.16 BASE-T1/V1 PMA/PMD extended ability register (1.18)  
 Bring in Table 45-19 and change BASE-T1 to BASE-T1/V1 in the title  
 Change Reserved row in the table to 1.18.15:11 (with appropriate change marks)  
 New row: 1.18.10 | MultiG+100/100M+MultiGBASE-T1 ability | 1 = PMA/PMD is able to perform MultiG+100/100M+MultiGBASE-V1 ability listed in register 1.77  
 | | 0 = PMA/PMD is able to perform MultiG+100/100M+MultiGBASE-T1 ability listed in register 1.77  
 Add new subclause 45.2.1.16.aaa MultiG+100M/100M+MultiG ability (1.18.10)  
 When read as a one, bit 1.18.10 indicates that the PMA/PMD is able to operate as a MultiG+100M/100M+MultiGBASE-V1 PMD type. When read as a zero, bit 1.18.10 indicates that the PMA/PMD is able to operate as a MultiG+100M/100M+MultiGBASE-T1 PMD type.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Added P35/L15

Cl 45 SC 45.2.1 P 35 L 16 # 153

Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D Registers

Bit 1.11.11 needs to be changed to BASE-T1/V1

*SuggestedRemedy*

Bring 45.2.1.10 heading into the draft.  
 Do the following with the appropriate editorial instructions and underline/strikethrough.  
 Bring Table 45-14 into the draft and Change the row for bit 1.11.11:0, changing BASE-T1 to BASE-T1/V1 in 3 places.  
 Bring 45.2.1.10.5 into the draft, and change BASE-T1 to BASE-T1/V1 in 2 places.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.7.4 P 34 L 38 # 162

Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D Registers

Add links to Clause 201.

*SuggestedRemedy*

Add link to 201.5.2.2.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.7.4 P 34 L 41 # 163

Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D Registers

Add links to Clause 201.

*SuggestedRemedy*

Add link to 201.5.2.3, unless combined and the link is to 201.5.2.2.

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

**Cl 45**    **SC 45.2.1.7.5**                      **P 35**            **L 7**                      # **164**  
 Wienckowski, Natalie                      IVN Solutions LLC / Ethernovia  
**Comment Type**    **T**                      **Comment Status**    **D**                      *Registers*  
 Add links to Clause 201.  
**SuggestedRemedy**  
 Add link to 201.5.2.4, unless combined and the link is to 201.5.2.3.  
**Proposed Response**                      **Response Status**    **W**  
 PROPOSED ACCEPT.

**Cl 45**    **SC 45.2.1.7.5**                      **P 35**            **L 10**                      # **165**  
 Wienckowski, Natalie                      IVN Solutions LLC / Ethernovia  
**Comment Type**    **T**                      **Comment Status**    **D**                      *Registers*  
 Add links to Clause 201.  
**SuggestedRemedy**  
 Add link to 201.5.2.5, unless combined and the link is to 201.5.2.3.  
**Proposed Response**                      **Response Status**    **W**  
 PROPOSED ACCEPT.

**Cl 45**    **SC 45.2.1.214**                      **P 39**            **L 4**                      # **6**  
 Maguire, Valerie                      Copperopolis; affl w/ CME Consulting, Microchip, an  
**Comment Type**    **E**                      **Comment Status**    **D**                      *EZ*  
 IEEE P802.3da has published.  
**SuggestedRemedy**  
 On P39, L4:  
 Replace, " IEEE Std 802.3da-202x" with, " IEEE Std 802.3da-2026  
 On P39, L40:  
 Replace, " IEEE Std 802.3da-202x" with, " IEEE Std 802.3da-2026  
**Proposed Response**                      **Response Status**    **W**  
 PROPOSED ACCEPT.

**Cl 46**    **SC 46.1**                                      **P 40**            **L 11**                      # **323**  
 Shen, David                                      Infineon  
**Comment Type**    **E**                      **Comment Status**    **D**                      *EZ*  
 Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).  
**SuggestedRemedy**  
 Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with 100 Mb/s in the reverse direction).

**Proposed Response**                      **Response Status**    **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).  
 To: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with 100 Mb/s in the reverse direction).

**Cl 46**    **SC 46.1**                                      **P 40**            **L 19**                      # **324**  
 Shen, David                                      Infineon  
**Comment Type**    **E**                      **Comment Status**    **D**                      *EZ*  
 Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).  
**SuggestedRemedy**  
 Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with 100 Mb/s in the reverse direction).

**Proposed Response**                      **Response Status**    **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).  
 To: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with 100 Mb/s in the reverse direction).

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Cl 46 SC 46.1.1 P 40 L 28 # 325

Shen, David Infineon

Comment Type E Comment Status D EZ

Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).

SuggestedRemedy

Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with 100 Mb/s in the reverse direction).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).

To: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with 100 Mb/s in the reverse direction).

Cl 46 SC 46.1.3 P 40 L 42 # 326

Shen, David Infineon

Comment Type E Comment Status D EZ

Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).

SuggestedRemedy

Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation(including asymmetric PHYs with 100 Mb/s in the reverse direction).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with one of these rates in one direction and 100 Mb/s in the reverse direction).

To: Physical Coding Sublayer (PCS) for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s operation (including asymmetric PHYs with 100 Mb/s in the reverse direction).

Cl 46 SC 46.3.1.1 P 41 L 9 # 263

Fuller, Paul Infineon

Comment Type T Comment Status D clock accuracy

the frequency is +/- 100ppm - I believe the ACT spec is +/-50ppm?

SuggestedRemedy

Change to +/- 50ppm

Proposed Response Response Status W

PROPOSED REJECT.

This is in Clause 46. Changing this would impact all subclauses that use XGMII. An individual Clause that references XGMII can require a tighter tolerance, if desired.

Cl 46 SC 46.3.1.1 P 41 L 9 # 328

Shen, David Infineon

Comment Type T Comment Status D clock accuracy

The TX\_CLK frequency shall be  $1/64 \times f_{MAC} \pm 100$  ppm, where  $f_{MAC}$  is the frequency (in Hz)

SuggestedRemedy

The TX\_CLK frequency shall be  $1/64 \times f_{MAC} \pm 50$  ppm, where  $f_{MAC}$  is the frequency (in Hz)

Proposed Response Response Status W

PROPOSED REJECT.

This is in Clause 46. Changing this would impact all subclauses that use XGMII. An individual Clause that references XGMII can require a tighter tolerance, if desired.

Cl 46 SC 46.3.2.1 P 41 L 18 # 327

Shen, David Infineon

Comment Type E Comment Status D EZ

The frequency of RX\_CLK may be derived from the received data or it may correspond to be that of a nominal clock (e.g., TX\_CLK)

SuggestedRemedy

The frequency of RX\_CLK may be derived from the received data or the nominal clock (e.g., TX\_CLK)

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 46 SC 46.3.2.1 P 41 L 20 # 329  
 Shen, David Infineon  
 Comment Type T Comment Status D clock accuracy  
 frequency shall be  $1/64 \times f_{MAC} \pm 100$  ppm, where  $f_{MAC}$  is the frequency (in Hz) corresponding to the  
 SuggestedRemedy  
 frequency shall be  $1/64 \times f_{MAC} \pm 50$  ppm, where  $f_{MAC}$  is the frequency (in Hz) corresponding to the  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 This is in Clause 46. Changing this would impact all subclauses that use XGMII. An individual Clause that references XGMII can require a tighter tolerance, if desired.

Cl 46 SC 46.3.2.1 P 41 L 20 # 264  
 Fuller, Paul Infineon  
 Comment Type T Comment Status D clock accuracy  
 the frequency is  $\pm 100$ ppm - I believe the ACT spec is  $\pm 50$ ppm?  
 SuggestedRemedy  
 Change to  $\pm 50$ ppm  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 This is in Clause 46. Changing this would impact all subclauses that use XGMII. An individual Clause that references XGMII can require a tighter tolerance, if desired.

Cl 46 SC 46.6.2.3 P 41 L 40 # 169  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ  
 Row with "..." is not needed as there is no row below the one being added.  
 SuggestedRemedy  
 Delete last row of Table in 46.6.2.3.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 200 SC 200.1.1 P 46 L 18 # 170  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ  
 typo  
 SuggestedRemedy  
 In list under "where", put a comma after the first two items and a period after the last. Also on P73/L50 and P156/L18.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 200 SC 200.11.2 P 63 L 33 # 269  
 Fuller, Paul Infineon  
 Comment Type T Comment Status D common  
 AC coupling cap should be 10nF  
 SuggestedRemedy  
 AC coupling cap should be 10nF  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 TFTD. 201.9.2 refers to 149.7.2. We can bring in the text to 201, but we can't change 149.7.2.

Cl 200 SC 200.12 P 63 L 50 # 28  
 Sun, Jingcong Motorcomm  
 Comment Type E Comment Status D EZ  
 typo  
 SuggestedRemedy  
 change '100Mb/s' to '100 Mb/s'  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.1 P72 L 20 # 157

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type E Comment Status D introEZ

Replace Editor's note with text.

SuggestedRemedy

Delete Editor's Note

Add the following text: This clause defines the type 100M+2.5GBASE-T1/V1, 2.5G+100MBASE-T1/V1, 100M+5GBASE-T1/V1, 5G+100MBASE-T1/V1, 100M+10GBASE-T1/V1, and 10G+100MBASE-T1/V1 Physical Coding Sublayer (PCS) as well as the 100M+2.5GBASE-T1/V1, 2.5G+100MBASE-T1/V1, 100M+5GBASE-T1/V1, 5G+100MBASE-T1/V1, 100M+10GBASE-T1/V1, and 10G+100MBASE-T1/V1 Physical Medium Attachment (PMA) sublayers. Together, the corresponding PCS and PMA sublayers comprise a 100M+2.5GBASE-T1, 2.5G+100MBASE-T1, 100M+5GBASE-T1, 5G+100MBASE-T1, 100M+10GBASE-T1, 10G+100MBASE-T1, 100M+2.5GBASE-V1, 2.5G+100MBASE-V1, 100M+5GBASE-V1, 5G+100MBASE-V1, 100M+10GBASE-V1, and 10G+100MBASE-V1 Physical Layer device (PHY). Provided in this clause are functional and electrical specifications for the type 100M+2.5GBASE-T1/V1 PCS and PMA, 2.5G+100MBASE-T1/V1 PCS and PMA, 100M+5GBASE-T1/V1 PCS and PMA, 5G+100MBASE-T1/V1 PCS and PMA, 100M+10GBASE-T1/V1 PCS and PMA, and 10G+100MBASE-T1/V1 PCS and PMA.

The 100M+2.5GBASE-T1, 2.5G+100MBASE-T1, 100M+5GBASE-T1, 5G+100MBASE-T1, 100M+10GBASE-T1, and 10G+100MBASE-T1 PHYs are intended to be operated over a single balanced pair of conductors. The link segment specifications defined in 201.9 were derived from automotive requirements, but may also be used for non-automotive applications. The conductors supporting the operation of the 100M+2.5GBASE-T1, 2.5G+100MBASE-T1, 100M+5GBASE-T1, 5G+100MBASE-T1, 100M+10GBASE-T1, and 10G+100MBASE-T1 PHYs are defined in terms of performance requirements between the Medium Dependent Interfaces (MDIs) allowing implementers to provide their own conductors to operate the 100M+2.5GBASE-T1, 2.5G+100MBASE-T1, 100M+5GBASE-T1, 5G+100MBASE-T1, 100M+10GBASE-T1, and 10G+100MBASE-T1 PHYs as long as the normative requirements included in 201.9 are met.

The 100M+2.5GBASE-V1, 2.5G+100MBASE-V1, 100M+5GBASE-V1, 5G+100MBASE-V1, 100M+10GBASE-V1, and 10G+100MBASE-V1 PHYs are intended to be operated over a single coaxial cable. The link segment specifications defined in 201.10 were derived from automotive requirements, but may also be used for non-automotive applications. The conductor supporting the operation of the 100M+2.5GBASE-V1, 2.5G+100MBASE-V1, 100M+5GBASE-V1, 5G+100MBASE-V1, 100M+10GBASE-V1, and 10G+100MBASE-V1 PHYs are defined in terms of performance requirements between the Medium Dependent Interfaces (MDIs) allowing implementers to provide their own conductors to operate the 100M+2.5GBASE-V1, 2.5G+100MBASE-V1, 100M+5GBASE-V1, 5G+100MBASE-V1, 100M+10GBASE-V1, and 10G+100MBASE-V1 PHYs as long as the normative requirements included in 201.10 are met.

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

CI 201 SC 201.1.1 P72 L 26 # 158

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type E Comment Status D EZ

The Editor's note is no longer needed

SuggestedRemedy

Delete boxed Editor's note

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.1.1 P73 L # 29

Tan, Yuxuan Motorcomm

Comment Type E Comment Status D EZ

The direction of arrows in LS\_PATH in Figure 201-1 should be reversed.

SuggestedRemedy

Change direction of arrows in LS\_PATH in Figure 201-1 to LS\_RX PCS <- LS\_RX PMA  
 <----- LS\_TX PMA <- LS\_TX PCS.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.1.1 P73 L 17 # 145

Pandey, Sujan Velinktech

Comment Type T Comment Status D EZ

Figure 201-1, the arrows of LS\_PATH is not correct

SuggestedRemedy

All arrows of LS\_PATH need to be reversed

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.1.2 P 74 L 37 # 159

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type E Comment Status D intro

Replace Editor's note with text.

SuggestedRemedy

Delete Editor's Note

Add the following text: The relationship between a MultiG+100M/100M+MultiGBASE-T1/V1 PHY, the ISO Open Systems Interconnection (OSI) Reference Model, and the IEEE 802.3 Ethernet Model is shown in Figure 201-x. The PHY sublayers (shown shaded) in Figure 201-x connect one Clause 4 Media Access Control (MAC) layer to the medium. The XGMII is defined in Clause 46.

Auto-Negotiation for 100M+2.5GBASE-T1, 2.5G+100MBASE-T1, 100M+5GBASE-T1, 5G+100MBASE-T1,100M+10GBASE-T1, and 10G+100MBASE-T1 PHYs is defined in Clause 98. Auto-Negotiation is not defined for 100M+2.5GBASE-V1, 2.5G+100MBASE-V1, 100M+5GBASE-V1, 5G+100MBASE-V1, 100M+10GBASE-V1, and 10G+100MBASE-V1 PHYs.

See Relationship\_Figure.png for Figure 201-x.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.1.3 P 74 L 48 # 171

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type E Comment Status D EZ

typo

SuggestedRemedy

Change: block diagram of PHY\_D device.

To: block diagram of the PHY\_D device.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.1.3 P 77 L 43 # 247

Muma, Scott Microchip

Comment Type T Comment Status D clock recovery

Clock recovery in Figure 202-3 is not an optional function as described in 201.5.2.11. It is necessary to receiver operation, and many other clauses have Clock Recovery without looptiming. It's not necessary to provide the recovered\_clock to the PMA Transmit function in the leader. Another way to remove looptiming capability from the leader should be found for Figure 202-3

SuggestedRemedy

Remove (follower only) from Clock Recovery, and consider adding to recovered\_clock or in Note 1 below the figure.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

I believe this refers to Figure 201-3.

TFTD.

CI 201 SC 201.1.3.2 P 78 L 45 # 172

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type T Comment Status D EZ

The DME definition was moved

SuggestedRemedy

Change: 201.4.2.3

To: 201.5.2.3.1, or appropriate reference is comment combining the LS and HS PMA transmit functions is accepted.

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 201 SC 201.1.5 P 80 L 15 # 34  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The statement "The LS\_TX PCS generates a continuous stream of DME symbols that are transmitted via the LS\_TX PMA" is not correct  
 SuggestedRemedy  
 Change to "The LS\_TX PCS generates a continuous stream of bits that are transmitted via the LS\_TX PMA"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Added Clause 201.1.5

Cl 201 SC 201.2 P 80 L 49 # 173  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ  
 SuggestedRemedy  
 Delete Editor's note  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.2.1.1 P 81 L 17 # 174  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ  
 98.4.2 isn't in the spec  
 SuggestedRemedy  
 Change "98.4.2" to "External" character type.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.2.1.2.2 P 82 L 4 # 175  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 The Link Monitor state diagram is in Clause 201  
 SuggestedRemedy  
 Change: External reference to Figure 149-33  
 To: Internal reference to Figure 201-23-Link Monitor state diagram.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.2.1.2.2 P 82 L 64 # 309  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status D EZ  
 Wrong figure reference: Figure 149-33 should be replaced by Figure 201-23.  
 SuggestedRemedy  
 See comment.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.2.2.3.1 P 86 L 17 # 35  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 PAM2 is also used in the training frames  
 SuggestedRemedy  
 Add at the end of line 17: ", and HS\_PATH training frames"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 201 SC 201.2.2.3.1 P 86 L 26 # 146  
 Pandey, Sujan Velinktech  
 Comment Type T Comment Status D DME symbols  
 Z  
 SuggestedRemedy  
 should be '0' instead  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 see #249

Cl 201 SC 201.2.2.3.1 P 86 L 26 # 249  
 Muma, Scott Microchip  
 Comment Type T Comment Status D DME symbols  
 It's unclear when zero means "0" vs. "Z". For the LS\_PATH should consistently use "Z"  
 (meaning electrical idle or high-impedance on the MDI) instead of the term zeros as a DME  
 zero is not the same as a PAM2 or PAM4 zero.  
 SuggestedRemedy  
 First determine if Z means "electrical idle" or "a vector of Z values". Then replace "zeros"  
 here with the selected term, and replace consistently for the LS\_PATH PCS layer.  
 Other places to amend: P85L10, P97L8, P117L42, P122L36.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 P85L10, P86L26  
 Change: zeros  
 To: Z symbols  
 P97L8  
 Change: pass a vector of zeros  
 To: pass a Z symbol

Cl 201 SC 201.3 P 89 L 1 # 313  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status D PCS HS  
 The text is hard to follow.  
 SuggestedRemedy  
 Move the text from Clause 149 to Clause 201, and remove references to EEE.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See 201\_PCS.pdf  
 Consider #313 & #208 together

Cl 201 SC 201.3.2.2 P 90 L 39 # 208  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D PCS HS  
 The requirement purports to bring in all the specifications for 149.3.2.2 (including  
 149.3.2.2.1 through .22) but this doesn't really work. The PAM2 changes need to be  
 explicitly spelled out, and the deletion of EEE needs to be spelled out - at least. Suggest  
 bring in the text from clause 149 that is intended, and review that.  
 SuggestedRemedy  
 Suggest bring in the text from 149.3.2.2, 149.3.2.2.x where .x is 1 through 21 with editorial  
 license to delete EEE portions and label PAM4 portions as 10G only.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See 201\_PCS.pdf  
 Consider #313 & #208 together

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.3.2.2 P91 L 13 # 205

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status D PCS HS

There are a number of errors in Figure 201-7. It shows the 10G path, which doesn't exist in a 2.5G or 5G PHY. Secondly, the inputs and outputs of the HS\_TX PCS Transmit function is unlabeled in Figure 201-7.

**SuggestedRemedy**

Split the Figure into 2 figures - one for 2.5G/5G and one for 10G. The 2.5G/5G figure doesn't have the extra scrambler output, gray mapping, selectable precoder, PAM4 mapper or MUX. The 10G figure doesn't have the note. Show the interface on the left hand side that the Dn[0], Dn[1] comes over. I presume it is blocked data? It needs to come from a blocker. Show tx\_symb as the output from the MUX (or the PAM2 mapper for 2.5G/5G). I will attempt to put together a contribution with how I understand the figure.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See zimmerman\_3dm\_02\_240226 and GZ\_Comment\_205\_Fig201-7.pdf.

Split Figure 201-7 into two Figures as shown by 201-7a and 201-7 b in GZ\_Comment\_205\_Fig201-7.pdf.

CI 201 SC 201.3.2.2 P91 L 45 # 36

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

Incorrect figure reference to Figure 201-6

**SuggestedRemedy**

Replace Figure 201-6 with Figure 201-7

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.3.2.2 P92 L 22 # 206

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status D PCS HS

The PAM4 path doesn't exist for 2.5G/5G. Figure 201-8 only covers 10G

**SuggestedRemedy**

Split figure 201-8 into 2 figures, one showing the 2.5G/5G and one showing the 10G. The 2.5G/5G eliminates the PAM4 path and the MUX at the right hand side of line 25

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Do the suggested remedy for Figure 201-8.

Also, do the same for Figure 201-9 for the receive path.

See 201\_PCS.pdf for proposed new Figures.

CI 201 SC 201.3.2.3 P92 L 64 # 310

Razavi, Alireza Infineon  
 Comment Type E Comment Status D EZ

Reference to EEE: Figure 149-18 should be moved to Clause 201, and the EEE-related item should be removed from it.

**SuggestedRemedy**

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.3.2.3 P93 L 47 # 177

Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ

**SuggestedRemedy**

Change: fifty To: 50

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 201 SC 201.3.2.3 P 93 L 48 # 155  
 Wienckowski, Natalie IVN Solutions LLC / Ethernetvia  
 Comment Type T Comment Status D EZ  
 no EEE  
 SuggestedRemedy  
 Remove reference to Figure 149-19  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.3.2.3 P 93 L 49 # 178  
 Wienckowski, Natalie IVN Solutions LLC / Ethernetvia  
 Comment Type T Comment Status D EZ  
 Figure 149-19 is for EEE only.  
 SuggestedRemedy  
 Remove: and Figure 149-19  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.3.2.3 P 93 L 64 # 311  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status D EZ  
 Reference to EEE: Figure 149-19 should be moved to Clause 201; EEE will be removed from it.  
 SuggestedRemedy  
 See comment.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 Added subclause 201.3.2.3  
 Figure 149-19 is for EEE only, so there is nothing left when this is removed.

Cl 201 SC 201.3.2.3 P 94 L 5 # 37  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS HS  
 The paragraph should reference Figure 149-15  
 SuggestedRemedy  
 Add reference to Figure 149-15 to the paragraph starting in line 5  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Change: When the PCS Synchronization process has obtained synchronization, the RS-FEC frame error ratio (RFER) monitor process monitors the signal quality and asserts hi\_rfer to indicate excessive RS-FEC frame errors.  
 To: When the PCS Synchronization process has obtained synchronization, the RS-FEC frame error ratio (RFER) monitor state diagram shown in Figure 201-15 monitors the received signal for high RS-FEC frame error ratio and asserts hi\_rfer to indicate excessive RS-FEC frame errors.  
 See 201\_PCS.pdf.

Cl 201 SC 201.3.4 P 94 L 45 # 312  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status D PCS HS  
 Poor readability.  
 SuggestedRemedy  
 Remove subclause 201.3.4 and move its content to 201.3.2.3.2. Also copy Equation (149-6) to Clause 201.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 The structure is the same as other PHY Clauses, including 149. Both HS and LS refer to the equations in 149.

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CI 201 SC 201.3.4 P 94 L 45 # 317

Razavi, Alireza Infineon

Comment Type E Comment Status D PCS HS

Multiple terms for one thing: in Clause 201 these terms refer to the same function (side-stream scrambler, side stream scrambler, PCS scrambler). Same issue for the descrambler.

*SuggestedRemedy*

Use "PCS scrambler" consistently for all of them.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Do the suggested remedy and also use "PCS descrambler" consistently.

CI 201 SC 201.3.5 P 94 L 51 # 134

van Dyck, Peter Infineon

Comment Type T Comment Status D PCS HS

Due to the HS\_PATH change to PAM2 in data mode the timing relationship between the Training frame and the RS-FEC frames has changed for 2.5Gb/s and 5Gb/s.

*SuggestedRemedy*

Copy text and figures/equations from Clause 149.4.5 to Clause 201.3.5.

Replace

"The timing relationship among training frame, partial frame, RS-FEC frame, superframe, and partial PHY frame count (PFC24) are shown in Figure 149-12."

with

"For 10Gb/s, the timing relationship among training frame, partial frame, RS-FEC frame, superframe, and partial PHY frame count (PFC24) are shown in Figure 201-???"

For 2.5Gb/s and 5Gb/s, the timing relationship among training frame, partial frame, RS-FEC frame, superframe, and partial PHY frame count (PFC24) are shown in Figure 201-???"

Note that the first Figure is the same as Figure 149-12. The second Figure is in "Timing\_2p5\_5.pdf"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See 201\_PCS.pdf for proposed text update.

CI 201 SC 201.3.5.1 P 95 L 2 # 203

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe

Comment Type T Comment Status D PCS HS

While Tn is generated, formally, the variable passed to the PMA is tx\_symb. Same thing for Sn in training mode. Tn appears to be assumed to be what the PMA operates on (and Sn in training mode) , but it is never actually set to the parameter passed. This is also a flaw in the formal specification of clause 149, and possibly 165.

*SuggestedRemedy*

Change 201.3.5.1 to read:

As specified for MultiGBASE-T1 PHYs in 149.3.5.1. The parameter tx\_symb is set to Tn for passing to the PMA when PHY control is in SEND\_N mode.

Insert new final sentence to 201.3.5.2 The resulting symbols are transferred to the PMA when PHY control is in SEND\_T mode for PAM transmission.

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

See 201\_PCS.pdf for updated text. Copied below for convenience.

201.3.5.1 Generation of symbol Tn

The bit Sn is mapped to the transmit symbol Tn as follows: if Sn = 0 then Tn = +1, if Sn = 1 then Tn = -1. The parameter tx\_symb is set to Tn for passing to the PMA when PHY control is in SEND\_T mode.

201.3.5.2 PMA training mode descrambler polynomials

The PHY shall acquire descrambler state synchronization to the PAM2 training sequence and report success through scr\_status. For side-stream descrambling, the high speed receiver employs the receiver descrambler generator polynomial per 201.3.4. The resulting symbols are transferred to the PMA when PHY control is in SEND\_T mode for PAM transmission.

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CI 201 SC 201.3.5.2 P 95 L 5 # 315  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status D variables  
 Wrong place for variable definition: the PMA training mode descrambler-polynomials text should be removed, but the definition of variable scr\_status should be moved to 149.3.7.2.2 (or the equivalent section in Clause 201).  
 SuggestedRemedy  
 See comment.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 The variable is defined in 201.2.2.5.1. It is then referenced in other sections to indicate which functions impact it.

CI 201 SC 201.4 P 96 L 3 # 38  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 With the current structure of the document, it would make sense to have Figures 201-10 closer to Figure 201-6  
 SuggestedRemedy  
 Move figure 201-10 forward in the document to be closer to Figure 201-6  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Move Figure 201-10 to 201.3.2 where it is referenced.

CI 201 SC 201.4.2.2 P 96 L 51 # 39  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS  
 The text ", set to all 1s, to it" should be removed, because it is not relevant in the context of the current text. Also, if reserved values are required to have a specific value, this needs more discussion.  
 SuggestedRemedy  
 Remove the text ", set to all 1s, to it"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2 P 96 L 51 # 8  
 Long, Richard TE Connectivity  
 Comment Type E Comment Status D PCS LS  
 Extra verbage "to it" not required  
 SuggestedRemedy  
 Change "set to all 1s, to it." to "set to all 1s."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See comment #39.

CI 201 SC 201.4.2.2 P 97 L 2 # 40  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The text "The symbol period, T, is 1000 / 117.1875 ns." is confusing  
 SuggestedRemedy  
 Replace with either "The symbol period, T, is (1 / 117.1875)us." or "The symbol period, T, is (1 / 117.1875MHz)."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: The symbol period, T, is 1000 / 117.1875 ns.  
 To: The symbol period, T, is (1000 / 117.1875) ns.

CI 201 SC 201.4.2.2 P 97 L 8 # 41  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D DME symbols  
 The description " vector of zeros at each symbol period" is ambiguous or incorrect.  
 SuggestedRemedy  
 Change the text to " vector of Z (see Clause 201.2.2.3.1) at each symbol period"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See #249

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 201 SC 201.4.2.2 P 97 L 12 # 42  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D reference  
 Incorrect clause reference to 201.4.5.1  
 SuggestedRemedy  
 Replace with correct clause reference  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: generate a sequence (Tn) defined in 201.4.5.1  
 To: generate a sequence (Sn) defined in 201.4.5

Cl 201 SC 201.4.2.2 P 97 L 16 # 43  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 Incorrect clause reference to 201.5.2.7.  
 SuggestedRemedy  
 Change reference to 201.2.6.4  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.4.2.2 P 97 L 20 # 44  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The word "the" should be removed from "During transmission, the four blocks"  
 SuggestedRemedy  
 Change to "During transmission, four blocks"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Changed subclause to 201.4.2.2.

Cl 201 SC 201.4.2.2 P 97 L 32 # 46  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS  
 The structure of the figure is different from the corresponding figure for HS\_PATH in Figure 201-7  
 SuggestedRemedy  
 Change the handling of the "Training frame" in the figure to be consistent with how it is done in Figure 201-7  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Changed subclause to 201.4.2.2.  
 See zimmerman\_3dm\_02\_240226 and GZ\_Comment\_205\_Fig201-7.pdf.  
 Replace Figure 201-11 with 201-11 in GZ\_Comment\_205\_Fig201-7.pdf.

Cl 201 SC 201.4.2.2 P 97 L 35 # 209  
 van Dyck, Peter Infineon  
 Comment Type E Comment Status D EZ  
 Figure 201-11: The output of the MUX has the wrong name for data transmitted to PMA  
 SuggestedRemedy  
 Replace "symb\_tx" with "tx\_symb"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.4.2.2.1 P 97 L 48 # 47  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The phrase "and vice versa" is ambiguous and probably wrong.  
 SuggestedRemedy  
 Remove the text "and vice versa"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Changed subclause to 201.4.2.2.1.

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CI 201 SC 201.4.2.2.1 P 97 L 48 # 48

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS

The entire paragraph starting in line 48 is unclear and does not have a clear purpose in the document.

*SuggestedRemedy*

The PCS transmit function maps XGMII signals into 65-bit blocks that are inserted into an RS-FEC frame. The PCS receive function extracts the 65-bit blocks from the RS\_FEC frame and maps them to the receiver XGMII interface. The PMA training frame synchronization allows establishment of RS-FEC frame and 65B boundaries by the PCS Synchronization process. Blocks and frames are unobservable and have no meaning outside the PCS.

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Changed subclause to 201.4.2.2.1.

Change: The PCS maps XGMII signals into 65-bit blocks inserted into an RS-FEC frame, and vice versa, using a 65B RS-FEC coding scheme. The PMA training frame synchronization allows establishment of RS-FEC frame and 65B boundaries by the PCS Synchronization process. Blocks and frames are unobservable and have no meaning outside the PCS.

To: The PCS transmit function maps XGMII signals into 65-bit blocks that are inserted into an RS-FEC frame. The PCS receive function extracts the 65-bit blocks from the RS\_FEC frame and maps them to the receiver XGMII interface. The PMA training frame synchronization allows establishment of RS-FEC frame and 65B boundaries by the PCS Synchronization process. Blocks and frames are unobservable and have no meaning outside the PCS.

CI 201 SC 201.4.2.2.2 P 98 L 10 # 179

Wienckowski, Natalie IVN Solutions LLC / Ethernetvia  
 Comment Type E Comment Status D EZ

*SuggestedRemedy*

Remove period by itself on line 10.

Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.2 P 98 L 30 # 117

Lo, William Axonne Inc.  
 Comment Type T Comment Status D EZ

Missing Line with arrow from RS\_FEC to 24-bit Parity

*SuggestedRemedy*

Draw the missing line

Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.2 P 98 L 31 # 50

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

Missing connection from "RS-FEC encoder" block to "24-bit Parity" block

*SuggestedRemedy*

Add missing connection

Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.2 P 99 L 27 # 51

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

Arrow from "Descrambler" to "adder" is in the wrong direction.

*SuggestedRemedy*

Revers the direction of the arrow from "Descrambler" to "adder"

Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.2 P 99 L 28 # 147

Pandey, Sujan Velinktech  
 Comment Type T Comment Status D EZ

Arrow of Descrambler is not correct

*SuggestedRemedy*

arrow needs to be reversed

Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.4.2.2.3 P 99 L 36 # 52  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 Scope of the sentence "For values shown as binary, the leftmost bit is the first transmitted bit" is not clear.  
 SuggestedRemedy  
 Add the text "For Figure 201-12," in front of "For values shown as binary, the leftmost bit is the first transmitted bit"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.3 P 99 L 38 # 53  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 Not desirable to start a new paragraph (or a sentence) with digits. It also implies that 64B/65B is an encoding without explicitly stating so (64B/65B is also sometimes used to describe the block).  
 SuggestedRemedy  
 Change "64B/65B encodes" to "The 64B/65B encoding, encodes"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.3 P 99 L 39 # 54  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS  
 The paragraph starting on line 38 is stating things that have been stated in other paragraphs and is not really about "Notation conventions"  
 SuggestedRemedy  
 Eliminate paragraph and replace it with reference to clause 149.3.2.2.4, if applicable.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 This is common to other 802.3 Clauses, including 149, which this is based on.

CI 201 SC 201.4.2.2.3 P 99 L 44 # 55  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 In accurate to use the text "eight characters"  
 SuggestedRemedy  
 Change "eight characters" to "eight octets".  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.3 P 99 L 51 # 135  
 van Dyck, Peter Infineon  
 Comment Type E Comment Status D EZ  
 tx\_coded and rx\_coded are incorrectly defined in the text.  
 SuggestedRemedy  
 Replace "tx\_coded<31:0>" with "tx\_coded<64:0>"  
 Replace "rx\_coded<31:0>" with "rx\_coded<64:0>"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.5 P 100 L 8 # 57  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The paragraph starting on line 8 probably does not bring any value to the document.  
 SuggestedRemedy  
 Remove the paragraph starting on line 8.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

Cl 201 SC 201.4.2.2.5 P 100 L 8 # 56

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The text incorrectly states that "The XGMII encodes a control character into an octet" which is not correct. This text is unnecessary and is probably best removed.

*SuggestedRemedy*

Remove the sentence "The XGMII encodes a control character into an octet (an eightbit value)."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 201 SC 201.4.2.2.5 P 100 L 72 # 314

Razavi, Alireza Infineon  
 Comment Type E Comment Status D PCS LS

Reference to EEE: Table 149-2 should be moved to Clause 201 and references to LPI and EEE removed from it.

*SuggestedRemedy*

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Add new sentence after Table 149-2.

The LPI Control character is not used by the 100M+MultiGBASE-T1/V1 PHY.

Cl 201 SC 201.4.2.2.12 P 100 L 44 # 58

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS

The paragraph starting in line 44 does not appear to serve any particular purpose in the document. If it does, it should be clarified what the essential information are in the paragraph.

*SuggestedRemedy*

Remove the paragraph starting on line 44 or clarify what is specified in the paragraph.

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl 201 SC 201.4.2.2.13 P 101 L 6 # 60

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS

The text "set to all 1s", is unnecessary and incorrect.

*SuggestedRemedy*

The whole paragraph should be removed, but at minimum the text "set to all 1s" should be removed.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: The resulting RS-FEC frame of four 65B blocks, followed by ten OAM bits, six reserved bits, set to all 1s, and 24 parity bits is 300 bits. See Figure 201-12 and 201.4.2.2.14 for details on PCS bit ordering and RS-FEC encoding. The RS-FEC encoding takes the 276-bit vector, consisting of tx\_group4x65B, the ten OAM bits, and six reserved bits, set to all 1s, and shall generate the four 6-bit parity symbols (24 bits total).

To: The RS-FEC encoding takes the 276-bit vector, consisting of tx\_group4x65B, the ten OAM bits, and six reserved bits and shall generate the four 6-bit parity symbols (24 bits total). See Figure 201-12 and 201.4.2.2.14 for details on PCS bit ordering and RS-FEC encoding.

Cl 201 SC 201.4.2.2.13 P 101 L 6 # 59

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS

The paragraphs starting at line 6 and line 10 serve no purpose in the document. They also incorrectly sate a specific value for the reserved bits.

*SuggestedRemedy*

Remove the paragraphs starting at line 6 and line 10.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #60.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.4.2.2.13 P 101 L 11 # 61

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS

The text "set to all 1s", is unnecessary and incorrect.

*SuggestedRemedy*

The whole paragraph should be removed, but at minimum the text "set to all 1s" should be removed.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #60.

CI 201 SC 201.4.2.2.14 P 101 L 15 # 62

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The statement "The group of 300 bits are encoded using a Reed-Solomon encoder" is not correct. There are 276 bits encoded, and 24-bit parity, resulting in a total of 300 bits.

*SuggestedRemedy*

Change "The group of 300 bits are encoded using a Reed-Solomon encoder" to "The data frame is encoded using a Reed-Solomon encoder"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.14 P 101 L 18 # 63

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The text "For the purposes of this clause" looks like an unnecessary qualification of the statement.

*SuggestedRemedy*

Remove the text "For the purposes of this clause"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.14 P 101 L 19 # 137

Maguire, Valerie Copperopolis; affl w/ CME Consulting, Microchip, an  
 Comment Type E Comment Status D EZ

The third term in some Reed-Solomon codes is stated incorrectly.

*SuggestedRemedy*

P101, L19 - Replace, "RS-FEC(50,46,2^6)" with "RS-FEC(50,46,6)"

P160, L2 - Replace, "RS-FEC(130,124,2^8)" with "RS-FEC(130,124,8)"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.14 P 101 L 53 # 64

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The paragraph starting in line 53 is redundant and has better description at line 7 on page 102

*SuggestedRemedy*

Remove the paragraph starting on line 53

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.2.2.15 P 102 L 51 # 65

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The LR\_PATH does not really have superframe, so better to use the word "frame".

*SuggestedRemedy*

Replace "superframe" with "frame"

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.4.2.2.15 P 103 L 4 # 204

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D PCS LS

While An is generated for the low speed direction, formally, the variable passed to the PMA is tx\_symb. Tn appears to be assumed to be what the PMA operates on, but it is never sent. This is also a flaw in the formal specification of clause 149, and possibly 165.

SuggestedRemedy

Insert new final sentence to 201.4.2.2.15:  
 The parameter tx\_symb is set to An for passing to the PMA when PHY control is in SEND\_N mode.  
 Insert new final sentence to 201.4.5.1 The resulting symbols are transferred to the PMA when PHY control is in SEND\_T mode for DME encoding and transmission.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.2.2 P 97 L 21 # 45

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS

Incorrect description: "followed by six 1s to" because there is no 1 second inserted at this point. This is also imprecise because the bits are "reserved", not necessarily with fixed values.

SuggestedRemedy

change text to "followed by six reserved bits to"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Changed subclause to 201.4.2.2.

Change: six 1s  
 To: six reserved bits

CI 201 SC 201.4.2.2.1 P 97 L 54 # 49

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

Incorrect reference to clause 149.3.2.2.2.

SuggestedRemedy

Change reference to Clause 201.4.2.2.2.

Proposed Response Response Status W

PROPOSED ACCEPT.

Changed subclause to 201.4.2.2.1.

CI 201 SC 201.4.2.3.1 P 104 L 1 # 66

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The word "It" lacks clarity

SuggestedRemedy

Replace the word "It" with "PCS receive"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.2.3.2 P 104 L 6 # 67

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The in this paragraph is inaccurate and not as good as the wording in Clause 2011.3.2.3.2.

SuggestedRemedy

Replace the whole text in this section with "The descrambling process is as specified in 149.3.2.3.2, except Equation (149-5) shall be applied regardless of whether PHY\_S is LEADER or FOLLOWER."

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.4.2.3.3 P 104 L 23 # 68  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 This is the only mention of R\_BLOCK\_TYPE in Clause 201. Need reference to where R\_BLOCK\_TYPE is defined.  
 SuggestedRemedy  
 Reference definition of R\_BLOCK\_TYPE in 149.3.7.2.4  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.4 P 104 L 39 # 69  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 Need to clarify that Equation (149-5) is used regardless of whether PHY\_S is LEADER or FOLLOWER  
 SuggestedRemedy  
 At the end of the line add "regardless of whether PHY\_S is LEADER or FOLLOWER"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 1 # 9  
 Long, Richard TE Connectivity  
 Comment Type E Comment Status D EZ  
 Infofield appears to be capitalized everywhere in the document except page 105, line 1 and line 9  
 SuggestedRemedy  
 Change "infofield" to "Infofield" and also on line 9  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 5 # 132  
 van Dyck, Peter Infineon  
 Comment Type E Comment Status D EZ  
 Clean up Figure 201-15.  
 SuggestedRemedy  
 Update Figure 201-15 as follows: Move C/D to the second row and remove first row  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 11 # 130  
 van Dyck, Peter Infineon  
 Comment Type T Comment Status D EZ  
 Value of reserved bits in infofield is missing.  
 SuggestedRemedy  
 Add the following text at Page 105, Line 11:  
 "Reserved bits in the infofield represent unused values and shall be set to zero on transmit and ignored when received by the link partner."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

CI 201 SC 201.4.5 P 105 L 11 # 131  
 van Dyck, Peter Infineon  
 Comment Type T Comment Status D EZ  
 Clear definition of infofield transmit bit ordering missing.  
 SuggestedRemedy  
 Add the following text at Page 105, Line 11:  
 "The fields in the infofield are transmitted from left to right starting with C/D. The Block field as well as fields D0 through D6 are transmitted LSB first."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Add the following text at Page 105, Line 11:  
 "The fields in the Infofield are transmitted from left to right starting with C/D. The Block field as well as fields D0 through D6 are transmitted LSB first."

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CI 201 SC 201.4.5 P 105 L 12 # 180

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type T Comment Status D EZ

Not all PHY capability fields specified in Clause 149 apply to th LS\_PATH PCS

**SuggestedRemedy**

Change: The message and PHY capability fields are as specified in 149.4.2.4.4 and 149.4.2.4.5.

To: The message and PHY capability fields are as specified in 149.4.2.4.4 and 149.4.2.4.5; however, only Oct10<7> (OAMen) applies.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 16 # 192

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe

Comment Type T Comment Status D EZ

It is unclear whether the setting of OAM bits to 0s during training is an automatic function of the PHY or a requirement on the user. Either way, the existing text is incorrect. I presume it should be an automatic function.

**SuggestedRemedy**

Change "Note that the OAM (if present) shall be set to all 0s during training." to "During training, any OAM channel contents (if present) shall be ignored, and zeros transmitted in their place."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Sentence is removed by comment #70.

CI 201 SC 201.4.5 P 105 L 16 # 129

van Dyck, Peter Infineon

Comment Type E Comment Status D EZ

OAM bits shall always be set to 0s during training regardless of OAM being implemented. It currently states "if present".

**SuggestedRemedy**

Remove "(if present)"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Removed by comment #70.

CI 201 SC 201.4.5 P 105 L 16 # 70

Jonsson, Ragnar Infineon

Comment Type T Comment Status D EZ

There is no need to specify the value of the OAM bits in the training frame, since it should be ignored. Specifying these values can lead to interoperability issues if receiver relies on these values having specific values.

**SuggestedRemedy**

Remove the sentence "Note that the OAM (if present) shall be set to all 0s during training"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 17 # 133

van Dyck, Peter Infineon

Comment Type T Comment Status D EZ

Clarifying text regarding assembly and transmission of training frame is missing.

**SuggestedRemedy**

Add the following text at Page 105, Line 17, after "Note that the OAM shall be set to all 0s during training.":  
"64B/65B blocks of the training frame are processed identical to tx\_coded blocks in Clause 201.1.3.2 and the resulting tx\_group4x65B block is transmitted as described in Clause 201.4.2.2.14."

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 20 # 128

van Dyck, Peter Infineon

Comment Type E Comment Status D EZ

In Figure 201-16, extra space "info field"

**SuggestedRemedy**

Replace with "infofield"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Replace with "Infofield"

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.4.5 P 105 L 24 # 71

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PCS LS

The figures should not specify the values for the Reserved bits.

*SuggestedRemedy*

Remove "1's" from the text "6-bit 1's"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

P105/L14 Change: The four training frame 64B/65B blocks are then concatenated with the sixteen OAM/Reserved bits and the 24 FEC parity bits, as shown in Figure 201–16.

To: The four training frame 64B/65B blocks are then concatenated with the 10 OAM bits, six Reserved bits and the 24 FEC parity bits, as shown in Figure 201–16. The six Reserved bits shall be set to 1.

Remove the "6-bit 1's" and associated arrow in Figure 201-16.

CI 201 SC 201.4.5 P 105 L 26 # 127

van Dyck, Peter Infineon  
 Comment Type E Comment Status D EZ

Remove Infocfield table from Figure 201-16, it's already depicted in Figure 201-15

*SuggestedRemedy*

See comment

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 35 # 30

Tan, Yuxuan Motorcomm  
 Comment Type E Comment Status D EZ

Typo

*SuggestedRemedy*

Change "Scnn[0]" in Equation (201-6) to "Scrn[0]"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.5 P 105 L 37 # 72

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PCS LS

There is no need to specify the value of the Reserved bits in the training frame, since it should be ignored. Specifying these values can lead to interoperability issues if receiver relies on these values having specific values.

*SuggestedRemedy*

Replace "6bit 1s" with "Reserved"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.4.5.1 P 105 L 43 # 316

Razavi, Alireza Infineon  
 Comment Type E Comment Status D variables

Wrong place for variable definition: the PMA training mode descrambler-polynomials text should be removed, but the definition of variable scr\_status should be moved to 149.3.7.2.2 (or the equivalent section in Clause 201).

*SuggestedRemedy*

See comment.

Proposed Response Response Status W

PROPOSED REJECT.

The variable is defined in 201.2.2.5.1. It is then referenced in other sections to indicate which functions impact it.

CI 201 SC 201.4.6 P 105 L 51 # 181

Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ

The statement doesn't make sense.

*SuggestedRemedy*

Change: items enclosed in the dotted lines are not present.  
 To: items enclosed in the dotted lines are not present in the MultiG+100M/100M+MultiGBASE-T1/V1 PHY.

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 201 SC 201.4.6 P 105 L 51 # 73  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The wording "As specified" lacks clarity.  
 SuggestedRemedy  
 Add at the beginning of the line "Detailed functions and state diagrams are"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.5.2.1 P 108 L 5 # 75  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The 100 ms is too long, this should only be 50ms.  
 SuggestedRemedy  
 Change "100 ms" to "50 ms".  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.4.8 P 106 L 38 # 321  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status D OAM  
 EEE is not defined. The PHY health part of OAM should be updated.  
 SuggestedRemedy  
 Copy 149.3.9.2.5 into Clause 201 and remove the 00 and 01 options.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change 201.3.8 and 201.4.8 to text shown in 201\_OAM.pdf.

Cl 201 SC 201.5.2.1 P 108 L 5 # 265  
 Fuller, Paul Infineon  
 Comment Type T Comment Status D EZ  
 100ms should be 50ms  
 SuggestedRemedy  
 100ms should be 50ms  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.4.8 P 106 L 39 # 74  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 The wording "As specified" lacks clarity.  
 SuggestedRemedy  
 Add at the beginning of the line "The OAM is"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.5.2.2 P 108 L 8 # 150  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 Combine PMA Transmit function, HS\_PATH and PMA Transmit function, LS\_PATH into PMA Transmit function. Remove lpi\_tx\_mode statement which relates to EEE.  
 SuggestedRemedy  
 Replace 201.5.2.2 and 201.5.2.3 with new 201.5.2.2: See PMA\_Transmit\_function.pdf  
 201.5.2.3.1 becomes 201.5.2.2.1.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See PMA\_Transmit\_function\_v2.pdf.

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Cl 201 SC 201.5.2.2 P 108 L 17 # 118

Lo, William Axonne Inc.

Comment Type T Comment Status D EZ

The is no EEE anymore

SuggestedRemedy

Delete the sentence:  
When lpi\_tx\_mode = ALERT, the PN sequence defined in 201.5.2.10 shall be used in place of tx\_symb as the data source for PMA Transmit.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Included in #150.

Cl 201 SC 201.5.2.2 P 108 L 17 # 31

Tan, Yuxuan Motorcomm

Comment Type E Comment Status D EZ

EEE is removed from the document.

SuggestedRemedy

Delete "When lpi\_tx\_mode=ALERT, the PN sequence defined in 201.5.2.10 shall be used in place of tx\_symb as the data source for PMA Transmit."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Included in #150.

Cl 201 SC 201.5.2.2 P 108 L 17 # 76

Jonsson, Ragnar Infineon

Comment Type E Comment Status D EZ

EEE is not supported so reference to ALERT and LPI should be removed.

SuggestedRemedy

Remove the sentence: "When lpi\_tx\_mode = ALERT, the PN sequence defined in 201.5.2.10 shall be used in place of tx\_symb as the data source for PMA Transmit."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Included in #150.

Cl 201 SC 201.5.2.2 P 108 L 23 # 10

Long, Richard TE Connectivity

Comment Type E Comment Status D EZ

Typo

SuggestedRemedy

Change "LEADER-FPOLLOWER" to "LEADER-FOLLOWER"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 201 SC 201.5.2.2 P 108 L 23 # 77

Jonsson, Ragnar Infineon

Comment Type E Comment Status D EZ

Typo in "FPOLLOWER"

SuggestedRemedy

Replace "FPOLLOWER" with "FOLLOWER"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 201 SC 201.5.2.2 P 108 L 31 # 207

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe

Comment Type T Comment Status D EZ

"this function" is ambiguous - is it the PMA Transmit Fault function in the previous paragraph?. What appears to be meant is the PMA\_transmit\_disable variable.

SuggestedRemedy

Replace "this function shall turn off the transmitter" , with "the transmitter shall be turned off"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See PMA\_Transmit\_function\_v2.pdf.

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CI 201 SC 201.5.2.2 P 108 L 32 # 78  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PMA transmit  
 For PoDL and PoC implementations the -53dBm results in implicit limit on noise introduced by the power delivery circuit. The -53dBm value needs discussion by the task force.  
 SuggestedRemedy  
 This level needs discussion by the task force, in the context of PoC.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 TFTD

CI 201 SC 201.5.2.3 P 109 L 5 # 79  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PMA transmit  
 For PoDL and PoC implementations the -53dBm results in implicit limit on noise introduced by the power delivery circuit. The -53dBm value needs discussion by the task force.  
 SuggestedRemedy  
 This level needs discussion by the task force, in the context of PoC.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 TFTD

CI 201 SC 201.5.2.3.1 P 109 L 10 # 80  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 Better to specify behavior based on condition, rather than absence of condition.  
 SuggestedRemedy  
 Replace "not SEND\_Z" with "SEND\_T or SEND\_N"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.5.2.3.1 P 109 L 13 # 182  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 A shall is needed.  
 SuggestedRemedy  
 Change: An, is encoded using Differential Manchester Encoding (DME).  
 To: An, shall be encoded using Differential Manchester Encoding (DME).  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See #193

CI 201 SC 201.5.2.3.1 P 109 L 13 # 193  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status D EZ  
 There is no 'shall' to do DME encoding, although there are requirements on the definition of what DME encoding is.  
 SuggestedRemedy  
 Change "The scrambled data bit An is encoded using Differential Manchester Encoding (DME)." to  
 "The scrambled data bit, An, shall be encoded using Differential Manchester Encoding (DME) as defined by the following rules:"  
 Change "shall"s on lines 17, 18, and 19 (clock transitions, data transitions, and otherwise) to "is" (3 occurrences)

Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 CI 201 SC 201.5.2.3.1 P 109 L 16 # 81  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 Unclear language about "start of each bit", implying to "start of bit period"  
 SuggestedRemedy  
 Add the word "period" or the word "symbol" at the end of line 16  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change to: start of each bit symbol

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CI 201 SC 201.5.2.3.1 P 109 L 19 # 82

Jonsson, Ragnar Infineon

Comment Type E Comment Status D EZ

Unclear language about "until the next bit", implying to "until the next bit period"

*SuggestedRemedy*

Add the word "period" or the word "symbol" at the end of line 19

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change to: start of each bit symbol

CI 201 SC 201.5.2.3.1 P 109 L 20 # 319

Razavi, Alireza Infineon

Comment Type T Comment Status D DME

The information in this line is redundant.

*SuggestedRemedy*

Remove this line, Figure 201-18, and Table 201-4.

Proposed Response Response Status W

PROPOSED REJECT.

See #194

CI 201 SC 201.5.2.3.1 P 109 L 24 # 250

Muma, Scott Microchip

Comment Type T Comment Status D DME symbols

The DME encoding of "Z" should also be defined.

*SuggestedRemedy*

Consider incorporating second part of Figure 147-13 which shows High-Z state. Consider adding text similar to Clause 147 above the figure explaining DME encoding of "Z": If the tx\_sym parameter value is the special symbol 'Z', the PMA shall: for -T1 MDI drive MDI+ and MDI- to the same voltage with 100-ohm nominal impedance, so that their difference is 0V; for -V1 MDI drive MDI to the midpoint voltage with 50-ohm nominal impedance.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Add the following sentences before the last sentence of the first paragraph in the text in PMA\_Transmit\_v2.pdf.

When tx\_symb is 0 for HS\_TX, when transmitting on -T1, the same voltage shall be put on MDI+ and MDI- resulting in a differential voltage of 0 V. When tx\_mode is SEND\_Z for HS\_TX and LS\_TX, when transmitting on -V1, a voltage that is the average of the max and min voltage shall be put on MDI. When tx\_symb is Z for LS\_TX, when transmitting on -T1, the same voltage shall be put on MDI+ and MDI- resulting in a differential voltage of 0 V. When tx\_mode is SEND\_Z for HS\_TX and LS\_TX, when transmitting on -V1, a voltage that is the average of the max and min voltage shall be put on MDI.

CI 201 SC 201.5.2.3.1 P 109 L 33 # 194

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe

Comment Type T Comment Status D DME

There is no shall calling out the timings in Table 201-4.

*SuggestedRemedy*

Change "See Figure 201-18 and Table 201-4." to "Timing of the DME symbols shall be as shown in Table 201-4 (See Figure 201-18)."

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.5.2.3.1 P 109 L 38 # 83  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D DME  
 There is inconsistency between the +/-100ppm in Table 201-4 and the +/-50ppm in clause 201.6.2.6  
 SuggestedRemedy  
 Keep the +/-100ppm in Table 201-4 and change the +/-50ppm value in line 3 of page 133 to +/-100ppm.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 TFTD #83 and #123 have different solutions for the same issue.

CI 201 SC 201.5.2.3.1 P 109 L 45 # 123  
 Lo, William Axonne Inc.  
 Comment Type T Comment Status D DME  
 This variation is already addressed in 201.5.2.10  
 SuggestedRemedy  
 Remove the editor's note and add:  
 The DME encoding timing may be relaxed per 201.5.2.10 when the device is a FOLLOWER while in PHY Link Synchronization phase of operation.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Remove Editor's note.  
 Add a note to table 201-4 that states: The DME timing tolerance of the FOLLOWER may be relaxed per 201.6.2.6 while performing PHY Link Synchronization.

CI 201 SC 201.5.2.3.1 P 109 L 45 # 183  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ  
 SuggestedRemedy  
 Delete Editor's note  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.5.2.4 P 110 L 1 # 151  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 Combine PMA Receive function, HS\_PATH and PMA Receive function, LS\_PATH into PMA Transmit function.  
 SuggestedRemedy  
 Replace 201.5.2.4 and 201.5.2.5 with new 201.5.2.3: See PMA\_Receive\_function.pdf  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See PMA\_Receive\_function\_v2.pdf

CI 201 SC 201.5.2.4 P 110 L 21 # 85  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D EZ  
 The polarity swap should be applied to both -T1 and -V1, otherwise we complicate the implementation and loose functionality.  
 SuggestedRemedy  
 Remove the words "for -T1".  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See PMA\_Receive\_function\_v2.pdf

CI 201 SC 201.5.2.5 P 110 L 29 # 86  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ  
 In accurate or unusual use of the word "comprises", because it is not followed by full "listing" of what comprises the "PMA Receive function"  
 SuggestedRemedy  
 Change "comprises" to "includes".  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See PMA\_Receive\_function\_v2.pdf

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 201 SC 201.5.2.5 P 110 L 33 # 248  
 Muma, Scott Microchip  
 Comment Type E Comment Status D EZ  
 Typo in exponent, missing minus sign.  
 SuggestedRemedy  
 Change 2e10 to 2e-10 (see P110L8 for similar but correct format).  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.5.2.5 P 110 L 33 # 32  
 Tan, Yuxuan Motorcomm  
 Comment Type E Comment Status D EZ  
 Typo  
 SuggestedRemedy  
 Change "2\*1010" to "2\*10-10".  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.5.2.5 P 110 L 42 # 87  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D EZ  
 Since DME is immune to polarity swap, no detection of polarity swap is needed (or even possible).  
 SuggestedRemedy  
 Remove the sentence "The receiver uses the sequence of symbols during the training sequence to detect and correct for pair polarity swaps"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.5.2.5 P 110 L 43 # 33  
 Tan, Yuxuan Motorcomm  
 Comment Type E Comment Status D EZ  
 Keep consistent with the statement for HS\_PATH.  
 SuggestedRemedy  
 Change "correct for pair polarity swaps." to "correct for pair polarity swaps for -T1."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

See #87

CI 201 SC 201.5.2.5 P 110 L 46 # 11  
 Long, Richard TE Connectivity  
 Comment Type E Comment Status D EZ  
 Line 46 looks like an extra line break inserted in the paragraph  
 SuggestedRemedy  
 Remove blank line 46  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.5.2.6 P 111 L 1 # 88  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PHY Cntrl  
 Almost all the text on page 111 can be removed. It describes almost exactly the same behavior as is defined in Clause 149.4.2.4, so it would be better to simply reference this clause for the definition of the infofield.  
 SuggestedRemedy  
 Remove the text on page 111 and reference Clause 149.4.2.4 with the following clarification: "The link partner is not required to decode every IF transmitted but is required to decode IFs at a rate that enables the correct actions prior to the transition from training frame to data frame format."  
 Proposed Response Response Status W  
 PROPOSED REJECT.

We have been bringing in text from 149 anytime there is an exception to the text.

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Cl 201 SC 201.5.2.6 P 111 L 8 # 89

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PHY Cntrl

The condition "Infocfield shall be transmitted at least 256 times" applies equally to both directions.

*SuggestedRemedy*

At the end of line 9, add "for both the HS\_PATH and the LS\_PATH"

*Proposed Response* Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
 Change: Infocfield shall be transmitted at least 256 times with each change to octets 7 to 10.

To: For 10G and 5G, Infocfield shall be transmitted at least 256 times with each change to octets 7 to 10. For 2.5G, Infocfield shall be transmitted at least 128 times with each change to octets 7 to 10.

Also change to 128 times for 100M in 201\_LS\_PHY\_Cntrl.pdf.

Cl 201 SC 201.5.2.6 P 111 L 9 # 121

Lo, William Axonne Inc.  
 Comment Type T Comment Status D PHY Cntrl

Need more precise definition of infocfield complete

*SuggestedRemedy*

Add the following sentence in line 9.  
 infocfield\_complete is set to TRUE when the infocfield is transmitted sufficient number of times. infocfield\_complete is immediately set to FALSE when a change to octets 7 to 10 occurs. infocfield\_complete can also be set to FALSE during state transitions in the PHY control state diagram.

*Proposed Response* Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See #89.

Cl 201 SC 201.5.2.6.4 P 112 L 1 # 90

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PHY Cntrl

The whole text in clause 201.5.2.6.4 can be replace with a reference to clause 149.4.2.4.4 (see also comment on page 111)

*SuggestedRemedy*

Remove the text in clause 201.5.2.6.4 and replace with reference to 149.4.2.4.4

*Proposed Response* Response Status W

PROPOSED REJECT.

Removing this would reduce readability as the surrounding sections have been copied in as they required changes for 3dm.

Cl 201 SC 201.5.2.6.5 P 112 L 51 # 91

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D OAM

This the term "MultiGBASE-T1" should be replace with the appropriate 802.3dm nomenclature.

*SuggestedRemedy*

Remove the word "MultiGBASE-T1".

*Proposed Response* Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See 201\_OAM.pdf for new subclause text.

Cl 201 SC 201.5.2.6.5 P 112 L 52 # 92

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The text incorrectly refers to " two optional capabilities", while the current text describes three capabilities: OAMen, PrecodeSel, and InterleaverDepth. However, only the OAMen capability is applicable in the HS direction, the other two do not apply.

*SuggestedRemedy*

change the text "support of these two optional capabilities" to "support of optional capabilities"

*Proposed Response* Response Status W

PROPOSED ACCEPT.

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Cl 201 SC 201.5.2.6.5 P 113 L 3 # 320

Razavi, Alireza Infineon

Comment Type T Comment Status D EZ

For the high data-rate info-field, interleavedDepth and PrecodedSet should be removed, since they are not defined for the LDR path.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See #93

Cl 201 SC 201.5.2.6.5 P 113 L 7 # 93

Jonsson, Ragnar Infineon

Comment Type T Comment Status D EZ

Transmitting the "PrecodeSel" and "InterleaverDepth" from PHY\_S to PHY\_D is meaningless, because these are requesting behaviors that are not supported in the LS\_PATH. Therefore they should be removed from the HS\_PATH capability list.

SuggestedRemedy

Remove "PrecodeSel" and "InterleaverDepth" from Table 201-7 and the text below the table.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 201 SC 201.5.2.6.5 P 113 L 15 # 94

Jonsson, Ragnar Infineon

Comment Type E Comment Status D OAM

This the term "MultiGBASE-T1" should be replace with the appropriate 802.3dm nomenclature.

SuggestedRemedy

Remove the word "MultiGBASE-T1".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See 201\_OAM.pdf for new subclause text.

Cl 201 SC 201.5.2.6.6 P 113 L 28 # 95

Jonsson, Ragnar Infineon

Comment Type T Comment Status D EZ

The reference to PAM2 to PAM4 transition does not properly describe the transition from SEND\_T to SEND\_N for 2.5Gbps and 5Gbps.

SuggestedRemedy

Replace "transmitter switches from PAM2 to PAM4" with "transmitter switches from SEND\_T to SEND\_N"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 201 SC 201.5.2.6.7 P 113 L 36 # 96

Jonsson, Ragnar Infineon

Comment Type T Comment Status D EZ

There is no condition defined that would cause "When PMA\_state<7:6> is greater than 01" to be true. Therefore, this whole clause is redundant.

SuggestedRemedy

Remove Clause 201.5.2.6.7.

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 201 SC 201.5.2.7 P 114 L 36 # 318

Razavi, Alireza Infineon  
 Comment Type T Comment Status D PHY Cntrl

This subclause should be rewritten.

**SuggestedRemedy**

Make it similar to 201.5.2.6, with these changes: (1) remove PFC24 and DataSwPFC24 (replace with Reserved infofields); (2) remove 201.5.2.6.3; (3) remove 201.5.2.6.6.2; (4) remove CRC16 (replace with Reserved fields); (5) remove 201.5.2.6.8.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See 201\_LS\_PHY\_Cntrl.pdf for propsed text.

Also,  
 Delete P105L12/26/2026 The structure of the special control block is as shown in Figure 201-15.

Delete Figure 201-15.

Delete P105L13: The message and PHY capability fields are as specified in 149.4.2.4.4 and 149.4.2.4.5.

Cl 201 SC 201.5.2.7 P 114 L 38 # 98

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PHY Cntrl

The description in this clause and Clause 201.5.2.6.5 do not take into account the asymmetric nature of the link and that the capability bits are not symmetric. All the bits in Clause 201.5.2.6.5 apply to Clause 201.5.2.7, but they do not all apply to 201.5.2.6.5.

**SuggestedRemedy**

Move the description of Capability bits under Clause 201.5.2.7, and clearly state which bits apply to the HS\_PATH as well.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See #318

See 201\_LS\_PHY\_Cntrl.pdf for new subclause text.

Cl 201 SC 201.5.2.7 P 114 L 38 # 97

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

Clause 201.5.2.6.4 is about Message Field, not capability bits.

**SuggestedRemedy**

Remove reference to 201.5.2.6.4

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 201 SC 201.5.2.7 P 114 L 40 # 99

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PHY Cntrl

The text "All reserved fields shall be set to 0" is does not have a clear scope, but presumably applies to the "Message and PHY Capability". Specifying specific values for the Reserved bits serves no purpose and can lead to interoperability issues if receiver relies on these values having specific values.

**SuggestedRemedy**

Remove the text "All reserved fields shall be set to 0."

Proposed Response Response Status W

PROPOSED REJECT.

If you look at other Clauses in 802.3, they always state what the reserved bits are set to, but don't have requirements as to what they are read as.

Cl 201 SC 201.5.2.8.1 P 114 L 53 # 100

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D Startup

The Auto-Negotiation must also provide methods to identify PHY\_S vs PHY\_D

**SuggestedRemedy**

Change the text "the source of control (via link\_control) and LEADER-FOLLOWER" to "the source of control (via link\_control), PHY\_D\_PHY\_S, and LEADER-FOLLOWER"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: the source of control (via link\_control) and LEADER-FOLLOWER

to: the source of control (via link\_control), PHY\_D, PHY\_S, and LEADER-FOLLOWER

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CI 201 SC 201.5.2.8.1 P 115 L 8 # 101  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D Startup  
 This text and Figure 201-22 should be updated to send the PHY back to Link Sync if error is detected during training.  
 SuggestedRemedy  
 Change "SILENT state" to "TRAINING\_FAILURE state"  
 Proposed Response Response Status Z  
 PROPOSED REJECT.  
 This comment was WITHDRAWN by the commenter.  
 Duplicate comment

CI 201 SC 201.5.2.8.1 P 115 L 17 # 102  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D Startup  
 The training time should be cut in half.  
 SuggestedRemedy  
 In tables 201-110 and 201-11, change "40" to "20" and "95.975" to "45.975"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 TFTD  
 Make the following changes in Table 201-10.  
 Change 40 – 0.384 / S to 20  
 Change 95.975 – 0.384 / S to 45.975 - 0.384  
 Change 0.384 / S to 0.384  
 Change 1.025 to 0.525  
 Change 97 to 46.5  
 Make the following changes in Table 201-11.  
 Change 40 to 20  
 Change 95.975 – 0.384 / S to 45.975 - 0.384  
 Change 0.384 / S to 0.384  
 Change 1.025 to 0.525  
 Change 97 to 46.5

CI 201 SC 201.5.2.8.1 P 115 L 23 # 266  
 Fuller, Paul Infineon  
 Comment Type T Comment Status D Startup  
 97ms should be 50ms  
 SuggestedRemedy  
 97ms should be 50ms  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See #102.

CI 201 SC 201.5.2.8.1 P 115 L 36 # 267  
 Fuller, Paul Infineon  
 Comment Type T Comment Status D Startup  
 97ms should be 50ms  
 SuggestedRemedy  
 97ms should be 50ms  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See #102.

CI 201 SC 201.5.2.8.2 P 116 L 6 # 103  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D EZ  
 The definition of "infofield\_complete" applies equally in both directions.  
 SuggestedRemedy  
 Remove the text "for HS\_PATH"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Add after HS\_PATH: and see 201.5.2.7 for LS\_PATH.

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CI 201 SC 201.5.2.8.2 P 116 L 9 # 104

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PHY Cntrl

The transition from TRUE to FALSE needs to be clarified for infocfield\_complete

**SuggestedRemedy**

The taskforce needs to discuss what the correct criteria is for transitioning infocfield\_complete from TRUE to FALSE, to eliminate any ambiguity in Figure 201-22

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

CI 201 SC 201.5.2.8.2 P 116 L 22 # 105

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PHY Cntrl

The statement "loc\_countdown\_done This variable is set to FALSE when the PHY Control state diagram is in the DISABLE\_TRANSMITTER state" should be reflected in Figure 201-22

**SuggestedRemedy**

Update DISABLE\_TRANSMITTER state in Figure 201-22 to include "loc\_countdown\_done<=FALSE"

Proposed Response Response Status W

PROPOSED ACCEPT.

See Markup of Figure 201-22 and Figure 201-26\_02262026.drawio.pdf.

CI 201 SC 201.5.2.8.2 P 116 L 52 # 106

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D PHY Cntrl

The term "Allows" is too weak, and there should also be a reference to clause 201.5.2.1, where the variable is described.

**SuggestedRemedy**

Change "Allows reset of the PHY Control and Link Monitor state diagrams" to "Forces reset of the PHY Control and Link Monitor state diagrams (see Clause 201.5.2.1)"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: Allows reset of the PHY Control and Link Monitor state diagrams

To: Forces reset of the PHY Control and Link Monitor state diagrams (see 201.5.2.1).

CI 201 SC 201.5.2.8.2 P 117 L 18 # 119

Lo, William Axonne Inc.  
 Comment Type T Comment Status D PHY Cntrl

The editorial note is correct.

**SuggestedRemedy**

Use the rem\_countdown\_done definition in the editorial note to replace the current one in lines 19-21. Delete the editorial note.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.5.2.8.2 P 117 L 42 # 148

Pandey, Sujan Velinktech  
 Comment Type T Comment Status D PHY Cntrl

This value is asserted when transmission of zero symbols is to take place

**SuggestedRemedy**

This value is continuously asserted in case transmission of zeros is required

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.5.2.8.3 P 117 L 50 # 107

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PHY Cntrl

The minwait\_timer only partially affects the minimum amount of time the PHJY stays in PCS\_TEST, and does not affect the time that the PHY Control stays in PCS\_DATA.

**SuggestedRemedy**

Change "A timer used to determine the minimum amount of time the PHY Control stays in the SILENT, TRAINING, PCS\_TEST, and PCS\_DATA states" to "A timer used to determine the minimum amount of time the PHY Control stays in the SILENT and TRAINING states, and the minimum time it stays in PCS\_TEST state before normal transition to the PCS\_DATA state"

Proposed Response Response Status W

PROPOSED ACCEPT.

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CI 201 SC 201.5.2.8.4 P 118 L 5 # 108

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PHY Cntrl

Figure 201-22 should be updated based on discussions in the January meeting and follow-up discussions.

**SuggestedRemedy**

Add new "TRAINING\_FAILURE" state and have "error transitions" transition to this new state instead of "SILENT" state. Also make updates figure 201-26 to have transition from LINK\_GOOD\_CHECK to TRANSMIT\_DISABLE when PHY Control enters TRAINING\_FAILURE.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

In Figure 201-26, add an arrow from LINK\_GOOD\_CHECK to TRANSMIT\_DISABLE with the condition "TRAINING\_FAILURE = TRUE".

See Markup of Figure 201-22 and Figure 201-26\_02262026.drawio.pdf.

CI 201 SC 201.5.2.8.4 P 118 L 6 # 211

Abedinzadeh, Bizhan Infineon  
 Comment Type T Comment Status D PHY Cntrl

Figure 201-17 should remove restart paths from PCS\_TEST/TX\_SWITCH/COUNT\_DOWN to SILENT.

**SuggestedRemedy**

Restart should cause restart from LINK SYNC. The included PDF shows the requested changes in state machine to allow desired transition

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

This is in 201.5.2.8.4, P118/L6, Figure 201-22 in D0.b.

TFTD see presentation

See Markup of Figure 201-22 and Figure 201-26\_02262026.drawio.pdf.

CI 201 SC 201.5.2.8.4 P 118 L 24 # 122

Lo, William Axonne Inc.  
 Comment Type T Comment Status D PHY Cntrl

Clarify intent of infofield\_complete.

**SuggestedRemedy**

Add:  
 infofield\_complete <= FALSE as the first statement in the TRAINING and COUNTDOWN states

Proposed Response Response Status W

PROPOSED ACCEPT.

See Markup of Figure 201-22 and Figure 201-26\_02262026.drawio.pdf.

CI 201 SC 201.5.2.8.4 P 118 L 33 # 120

Lo, William Axonne Inc.  
 Comment Type T Comment Status D PHY Cntrl

info\_field\_complete should also apply to the HS\_PATH in the transition from COUNTDOWN to TX\_SWITCH

**SuggestedRemedy**

Change the transition condition to:  
 ((phy\_role = PHY\_S \* loc\_countdown\_done) + (phy\_role = PHY\_D))\* infofield\_complete

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Consider #109 & #120 together.

See Markup of Figure 201-22 and Figure 201-26\_02262026.drawio.pdf.

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CI 201 SC 201.5.2.8.4 P 118 L 33 # 109

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PHY Cntrl

Figure 201-22 should be updated based on discussions in the January meeting and follow-up discussions.

*SuggestedRemedy*

Change the transition condition from COUNTDOWN to TX\_SWITCH to eliminate the infield\_complete from the PHY\_D path but add it to the PHY\_S path.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Consider #109 & #120 together.

In the transition from COUNTDOWN to TX\_SWITCH, change the condition to:  
 (phy\_role = PHY\_S \* loc\_countdown\_done \* infield\_complete) + phy\_role = PHY\_D

See Markup of Figure 201-22 and Figure 201-26\_02262026.drawio.pdf.

CI 201 SC 201.5.2.9 P 119 L 11 # 110

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The wording "During this period" is ambiguous.

*SuggestedRemedy*

Change "During this period" to "While in LINK\_DOWN state"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.5.2.9 P 119 L 15 # 111

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The wording "As soon as reliable transmission is achieved" lacks clarity

*SuggestedRemedy*

Change "As soon as reliable transmission is achieved" to "When pcs\_data\_mode is TRUE"

Proposed Response Response Status W

PROPOSED ACCEPT.

Changed line to 15.

CI 201 SC 201.5.2.9 P 119 L 16 # 112

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The text "upon which further PHY operations can take place" is either meaningless or ambiguous.

*SuggestedRemedy*

Remove the text "upon which further PHY operations can take place"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.5.2.10 P 120 L 4 # 195

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D EZ

This section describes the link synchronization, but lacks the simple requirement that the state diagram (Figure 201-26) shall be followed.

*SuggestedRemedy*

Change "shall establish the start of PHY PMA training as defined in 201.5.2.7." to "shall conform to the state diagram in Figure 201-26. This section describes and defines the function of Figure 201-26, the link synchronization process."

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.5.2.10 P 120 L 30 # 113

Jonsson, Ragnar Infineon  
 Comment Type E Comment Status D EZ

The term "SEND\_S pulse" is used without any explanation what "SEND\_S pulse" means.

*SuggestedRemedy*

Add the text "The SEND\_S signal is a series of pulses." before line 30

Proposed Response Response Status W

PROPOSED ACCEPT.

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CI 201 SC 201.5.2.10 P 120 L 33 # 136

Zherebtsov, Aleksei Infineon

Comment Type E Comment Status D DME

The sentence at this line is "At the FOLLOWER each DME symbol time is nominally 25.6/3 ns +1/-20%." But -20% is related to the clock frequency, not the clock period. The clock frequency offset -20% corresponds to the clock period offset +25%.

*SuggestedRemedy*

The sentence "At the FOLLOWER each DME symbol time is nominally 25.6/3 ns +1/-20%." shall be changed to "At the FOLLOWER each DME symbol time is nominally 25.6/3 ns +25/-1%."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: each DME symbol time is nominally 25.6/3 ns +1/-20%.

To: each DME symbol time is 25.6/3 ns +25/-1%.

CI 201 SC 201.5.2.10 P 120 L 33 # 114

Jonsson, Ragnar Infineon

Comment Type T Comment Status D clock accuracy

The text "± 50 ppm" is not consistent with the ± 100 ppm in Table 201-4

*SuggestedRemedy*

Change "± 50 ppm" to "± 100 ppm"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: each DME symbol time is nominally 25.6/3 ns (8.533 ns) ± 50 ppm.

To: each DME symbol time is 25.6/3 ns (8.533 ns) ± 100 ppm.

Also change on P133L3, P140L45.

CI 201 SC 201.5.2.10 P 120 L 40 # 197

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe

Comment Type E Comment Status D EZ

The 5th paragraph here has shalls which duplicate what is in the state diagram. They should be replaced by descriptive text.

*SuggestedRemedy*

Replace "shall output" at lines 42 and 44 with "outputs"

Replace "shall repeat" at line 45 with "repeats"

Replace "shall stop outputting and enter" at lines 46-47 with "stops outputting and enters"

Replace "shall also enter" at line 48 with "enters"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See zimmerman\_3dm\_01\_240226 and GZ\_Comment\_linksync.pdf.

Update text and Figure 201-26 in 201.5.2.10 and subclauses to match GZ\_Comment\_linksync.pdf.

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CI 201 SC 201.5.2.10 P 120 L 41 # 196

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D link sync

The text here includes a delay for the FOLLOWER sending out a SEND\_S pulse that conflicts with the state diagram. Assuming this is the intended behavior, the state diagram needs to be corrected.

*SuggestedRemedy*

NOTE - the below is closer but almost surely wrong - A presentation will be provided.

Add new timer to 201.5.2.10.2 (P122 L22):

send\_s\_delay\_timer

This timer is used to delay the Follower's transmission to sending SEND\_S after it has detected SEND\_S from the Leader. The timer shall expire 435 +90/-10 ns after it is started.

Add new state between SIGDET\_WAIT and TX\_SEND\_S (replacing current exit from SIGDET\_WAIT to TX\_SEND\_S), on exit condition from SIGDET\_WAIT of "send\_s\_sigdet"

State name: "SEND\_S DELAY"

State action: start send\_s\_delay\_timer

Exit: to TX\_SEND\_S on condition send\_s\_delay\_timer\_done

Like I said, a presentation will be submitted - the above is closer, but probably wrong.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See zimmerman\_3dm\_01\_240226 and GZ\_Comment\_linksync.pdf.

Update text and Figure 201-26 in 201.5.2.10 and subclauses to match GZ\_Comment\_linksync.pdf.

CI 201 SC 201.5.2.10.1 P 122 L 1 # 198

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D link sync

The conditions for what TRUE and FALSE mean are contained as 'shalls' in the variable description for send\_s\_sigdet. Since the state diagram is one 'shall' this makes it a redundant requirement, and isn't good style.

*SuggestedRemedy*

Delete Text (2 sentences) from "At least 3 consecutive... to "setting this variable from TRUE to FALSE".

Change definitions of TRUE and FALSE to:

TRUE: At least 3 consecutive valid SEND\_S pulses have been detected.

FALSE: No SEND\_S pulses have been detected for at least 3.1 us.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See zimmerman\_3dm\_01\_240226 and GZ\_Comment\_linksync.pdf.

Update text and Figure 201-26 in 201.5.2.10 and subclauses to match GZ\_Comment\_linksync.pdf.

CI 201 SC 201.5.2.10.1 P 122 L 2 # 115

Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D link sync

The description "At least 3.1µs period with no SEND\_S pulses detected shall be detected before setting this variable from TRUE to FALSE" can lead to the state machine staying erroneously in the SEND\_S state, in the presence of EMI pulses.

*SuggestedRemedy*

Change "At least 3.1µs period with no SEND\_S pulses detected shall be detected before setting this variable from TRUE to FALSE" to "If less than three pulses are detected within a 5.1us period, the send\_s\_sigdet transitions from TRUE to FALSE"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See zimmerman\_3dm\_01\_240226 and GZ\_Comment\_linksync.pdf.

Update text and Figure 201-26 in 201.5.2.10 and subclauses to match GZ\_Comment\_linksync.pdf.

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CI 201 SC 201.5.2.10.2 P 122 L 20 # 210  
 Abedinzadeh, Bizhan Infineon  
 Comment Type T Comment Status D link sync  
 Link\_fail\_inhbit\_timer be reduced to 50ms  
 SuggestedRemedy  
 Change to 50ms  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See #116

CI 201 SC 201.5.2.10.2 P 122 L 21 # 116  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D link sync  
 The link\_fail\_inhibit\_timer should expire after 50ms.  
 SuggestedRemedy  
 Add to line 21 "The link\_fail\_inhibit\_timer is initialized to 50ms".  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 The correct line number is 21.  
 Consider #114 and #116 together.

CI 201 SC 201.5.2.10.3 P 122 L 36 # 149  
 Pandey, Sujjan Velinktech  
 Comment Type T Comment Status D link sync  
 Transmit a zero value  
 SuggestedRemedy  
 This value is continuously asserted in case transmission of zeros is required  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.5.2.11 P 124 L 4 # 12  
 Long, Richard TE Connectivity  
 Comment Type E Comment Status D EZ  
 Typo  
 SuggestedRemedy  
 Change "LS\_PATEH" to "LS\_PATH"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.6.1 P 124 L 34 # 184  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ  
 SuggestedRemedy  
 Delete Editor's note  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.6.1.1 P 126 L 17 # 252  
 Sakunia, Saket Infineon  
 Comment Type E Comment Status D EZ  
 replace "...use a reference clock provided by the measurement device" with "...use a reference clock provided by an external clock source"  
 SuggestedRemedy  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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Cl 201 SC 201.6.1.1 P 126 L 34 # 253  
 Sakunia, Saket Infineon  
 Comment Type E Comment Status D EZ  
 replace "...use a reference clock provided by the measurement device" with "...use a reference clock provided by an external clock source"  
 SuggestedRemedy  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.6.1.1 P 127 L 35 # 254  
 Sakunia, Saket Infineon  
 Comment Type E Comment Status D EZ  
 replace "...use a reference clock provided by the measurement device" with "...use a reference clock provided by an external clock source"  
 SuggestedRemedy  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.6.1.1 P 128 L 11 # 255  
 Sakunia, Saket Infineon  
 Comment Type E Comment Status D EZ  
 replace "...use a reference clock provided by the measurement device" with "...use a reference clock provided by an external clock source"  
 SuggestedRemedy  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.6.2 P 128 L 25 # 3  
 Maguire, Valerie Copperopolis; affl w/ CME Consulting, Microchip, an  
 Comment Type E Comment Status D EZ  
 Follow IEEE Style  
 IEEE Editorial Style Manual for Authors  
<https://journals.ieeeauthorcenter.ieee.org/wp-content/uploads/sites/7/IEEE-Editorial-Style-Manual-for-Authors.pdf>  
 Page 28 - listed in abbreviation list

2021 IEEE SA Standards Style Manual  
<https://mentor.ieee.org/myproject/Public/mytools/draft/styleman.pdf>  
 Page 29 - used with lowercase in an example  
 SuggestedRemedy  
 Replace "DC" with "dc" in three locations:  
 P128, L25  
 P136, L32  
 P227, L35  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.6.2.2 P 128 L 43 # 251  
 Sakunia, Saket Infineon  
 Comment Type T Comment Status D ACT test  
 Comment 240 draft 0.a. Update: Transmitter Linearity test. Test Mode 4 measurement is impacted by presence of PoC/PoDL components. The measurement method needs to be updated to account for presence of PoC/PoDL components  
 SuggestedRemedy  
 Comment 240 draft 0.a. Update resolution: The method used calculate the Transmitter Linearity needs to introduce a High Pass Filter corresponding to the High Pass corner of the PoC/PoDL circuit .  
 Proposed Response Response Status W  
 PROPOSED REJECT.

This is 201.6.2.2, P128/L43 in D0.b.  
 TFTD if a solution is provided by the commenter.  
 The commenter has not provided a solution.

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CI 201 SC 201.6.2.2 P 128 L 43 # 201  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status D EZ  
 149.7.2 only has descriptive text. Saying they "shall be as specified" is inappropriate.  
 SuggestedRemedy  
 Change "shall be as specified in 149.7.2." to "are described in 149.7.2."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Corrected to 201.6.2.2, P128/L43

CI 201 SC 201.6.2.4 P 130 L 34 # 199  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status D EZ  
 The way a PSD is measured isn't a requirement on the device, it is a requirement on the user of the standard, which is not appropriate. Measuring a device is different from whether the device is compliant...  
 The same comment applies to 201.7.2.5 (LS transmitter PSD) as well, on P138  
 SuggestedRemedy  
 Change "shall be measured" to "is measured" at P130 L34 and at P138 L18  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.6.2.6 P 133 L 3 # 84  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D clock accuracy  
 There is inconsistency between the +/-100ppm in Table 201-4 and the +/-50ppm in clause 201.6.2.6  
 SuggestedRemedy  
 Keep the +/-100ppm in Table 201-4 and change the +/-50ppm value in line 3 of page 133 to +/-100ppm.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.6.2.6 P 133 L 7 # 176  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type E Comment Status D EZ  
 According to the IEEE Standards - draft standard template, there should not be a space between a number and the % symbol, e.g. 10%, not 10 %.  
 SuggestedRemedy  
 Remove the space between "20" and "%". Remove all spaces between the number and the % symbol.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 Val to check 202.

CI 201 SC 201.6.2.6 P 133 L 7 # 138  
 Johnson, Samuel Infineon  
 Comment Type T Comment Status D EZ  
 "short-term" is vague and should be specially defined to a reasonable value  
 SuggestedRemedy  
 Change the text to:  
 "The symbol transmission rate of the FOLLOWER PHY, when running off of a free-running clock, shall be within the range 5625 x S MHz +/-20% and, over measuring period of 1ms, frequency variation shall be less than 1% / second  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.7.1 P 136 L 2 # 185  
 Wienckowski, Natalie IVN Solutions LLC / Ethernovia  
 Comment Type T Comment Status D EZ  
 Change text to clarify what is sent.  
 SuggestedRemedy  
 Change: When test mode 2 is enabled, the PCS shall generate a continuous pattern of 1's.  
 To: When test mode 2 is enabled, the PHY shall repeatedly transmit DME encoded ones.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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CI 201 SC 201.7.2.5 P 138 L 42 # 186

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type T Comment Status D EZ

The Figure was updated for the UpperPSD to go to 3500 MHz, but this was not changed in Equation 201-9.

SuggestedRemedy

In Equation 201-9, change 400 to 3500.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.7.2.6 P 140 L 32 # 187

Wienckowski, Natalie IVN Solutions LLC / Ethernovia

Comment Type E Comment Status D EZ

typo

SuggestedRemedy

Change 100M to 100 Mb/s. Also on L36.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.7.2.8 P 140 L 52 # 200

Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe

Comment Type E Comment Status D EZ

The way rise time is measured isn't a requirement on the device, but an inappropriate requirement on the user. Here though, the measurement point and test mode are part of the definition of the requirement.

SuggestedRemedy

Change "shall be measured" to "is defined as measured"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.10.1.5 P 145 L 2 # 13

Long, Richard TE Connectivity

Comment Type T Comment Status D EZ

Use piecewise equation here instead of text

SuggestedRemedy

Remove the limits from the text and place them in a piecewise equation

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Create an equation and a plot of the equation to put in the text.

CI 201 SC 201.10.2.1 P 145 L 16 # 15

Long, Richard TE Connectivity

Comment Type T Comment Status D EZ

Add PSANEXT formula and explanation text similar to 202.8.2.1

SuggestedRemedy

Copy page 240, lines 6 - 18 and place here, change frequency range to 3 MHz to 4000 MHz in added text.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

P145/L17 Insert the following between the heading and existing text:

The differential pair-to-pair near-end crosstalk (NEXT) loss between the disturbed link segment and the disturbing link segment is specified to meet the bit error ratio objective by limiting the alien crosstalk at the near end of a link segment. Multiple disturber alien NEXT loss is specified as the power sum of the individual alien NEXT disturbers. The power ANEXT loss is derived using Equation (97-25).

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CI 201 SC 201.10.2.1 P 145 L 22 # 14  
 Long, Richard TE Connectivity  
 Comment Type T Comment Status D EZ  
 Error in equation  
 SuggestedRemedy  
 Change PSANEXT equation to what is shown on slide 3 of  
[https://www.ieee802.org/3/dm/public/0126/Boyer-Sharma\\_3dm\\_01a\\_0126.pdf](https://www.ieee802.org/3/dm/public/0126/Boyer-Sharma_3dm_01a_0126.pdf) (i.e. remove "75" and "80" from the formula)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: 6075,6080  
 To: 60,60

CI 201 SC 201.10.2.2 P 146 L 9 # 16  
 Long, Richard TE Connectivity  
 Comment Type T Comment Status D EZ  
 Error in equation  
 SuggestedRemedy  
 Change PSAACRF equation to what is shown on slide 3 of  
[https://www.ieee802.org/3/dm/public/0126/Boyer-Sharma\\_3dm\\_01a\\_0126.pdf](https://www.ieee802.org/3/dm/public/0126/Boyer-Sharma_3dm_01a_0126.pdf) (i.e. remove "75" and "80" from the formula)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: 6075,6080  
 To: 60,60

CI 201 SC 201.10.2.2 P 146 L 1 # 17  
 Long, Richard TE Connectivity  
 Comment Type T Comment Status D EZ  
 Add PSAACRF formula and explanation text similar to 202.8.2.2  
 SuggestedRemedy  
 Copy page 241, lines 3 - 21 and place here, change frequency range to 3 MHz to 4000 MHz in added text.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 P146/L4 Insert the following between the heading and existing text:  
 In order to limit the alien crosstalk at the far-end of a link segment, the differential pair-to-pair alien far-end crosstalk (FEXT) loss between the disturbed link segment and the disturbing link segment is specified to meet the bit error ratio objective. Multiple disturber attenuation to crosstalk ratio far-end ACRF is specified as the power sum of the individual alien ACRF disturbers to limit the total alien FEXT coupled into a link segment. The power AACRF is derived using Equation (97–27).

CI 201 SC 201.14 P 151 L 1 # 202  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D EZ  
 The PHY link includes the medium. The specification is only on the PHY sublayer processing. This impacts both the spec on line 1 (HS\_PATH) and line 5 (LS\_PATH).  
 SuggestedRemedy  
 change "PHY link" to "PHY (local XGMII to remote XGMII link delay minus the link segment propagation delay)" in lines 1 and 5.  
 Delete the NOTE on line 9 (in its entirety).  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.14 P 151 L 10 # 125  
 Lo, William Axonne Inc.  
 Comment Type T Comment Status D 201A  
 Add a pointer to see Annex 201  
 SuggestedRemedy  
 Add following Sentence:  
 See Annex 201 for informative guidance on the allocation of delay between the transmit and receive portions of the PHY.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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CI 201 SC 201.14 P 151 L 26 # 268  
 Fuller, Paul Infineon  
 Comment Type T Comment Status D 100M delay  
 Delay should be 10us and 2 Pause Quanta  
 SuggestedRemedy  
 Delay should be 10us and 2 Pause Quanta  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See #124 for preferred values.

CI 201 SC 201.14 P 151 L 27 # 124  
 Lo, William Axonne Inc.  
 Comment Type T Comment Status D 100M delay  
 Replace TBD values  
 SuggestedRemedy  
 512, 1, 5120  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.14 P 151 L 27 # 156  
 Wienckowski, Natalie IVN Solutions LLC / Ethernetovia  
 Comment Type E Comment Status D EZ  
 typo  
 SuggestedRemedy  
 Change: 100M\_MultiGBAE-T1/V1  
 To: 100M+MultiGBAE-T1/V1  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.14 P 151 L 32 # 126  
 Lo, William Axonne Inc.  
 Comment Type T Comment Status D 201A  
 Remove editor's note with Annex 201  
 SuggestedRemedy  
 See Lo\_3dm\_Annex201.pdf  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 TFTD

CI 202 SC 202 P 155 L 3 # 256  
 Gorshe, Steve Microchip Technology  
 Comment Type T Comment Status D new speed  
 Add support for 100M+1GBASE-T1/V1 and 1G+100mBASE-T1/V1  
 SuggestedRemedy  
 Apply the updates from Gorshe-1G\_8023-202-d0pb.docx, with editorial license.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 TFTD

Apply the updates from Gorshe-7d5G\_8023-202-d0pb.docx and gorshe\_3dm\_03\_0326-draft.pptx, with editorial license.

CI 202 SC 202 P 155 L 3 # 257  
 Gorshe, Steve Microchip Technology  
 Comment Type T Comment Status D new speed  
 Add support for 100M+7.5GBASE-T1/V1 and 7.5G+100mBASE-T1/V1  
 SuggestedRemedy  
 Apply the updates from Gorshe-7d5G\_8023-202-d0pb.docx, with editorial license.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

TFTD  
 Apply the updates from Gorshe-7d5G\_8023-202-d0pb.docx and gorshe\_3dm\_03\_0326-draft.pptx, with editorial license.

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Cl 202 SC 202.1 P 155 L 18 # 258

Gorshe, Steve

Microchip Technology

Comment Type E Comment Status D intro

Add an overview description

*SuggestedRemedy*

Delete the Editor's note and add the following summary paragraph ahead of 202.1.1 (with Editor's license): "The clause 202 MultiG+100MBASE/100MBASE+MultiG-T1/V1 PCS is optimized to support a single, flexible PHY with multiple rate options. It features baud rate commonality across all high-speed and low-speed PHY types. This commonality includes using the same TDD cycle for all PHY combinations (see 202.3), as well as the same base FEC with different shortening parameters for the high-speed and low-speed directions."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Clarify where to insert this text, replace "PCS" with "PHY", replace "PHY types" with "PHY implementations", and replace "PHY combinations" with "PHY implementations". Streamline text in first sentence. "low speed" and "high speed" is used predominantly in the document.)

Delete Editor's Note on P155, L24-34

Insert the following text on P156, L15:

"The MultiG+100MBASE/100MBASE+MultiG-T1/V1 PHY is optimized to support multiple rate options. It features baud rate commonality across all high-speed and low-speed PHY implementations. This commonality includes using the same TDD cycle for all PHY implementations (see 202.3), as well as the same base FEC with different shortening parameters for the high speed and low speed directions."

Editors to replace "high-speed" with "high speed" in two locations in clause 201 and "low-speed" with "low speed" in two locations in clause 201.

Cl 202 SC 202.1.1 P 156 L 18 # 4

Maguire, Valerie

Copperopolis; affl w/ CME Consulting, Microchip, an

Comment Type E Comment Status D intro

Just saying "X+Y" is a little unclear. Suggest to add an example.

*SuggestedRemedy*

Replace, "represents the transmit and receive bit rates in the PHY name, where X is the transmit bit rate and Y is the receive bit rate"

with, "Replace, "represents the transmit and receive bit rates in the PHY name, where X is the transmit bit rate and Y is the receive bit rate (e.g., for 100M+2.5GBASE-T1, X = 100 Mb/s and Y = 2.5 Gb/s)"

Grant Editor's License to make this same change in other clauses

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Typo - extra "Replace, " in Suggested Remedy corrected.)

Replace, "represents the transmit and receive bit rates in the PHY name, where X is the transmit bit rate and Y is the receive bit rate"

with, "represents the transmit and receive bit rates in the PHY name, where X is the transmit bit rate and Y is the receive bit rate (e.g., for 100M+2.5GBASE-T1, X = 100 Mb/s and Y = 2.5 Gb/s)"

Grant Editor's License to make this same change in other clauses

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CI 202 SC 202.1.1 P 156 L 20 # 5

Maguire, Valerie Copperopolis; affl w/ CME Consulting, Microchip, an

Comment Type E Comment Status D EZ

Don't need to have balanced twice in the line for -T1.

The information in parenthesis is "in other words", so "i.e.," should be used.

The double parenthesis bothers the Commenter. :-)

*SuggestedRemedy*

Replace, "-T1 represents a single shielded balanced pair of conductors (differential (balanced))"

With, "-T1 represents a single shielded balanced pair of conductors (i.e., differential)"

Replace, "-V1 represents a single coaxial cable (single-ended (unbalanced))"

With, "-V1 represents a single-ended coaxial cable (i.e., unbalanced)"

Grant Editor's License to make this same change in other clauses.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.1.1 P 156 L 45 # 1

Maguire, Valerie Copperopolis; affl w/ CME Consulting, Microchip, an

Comment Type E Comment Status D intro

Introduce -T1, -V1, and -T1/V1 as shorthand for when talking about MultiG+100M/100M+MultiGBASE-T1, MultiG+100M/100M+MultiGBASE-V1, and MultiG+100M/100M+MultiGBASE-T1/V1, respectively.

*SuggestedRemedy*

Replace, "MultiG+100M/100M+MultiGBASE-T1" with "MultiG+100M/100M+MultiGBASE-T1 or -T1"

Replace, "MultiG+100M/100M+MultiGBASE-V1" with "MultiG+100M/100M+MultiGBASE-V1 or -V1"

Replace, "MultiG+100M/100M+MultiGBASE-T1/V1" with "MultiG+100M/100M+MultiGBASE-T1/V1 or -T1/V1"

Grant Editor's License to make this same change in other clauses.

When speaking about the link segment or the MDI (but not the PHY), Grant Editors license to search for "MultiG+100M/100M and MultiGBASE-T1/V1" and "MultiG+100M/100M+MultiGBASE-T1/V1" and replace with "-T1/V1" as appropriate.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.1.3 P 158 L 3 # 213

Muma, Scott Microchip

Comment Type T Comment Status D TDD Autoneg

Since Clause 98 AN support is not defined, remove "Technology Dependent Interface" from this and other diagrams and text, and remove the PMA\_Link.indication (link\_status) and PMA\_Link.request(link\_control). Link\_control and link\_status are internal to the PHY or management connected.

*SuggestedRemedy*

Delete "Technology Dependent Interface (optional)", the dashed line below it, and the PMA\_Link.\* signal connections to the dashed line from Figure 202-1

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 202 SC 202.1.3 P 158 L 50 # 218

Muma, Scott Microchip  
 Comment Type T Comment Status D EZ

Typically similar clauses have a note indicating the recovered\_clock can be used for looptiming.

*SuggestedRemedy*

Below Figure 202-1 add:  
 NOTE 1-The recovered\_clock arc is shown to indicate delivery of the received clock signal back the PMA TRANSMIT for loop timing.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Hyphen changed to em-dash. Number 1 not needed if only one note. Note can be added below Figure 202-22. too.)

Add at the bottom of Figure 202-1 and Figure 202-22:  
 "NOTE-The recovered\_clock arc is shown to indicate delivery of the received clock signal back the PMA TRANSMIT for loop timing."

CI 202 SC 202.2.1 P 162 L 39 # 237

Muma, Scott Microchip  
 Comment Type T Comment Status D EZ

The following primitives were defined, but are not used and no longer needed, so can be removed from this section and from the diagrams.  
 PMA\_TX\_TDD\_ACTIVE.indication(tx\_tdd\_active)  
 PMA\_RX\_TDD\_ACTIVE.indication(rx\_tdd\_active)  
 PMA\_TX\_ON.request(tx\_on)  
 PMA\_RX\_ON.request(rx\_on)

*SuggestedRemedy*

1. Remove:  
 PMA\_TX\_TDD\_ACTIVE.indication(tx\_tdd\_active)  
 PMA\_RX\_TDD\_ACTIVE.indication(rx\_tdd\_active)  
 PMA\_TX\_ON.request(tx\_on)  
 PMA\_RX\_ON.request(rx\_on)  
 from the list of primitives.
2. Remove the deleted primitives from all diagrams
3. Delete the subclauses defining these primitives 202.2.1.10, 202.2.1.11, 202.2.1.12, and 202.2.1.13.
4. Delete related variables tx\_tdd\_active, rx\_tdd\_active, rx\_on, tx\_on in sections 202.3.7.2.2 and 202.4.4.1.
5. Remove tx\_tdd\_active from Figure 202-26
6. Remove the editor's notes that are in the sections being deleted which noted these primitives were TBD/redundant.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.2.1 P 163 L 2 # 214

Muma, Scott Microchip  
 Comment Type T Comment Status D TDD Autoneg

Since Clause 98 AN support is not defined, remove "Technology Dependent Interface" from this and other diagrams and text, and remove the PMA\_Link.indication (link\_status) and PMA\_Link.request(link\_control). Link\_control and link\_status are internal to the PHY or management connected.

*SuggestedRemedy*

Delete "Technology Dependent Interface (optional)", the dashed line below it, and the PMA\_Link.\* signal connections to the dashed line from Figure 202-2

Proposed Response Response Status W

PROPOSED ACCEPT.

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CI 202 SC 202.2.1.3 P 165 L 32 # 272

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D EZ

as in Editor's Note: only describes normal operation, not training

SuggestedRemedy

change: "in training mode and in normal operation for all refresh header, 2.5Gb/s mode, and 5Gb/s mode data payloads."

to: "in normal operation for 100M+MultiGBASE-T1/V1, 2.5G+100MBASE-T1/V1, and 5G+100MBASE-T1/V1."

Proposed Response Response Status W

PROPOSED REJECT.

Commenter withdrew comment.

CI 202 SC 202.2.1.3.1 P 165 L 28 # 270

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D EZ

comma after "tx\_symb"

SuggestedRemedy

change "tx\_symb the value" to "tx\_symb, the value"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Commenter correctly identifies that this sentence reads awkwardly. Improved structure proposed.)

Replace, "During transmission, the PMA\_UNITDATA.request simultaneously conveys to the PMA via the parameter tx\_symb the value of the symbols to be sent over the MDI."

with, "The PMA\_UNITDATA.request primitive conveys the value of the symbol to be transmitted over the MDI via the tx\_symb parameter."

CI 202 SC 202.2.1.3.1 P 165 L 31 # 271

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D EZ

wording

SuggestedRemedy

change "10 Gb/s mode's data payload" to "10G+100MBASE-T1/V1"

Proposed Response Response Status W

PROPOSED REJECT.

Commenter withdrew comment.

CI 202 SC 202.2.1.4.2 P 166 L 10 # 273

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D EZ

The editor's note can be removed as the description had been reviewed and updated during last comment resolution (#142).

SuggestedRemedy

Remove editor's note.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.2.1.7 P 167 L 29 # 274

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D EZ

align with 149.2.2.7

SuggestedRemedy

remove "When the 100M+MultiGBASE-T1/V1 PHY starts Asymmetric training or enters the PCS\_TEST state, loc\_rcvr\_status can be set to NOT\_OK."

Proposed Response Response Status W

PROPOSED ACCEPT.

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CI 202 SC 202.2.1.14.2 P 172 L 6 # 275  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ  
 add text  
**SuggestedRemedy**  
 Add text: "PMA Receive generates PMA\_DET\_LP\_BURST.indication messages to indicate a change in detect\_lp\_burst."  
 Remove editor's note.  
**Proposed Response Response Status W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: No change to suggested Remedy except to delete double space after "Receive".)  
 Add text: "PMA Receive generates PMA\_DET\_LP\_BURST.indication messages to indicate a change in detect\_lp\_burst."  
 Remove editor's note.

CI 202 SC 202.2.1.14.3 P 172 L 13 # 276  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D TDD PCS  
 wording  
**SuggestedRemedy**  
 change: "Used by TDD monitor and PHYC control state diagram."  
 to: "The effect of receipt of this primitive is specified in Figure 202-26."  
 Remove editor's note.

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

CI 202 SC 202.3.2 P 173 L 19 # 222  
 Muma, Scott Microchip  
 Comment Type T Comment Status D EZ  
 The rx\_oam\_field and tx\_oam\_field don't need to be defined in this diagram as they differ for each PHY. Removing <TBD> in Figure 202-3 is consistent with Figure 202-1.  
**SuggestedRemedy**  
 In Figure 202-3 delete "<TBD>" in 2 places following rx\_oam\_field and tx\_oam\_field.  
**Proposed Response Response Status W**  
 PROPOSED ACCEPT.

CI 202 SC 202.3.2.2 P 174 L 9 # 240  
 Muma, Scott Microchip  
 Comment Type T Comment Status D TDD PCS  
 The PCS Payload Scrambler is more correctly called the PCS Scrambler.  
**SuggestedRemedy**  
 In Figure 202-4 change "PCS Payload Scrambler" to "PCS Scrambler"  
**Proposed Response Response Status W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: Only the first word in a figure item and figure title is capitalized unless it's a proper noun.)  
 In Figure 202-4 change "PCS Payload Scrambler" to "PCS scrambler"  
 Change Figure title to, "Figure 202-4-PCS Transmit function block diagram"

CI 202 SC 202.3.2.2 P 174 L 9 # 239  
 Muma, Scott Microchip  
 Comment Type T Comment Status D TDD PCS  
 Equation (202-4) defines Cn as the scrambled header data stream, but it is missing from Figure 202-4. An is produced during the data region, Cn is similarly produced during the refresh header region, so can add the Cn label at the same place as An. To be more explicit there could be a separate refresh header scrambler that produces Cn, and additional muxing, but this likely complicates the drawing without adding much clarity.

**SuggestedRemedy**  
 Change An in Figure 202-4 to "An/Cn".  
**Proposed Response Response Status W**  
 PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: "/" could be confused with a division operator.)  
 Change "An" in Figure 202-4 to "An or Cn".

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CI 202 SC 202.3.2.2 P 174 L 9 # 238

Muma, Scott Microchip  
 Comment Type T Comment Status D TDD PCS

The MUX block in the lower left area of Figure 202-4 is not required since there is no training performed in PAM4 mode and there is no source of Trn[1]; Dn[1] can go directly to the XOR to produce Bn as per (202-6).

*SuggestedRemedy*

As per comment remove the MUX and associated input wires in Figure 202-4 bottom left area, replace the output of the mux with Dn[1].

Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.2.2.16 P 183 L 25 # 18

Long, Richard TE Connectivity  
 Comment Type E Comment Status D EZ

Typo

*SuggestedRemedy*

Change "Reed-Soloman" to "Reed-Solomon"

Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.2.2.16 P 183 L 32 # 224

Muma, Scott Microchip  
 Comment Type T Comment Status D TDD PCS

LEADER and FOLLOWER are not relevant to the FEC encoding, but speed is, so delete the LEADER/FOLLOWER terms and replace with the appropriate speed.

*SuggestedRemedy*

Replace: k = 124 is adopted for the 100M+MultiG BASE-T1/V1 LEADER and k = 122 is adopted for the 100M+MultiG BASE-T1/V1 FOLLOWER.  
 with: k = 124 is adopted for the LS direction and k = 122 is adopted for the HS direction.

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: HS and LS acronyms are not used in the draft.)

Replace: k = 124 is adopted for the 100M+MultiG BASE-T1/V1 LEADER and k = 122 is adopted for the 100M+MultiG BASE-T1/V1 FOLLOWER.

with: k = 124 is adopted for the LS\_PATH and k = 122 is adopted for the HS\_PATH.

P183, L30  
 Replace, "In the HS direction" with "For the HS\_PATH"

P183, L35  
 Replace, "HS direction" with "HS\_PATH"

P183, L28  
 Replace, "In the LS direction" with "For the LS\_PATH"

P183, L35  
 Replace, "LS direction" with "LS\_PATH"

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CI 202 SC 202.3.2.2.16 P 184 L 15 # 223

Muma, Scott Microchip  
 Comment Type E Comment Status D TDD PCS

It should be noted that the formation of tx\_Rsmesssage is given for L=1 and is different for L=2, 4 due to the interleaving that precedes the FEC encoder(s).

SuggestedRemedy

1. Delete editor's note preceding text
2. Replace sentence with:  
 tx\_RSmesssage<975:0> prior to RS-FEC(128,122) encoder is formed as follows when L=1 (refer to 202.3.2.2.14 and 202.3.2.2.15 when L=2, 4):

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Improve grammar and align with Style.)

1. Delete editor's note preceding text
2. Replace sentence with:  
 tx\_RSmesssage<975:0> prior to RS-FEC(128,122) encoder is formed as follows for L=1 (see 202.3.2.2.14):
3. Insert new standalone sentence on P184, L20 after the equations, "For L=2 and L=4, see both 202.3.2.2.14 and 202.3.2.2.15."

CI 202 SC 202.3.2.2.16 P 185 L 39 # 277

Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ

Rows 7 and 8 of Table 202-4 can be removed.

SuggestedRemedy

remove the last two rows of Table 202-4

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.3.2.2.17 P 185 L 47 # 244

Muma, Scott Microchip  
 Comment Type T Comment Status D EZ

The scrambler used in Equation (202-4) should be clarified that it's the PRBS-11.

SuggestedRemedy

Add: DSn[0] in Equation (202-4) is produced using the scrambler defined in 202.3.4.1.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Insert:

"where

DSn[0] is produced using the scrambler defined in 202.3.4.1"

CI 202 SC 202.3.2.2.17 P 185 L 50 # 243

Muma, Scott Microchip  
 Comment Type T Comment Status D TDD PCS

Equation (202-4) should define when each equation is to be used. The upper equation is used when tx\_mode != SEND\_N, lower equation is used when tx\_mode = SEND\_N. See similar conditions in Equation (202-5).

SuggestedRemedy

After the upper equation add the condition "tx\_mode != SEND\_N". After the lower equation add the condition "tx\_mode = SEND\_N".

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.3.2.2.17 P 186 L 15 # 241

Muma, Scott Microchip  
 Comment Type E Comment Status D EZ

202-6 should be a cross-reference to Equation (202-6).

SuggestedRemedy

Format cross-reference appropriately.

Proposed Response Response Status W

PROPOSED ACCEPT.

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CI 202 SC 202.3.2.2.17 P 186 L 22 # 242  
 Muma, Scott Microchip  
 Comment Type T Comment Status D TDD PCS  
 Equation (202-6) is only used when tx\_mode=SEND\_N.  
 SuggestedRemedy  
 Add to equation the condition that tx\_mode=SEND\_N.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.2.2.17 P 186 L 24 # 245  
 Muma, Scott Microchip  
 Comment Type T Comment Status D TDD PCS  
 The scramblers used in Equations (202-5) and (202-6) should be clarified.  
 SuggestedRemedy  
 Add: DS<sub>n</sub> in Equations (202-5) and Equation (202-6) is produced using the scrambler defined in 202.3.4.2.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: DS<sub>n</sub> refers to DS<sub>n</sub>[0] and DS<sub>n</sub>[1].)  
 Insert the following sentence at the end of the paragraph on P186, L2:  
 "Bit DS<sub>n</sub>[0] is produced using the scrambler defined in 202.3.4.2. It is applied as an additive scrambler sequence to incoming data bit D<sub>n</sub>[0] (LSB) to generate the scrambled data bit, A<sub>n</sub>."  
 On P186, L14, replace:  
 Replace, "DS<sub>n</sub>[0] and DS<sub>n</sub>[1] are applied as additive scrambler sequences to incoming data bits D<sub>n</sub>[0] (LSB) and D<sub>n</sub>[1] (MSB) to generate two scrambled data bits {A<sub>n</sub>, B<sub>n</sub>} as shown in 202-6."  
 with, "Bits DS<sub>n</sub>[0] and DS<sub>n</sub>[1] in Equation (202-6) are produced using the scrambler defined in 202.3.4.2. They are applied as additive scrambler sequences to incoming data bits D<sub>n</sub>[0] (LSB) and D<sub>n</sub>[1] (MSB) to generate two scrambled data bits, A<sub>n</sub> and B<sub>n</sub>."

CI 202 SC 202.3.2.2.19 P 186 L 45 # 139  
 Zerna, Conrad NXP  
 Comment Type T Comment Status D TDD PCS  
 This is a carry-over from ch. Not needed in TDD.  
 SuggestedRemedy  
 Remove subsection 202.3.2.2.19  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Recommend discussion to confirm there's consensus regarding no need for any interoperable precoding before accepting.)

CI 202 SC 202.3.2.2.19 P 186 L 51 # 278  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 wording  
 SuggestedRemedy  
 change "The PCS transmit" to "The 10G+100MBASE-T1/V1 PCS transmit"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change "The PCS transmit" to "The 10G+100MBASE-T1/V1 PCS Transmit"  
 Editors to globally replace "PCS transmit function" with "PCS Transmit function"  
 Editors to globally replace "PCS receive function" with "PCS Receive function"  
 Editors to globally replace "PCS transmit process" with "PCS Transmit process"  
 Editors to globally replace "PCS receive process" with "PCS Receive process"  
 Delete Editor's Note on P186, L48

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CI 202 SC 202.3.2.3 P 188 L 29 # 279  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ  
 For "40 consecutive RS-FEC frame errors", there is no difference between LEADER and FOLLOWER.  
 SuggestedRemedy  
 remove "(TBD)" and Editor's Note  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.2.2 P 200 L 27 # 281  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 These two sentences can be removed because it is unexpected copied from 202.3.2.3 (line 28 on page 188).  
 SuggestedRemedy  
 remove "If 40 (TBD) consecutive RS-FEC frame errors are detected, the block\_lock flag is de-asserted. The block\_lock flag is re-asserted upon detection of a valid RS-FEC frame"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.2.3 P 190 L 40 # 246  
 Muma, Scott Microchip  
 Comment Type E Comment Status D EZ  
 The last symbol (index 511) in the RS-FEC (512 symbols) block of Figure 202-11 should be PAM4 instead of PAM2.  
 SuggestedRemedy  
 Change PAM2511 to PAM4511  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.2.2 P 200 L 32 # 282  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ  
 align with 149.3.7.2.2  
 SuggestedRemedy  
 remove "(TBD)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.3 P 191 L 51 # 280  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 Test mode 7 is now described in 202.5.1.  
 SuggestedRemedy  
 remove "(TBD)" and Editor's Note  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.2.2 P 200 L 36 # 283  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ  
 lp\_low\_snr is originally for LPI refresh in 802.3ch. It can be removed.  
 SuggestedRemedy  
 remove the variable "lp\_low\_snr"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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CI 202 SC 202.3.7.2.2 P 200 L 40 # 284  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 period is missed  
 SuggestedRemedy  
 change "See 202.4.4.1" to "See 202.4.4.1."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.2.2 P 201 L 27 # 285  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ  
 wording  
 SuggestedRemedy  
 change "in user-defined timeout period (usually 3~5 TDD cycles - TBD)." to "in 3 TDD cycles."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.2.3 P 202 L 7 # 286  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ  
 The timer, Rfer\_timer, is redundant.  
 SuggestedRemedy  
 remove "Rfer\_timer (TBD)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.2.4 P 203 L 22 # 287  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 "R\_TYPE\_NEXT" is used in Figure 202-21.  
 SuggestedRemedy  
 remove "(TBD)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.2.4 P 203 L 48 # 288  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 802.3ch has this function (T\_TYPE\_NEXT), but it is not used in any figure.  
 SuggestedRemedy  
 remove the function "T\_TYPE\_NEXT"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Definition and (TBD) needs to be deleted, too.)  
 remove the function "T\_TYPE\_NEXT (TBD)" and its defintion on P203, L48-50

CI 202 SC 202.3.7.3 P 204 L 21 # 219  
 Muma, Scott Microchip  
 Comment Type T Comment Status D EZ  
 The Transmit state diagram is only in Figure 202-20. Figure 202-21 is the Receive state diagram.  
 SuggestedRemedy  
 Change: The PCS 64B/65B Transmit state diagram shown in Figure 202-20 and Figure 202-21 controls the  
 To: The PCS 64B/65B Transmit state diagram shown in Figure 202-20 controls the  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.3.7.3 P 204 L 27 # 220  
 Muma, Scott Microchip  
 Comment Type T Comment Status D EZ  
 Add text explaining the Receive state diagram is in Figure 202-21 and missing from 802.3-2022 p 5999 modified for Clause 202.  
 SuggestedRemedy  
 Insert: The PCS 64B/65B Receive state diagram is shown in Figure 202-21 and controls the decoding of 65B received blocks. It makes exactly one transition for each receive block processed.  
 The PCS shall perform the functions of RFER monitor, Transmit, and Receive as specified in these state diagrams.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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CI 202 SC 202.3.7.3 P 207 L 30 # 221

Muma, Scott Microchip  
 Comment Type E Comment Status D EZ

The transition to RX\_E from the encircled E is leftover from Clause 149 diagrams related to EEE and should be deleted now.

*SuggestedRemedy*

Delete the encircled "E" and arrow right above the RX\_E state from Figure 202-21.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.3.8.1 P 208 L 22 # 289

Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ

Both Rx TDD indication and TxTDD indication are not used and thus can be removed.

*SuggestedRemedy*

remove "Rx TDD indication" and "TxTDD indication"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Definition and (TBD) needs to be deleted, too.)

remove "Rx TDD indication (TBD)" and "TxTDD indication (TBD)" and their respective definitions on P208, L22-26

CI 202 SC 202.3.9 P 208 L 41 # 259

Gorshe, Steve Microchip Technology  
 Comment Type T Comment Status D TDD OAM

Add text for this sub-clause

*SuggestedRemedy*

Remove the Editors note and add the following text: "As specified for MultiGBASE-T1 PHYs in 149.3.9. OAM involves both HS\_PATH and LS\_PATH. The 10-bit symbols are inserted one per TDD burst into the OAM fields in the HS\_PATH and LS\_PATH. OAM bits beyond the first 10 per burst are reserved."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's Note: Improve grammar. A diagram making the OAM bit mapping/ordering within TDD bursts explicit would be helpful if we have have a volunteer to create it.)

Remove the Editors note and add the following text:

"MultiG+100MBASE-T1/V1 operations, administration, and maintenance (OAM) is as specified for MultiGBASE-T1 PHYs in 149.3.9. OAM involves both HS\_PATH and LS\_PATH. The 10-bit symbols are inserted one per TDD burst into the OAM fields in the HS\_PATH and LS\_PATH. OAM bits after the first 10 per burst are reserved."

CI 202 SC 202.4.1 P 209 L 43 # 216

Muma, Scott Microchip  
 Comment Type T Comment Status D EZ

There is a remaining floating line input to Link Monitor and PHY Control that was formerly driven by sync\_link\_control in Figure 149-26 which should be deleted from this diagram.

*SuggestedRemedy*

Delete the floating arrows/line below Link Monitor and PHY Control in Figure 202-22. After this change and removal of PMA\_LINK.request there are no inputs into the bottom of the Link Monitor and PHY Control blocks.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Clarify that text gets deleted, too. After this change and removal of PMA\_LINK.request there are no inputs into the bottom of the Link Monitor and PHY Control blocks.)

Delete the floating arrows/line below Link Monitor and PHY Control and delete the text, "PMA\_LINK.request (link\_control)" in Figure 202-22.

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CI 202 SC 202.4.1 P 209 L 44 # 215

Muma, Scott Microchip  
 Comment Type T Comment Status D TDD Autoneg

Since Clause 98 AN support is not defined, remove "Technology Dependent Interface" from this and other diagrams and text, and remove the PMA\_Link.indication (link\_status) and PMA\_Link.request(link\_control). Link\_control and link\_status are internal to the PHY or management connected.

SuggestedRemedy

Delete "Technology Dependent Interface (optional)", the dashed line beside it, and the PMA\_Link.\* signal connections to the dashed line from Figure 202-22

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.4.2.1 P 210 L 23 # 290

Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D PMA reset

to align with 802.3ch and 802.3cy

SuggestedRemedy

remove "(50 ms TBD)"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Consider with comments #304 and #306.

CI 202 SC 202.4.2.2 P 210 L 30 # 225

Muma, Scott Microchip  
 Comment Type E Comment Status D EZ

This sentence is accurate at this point so can remove "(TBD)"

SuggestedRemedy

Delete (TBD)

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.4.2.2 P 210 L 35 # 226

Muma, Scott Microchip  
 Comment Type E Comment Status D EZ

Update cross reference from 202.x.2 to 202.5.2

SuggestedRemedy

Change 202.x.2 to 202.5.2

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.4.2.2 P 210 L 39 # 227

Muma, Scott Microchip  
 Comment Type E Comment Status D EZ

Update cross reference from 202.x.2.3 to 202.5.2.3

SuggestedRemedy

Change 202.x.2.3 to 202.5.2.3

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.4.2.2 P 210 L 41 # 228

Muma, Scott Microchip  
 Comment Type E Comment Status D EZ

Update cross reference from 202.x.2.3 to 202.5.2.3

SuggestedRemedy

Change 202.x.2.3 to 202.5.2.3

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.4.2.2.1 P 210 L 46 # 291

Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ

to align with 802.3bp, 802.3ch and 802.3cy

SuggestedRemedy

remove "(TBD)"

Proposed Response Response Status W

PROPOSED ACCEPT.

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CI 202 SC 202.4.2.3 P 211 L 1 # 235  
 Muma, Scott Microchip  
 Comment Type T Comment Status D EZ  
 It has been confirmed that this is the correct RFER to achieve the target post-FEC BER and FLR, so TBD can be removed.  
 SuggestedRemedy  
 Remove (TBD)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.4.2.3 P 211 L 1 # 260  
 Gorshe, Steve Microchip Technology  
 Comment Type T Comment Status D EZ  
 Use the current value  
 SuggestedRemedy  
 Remove the TBD  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Accomodated by Comment #235

CI 202 SC 202.4.2.3 P 211 L 2 # 236  
 Muma, Scott Microchip  
 Comment Type T Comment Status D EZ  
 This is true for both link segments, so refer to both.  
 SuggestedRemedy  
 P211L2: meeting the requirements of 202.7 for -T1 and 202.8 for -V1.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: Clarify changed text.)  
 Replace, "over a channel meeting the requirements of 202.7"  
 with, "over a -T1 channel meeting the requirements of 202.7 or a -V1 channel meeting the requirements of 202.8"

CI 202 SC 202.4.2.4 P 211 L 35 # 292  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 wording  
 SuggestedRemedy  
 remove "(TBD)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.4.2.4.3 P 212 L 25 # 293  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 wording  
 SuggestedRemedy  
 remove "(TBD)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.4.2.4.3 P 212 L 30 # 19  
 Long, Richard TE Connectivity  
 Comment Type E Comment Status D EZ  
 Typo  
 SuggestedRemedy  
 Burst should not be capitalized, also page 216 line 46  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: "Burst" also appears in two figures.)  
 Replace "Burst" with "burst" in the following locations:  
 Figure 202-17  
 Figure 202-18  
 P212, L30  
 P216, L46

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CI 202 SC 202.4.2.4.4 P 212 L 41 # 294

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D EZ

wording (many places need to be changed, e.g., lines 41-43 on page 212, Table 202-9 on page 213, etc.)

*SuggestedRemedy*

change "Training\_phase" to "training\_phase"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Specify the locations where the change should be made. Missing underscore in Table 202-9 and a state diagram.)

change "Training\_phase" to "training\_phase" in the following locations:

- P212, L41
- P212, L42
- P212, L43

change "Training phase" to "training\_phase" in the header of Table 202-9 and resize columns as necessary.

change "training phase" to "training\_phase" on P223, L14

CI 202 SC 202.4.2.4.4 P 213 L 1 # 295

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D EZ

For Table 202-9:

1. Since training\_phase<4:3> has 2-bits, its expression should be updated.
2. Since there are total 3 reserved bits, i.e., reserved<2:0>, the last column is redundant.

*SuggestedRemedy*

1. change "Training\_phase" to "training\_phase"
2. for the 3rd column: change "0" to "00" and change "1" to "01"
3. remove the 7th column

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Remedy part 1 accomodated by comment #294.)

In Table 202-9:

1. In the 3rd column: change "0" to "00" in three locations and change "1" to "01" in three locatations
2. remove the 7th column

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CI 202 SC 202.4.2.4.5 P 213 L 21 # 261

Gorshe, Steve Microchip Technology  
 Comment Type T Comment Status D multi-rate

Agreement has been reached that this is a multi-rate PHY that may support any combination of rates, including a single rate.

**SuggestedRemedy**

Remove the Editor's note and add the following text at the beginning of 202.4.2.4.5 (with Editor's license): "This is a multi-rate PHY that may support any combination of bit rates including a single bit rate. The Leader is configured via management control for the data rate it will use to communicate with the Follower and the data rate that it expects the Follower to use. The information field PHY capability and negotiated speed (data rate) bits of the information field are used to check for misconfiguration."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Replace Editor's Note on P213, L19-25 with,  
 "This is a multi-rate PHY that supports any combination of bit rates, including a single bit rate. The LEADER is configured via management control for the data rate used to communicate with the FOLLOWER and the data rate used by the FOLLOWER. The Infofield PHY capability and Infofield negotiated speed (data rate) bits are used to check for misconfiguration."

Replace three occurrences of "InfoField" with "Infofield" and replace one occurrence of "InfoFields" with "Infofields" in clause 202.

CI 202 SC 202.4.2.4.5 P 214 L 1 # 296

Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ

wording: remove "BASE-T1/V1" and add period

**SuggestedRemedy**

change: "The optional BASE-T1/V1 OAM capability shall be enabled only if both PHYs set the capability bit OAMen=1"  
 to: "The optional OAM capability shall be enabled only if both PHYs set the capability bit OAMen=1."

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.4.2.4.5 P 214 L 4 # 297

Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ

Precoder is only available for 10G mode.

**SuggestedRemedy**

change: "PrecodeSel indicates the requested precoder."  
 to: "PrecodeSel indicates the requested precoder, available for 10G only."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Be more specific than 10G, improve grammar, remove conflicting text, and correct minor issues in Table 202-10.)

Replace, "PrecodeSel indicates the requested precoder."

with, "PrecodeSel indicates the requested precoder and is available for 10 Gb/s Speed Capability only (see 202.3.2.2.19).

Replace "2.5G", "5G", and "10G" in Table 202-10 with "2.5 Gb/s", "5 Gb/s", and "10 Gb/s", respectively.

Replace "Negotiated High speed" with "Negotiated speed" on P213, L53

Delete paragraph on P213, L46-48

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CI 202 SC 202.4.2.4.6 P 214 L 18 # 298  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D TDD delay  
 The bit ordering needs to be modified according to Editor's Note and for supporting larger IBG.  
 SuggestedRemedy  
 change:  
 "Oct<1:0>= Reserved. Oct<2>= delay\_count\_valid. Oct<7:3>= delay\_count<4:0>."  
 to:  
 "Oct<0>= delay\_count\_valid. Oct<1:6>= delay\_count<5:0>. Oct<7>= Reserved."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's Note: Suggested modification allows delay\_count to be increased in the future if needed assuming delay\_count<0> is LSB. Remove Editor's Note.)  
 Delete Editor's Note on P214, L12-15  
 change:  
 "Oct<1:0>= Reserved. Oct<2>= delay\_count\_valid. Oct<7:3>= delay\_count<4:0>."  
 to:  
 "Oct<0>= Reserved. Oct<1:6>= delay\_count<5:0>. Oct<7>= delay\_count\_valid"

CI 202 SC 202.4.2.4.6 P 214 L 37 # 189  
 Chini, Ahmad Broadcom  
 Comment Type T Comment Status D EZ  
 Not a correct statement. delay counter is used in other states as well  
 Note-The TDD delay\_counter fields and PHY capability bits field are only defined during symmetric training TRAINING0 state, but not defined in other states.  
 TDD delay counter is only defined during the symmetric training phase, when PMA\_state<7:6>=00. The initial value shall be set to 0.  
 SuggestedRemedy  
 remove the Note and the paragraph after that.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.4.2.4.6 P 214 L 49 # 299  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D TDD delay  
 The TDD delay counter now has 6 bits.  
 SuggestedRemedy  
 change "0 to 31 (TBD)" to "0 to 63"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.4.2.4.7 P 215 L 12 # 300  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 PhaseSwBC24 has a range (line 22: 16 ~ 256) related to the BC24.  
 SuggestedRemedy  
 remove Editor's Note  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.4.2.4.7 P 215 L 26 # 301  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 wording  
 SuggestedRemedy  
 remove "(TBD)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

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CI 202 SC 202.4.2.4.11 P 216 L 51 # 302  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D EZ  
 LEADER determines the speed  
 SuggestedRemedy  
 change "will be determined (TBD)." to "will be determined by LEADER."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: Missing "the" in Suggested Remedy and on P216, L45.)  
 change "will be determined (TBD)." to "will be determined by the LEADER."  
 on P216, L45,  
 change "payload symbol from LEADER appears" to "payload symbol from the LEADER appears"

CI 202 SC 202.4.2.4.11 P 217 L 5 # 303  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D TDD delay  
 Since the IBG is updated, 106.66ns should be changed to 176ns. For more flexible, consider to add a range for it, e.g.,  $\pm 8$  ns.  
 SuggestedRemedy  
 change "106.66 ns - delay\_count x 5.33 ns" to "within the range 176 ns - delay\_count x 5.33 ns  $\pm 8$  ns"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.4.2.4.11 P 217 L 5 # 188  
 Chini, Ahmad Broadcom  
 Comment Type T Comment Status D TDD delay  
 The value 106.66 ns, has to be updated since IBG increased to 176 in the latest draft.  
 SuggestedRemedy  
 Replace  
 106.66 ns  
 with  
 176ns  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: Space needed between value and unit.)  
 Replace  
 106.66 ns  
 with  
 176 ns

CI 202 SC 202.4.2.4.11 P 217 L 10 # 304  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D timer  
 to align with 98.5.2  
 SuggestedRemedy  
 change "50 ms (TBD)" to "97.5 ms"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Consider with comments #290 and #306.

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CI 202 SC 202.4.3.1 P 217 L 39 # 262

Gorshe, Steve

Microchip Technology

Comment Type T Comment Status D MDI

Update the MDI section to reference clause 149

*SuggestedRemedy*

Remove the Editor's note. Replace the current text with: 202.4.3.1 MDI, T1 The MDI signals are as specified in 149.4.3, with the following exceptions: 1) The 2.5Gb/s signaling uses PAM2 instead of PAM4. 2) The 5Gb/s signaling uses PAM2 instead of PAM4. 202.4.3.2 MDI, V1 The MDI signals are as specified in 149.4.3, with the following exceptions: 1) The signals are single ended instead of differential. 2) The 2.5Gb/s signaling uses PAM2 instead of PAM4. 3) The 5Gb/s signaling uses PAM2 instead of PAM4.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Changes begin on P218, L1. It doesn't seem like we can delete the current text and just reference 149.4.3 because then the reference to the electrical specifications becomes incorrect. Recommend keeping the current text and simply noting that the data phase of 10G uses PAM4 while all other symbols transmitted within a burst use PAM2. Even this is just a reminder since other subclauses define this. Also, single-ended vs. differential doesn't seem like it needs to be defined here but can be mentioned. Insert space between unit and Gb/s).

Delete Editor's Note on P218, L1-12.

Insert the following sentences after the first sentence on P218, L14:

"10 Gb/s signaling uses PAM 4. 2.5 Gb/s and 5 Gb/s signaling uses PAM2. The -T1 MDI is defined in 202.9 and the -V1 MDI is defined in 202.10."

CI 202 SC 202.4.4.1 P 218 L 51 # 217

Muma, Scott

Microchip

Comment Type T Comment Status D EZ

PMA\_LINK.indication primitive is not defined and should be removed from this description of link\_status.

*SuggestedRemedy*

Change: The link\_status parameter set by PMA Link Monitor state diagram and communicated through the PMA\_LINK.indication primitive.

To: The link\_status parameter set by PMA Link Monitor state diagram.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change: The link\_status parameter set by PMA Link Monitor state diagram and communicated through the PMA\_LINK.indication primitive.

To: The link\_status parameter set by the Link Monitor state diagram.

CI 202 SC 202.4.4.1 P 219 L 16 # 305

Wang, Frank

Realtek Semiconductor Corp.

Comment Type T Comment Status D EZ

The variable, loc\_SNR\_margin, is redundant.

*SuggestedRemedy*

remove "loc\_SNR\_margin"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Remove variable and definition.)

remove "loc\_SNR\_margin" and its definition on P219, L16-22

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CI 202 SC 202.4.4.2 P 221 L 7 # 306  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D timer  
 to align with 98.5.2  
 SuggestedRemedy  
 change "50 ms (TBD)" to "97.5 ms"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Consider with comments #290 and #305.

CI 202 SC 202.4.4.2 P 221 L 16 # 307  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status D timer  
 to align with 802.3ch and 802.3cy  
 SuggestedRemedy  
 change "500 us (TBD)" to "975 us"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: Clarify that u is the symbol for micro.)  
 change "500 us (TBD)" to "975 us"  
 where u is the symbol for micro

CI 202 SC 202.4.5 P 222 L 38 # 308  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D EZ  
 wording for Figure 202-26 and 202-27  
 SuggestedRemedy  
 1. change "pma\_state" to "PMA\_state"  
 2. change "training\_phase <= 0" to "training\_phase <= 00"  
 3. change "training\_phase <= 1" to "training\_phase <= 01"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: pma\_state is also found in Figure 202-27.)  
 In Figure 202-26, TRAINING0 state:  
 1. change "pma state" to "PMA\_state"  
 2. change "training\_phase <= 0" to "training\_phase <= 00"  
 3. change "training\_phase <= 1" to "training\_phase <= 01"  
 In Figure 202-27, change "pma\_state" to PMA\_state" in three locations.

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CI 202 SC 202.5 P 225 L 225 # 212

Abedinzadeh, Bizhan Infineon  
 Comment Type E Comment Status D test

It is stated that when test mode 4 is enabled in PAM2 mode the PHY shall transmit sequence of . In 10G mode training/data is PAM2/PAM4. I think the intention is not 10G Pam2 training

**SuggestedRemedy**

Suggest making the following change. Line 26 change PAM2 to 5G/2.5G speed , and line 28 change PAM4 to 10G speed

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

(Editor's note: The Suggested Remedy may not align with 202.5.2.2, but it's understood that there is some ambiguity concerning which transmitters should use PAM2/PAM4/both. Perhaps it would be helpful to add a statement that says which transmitters/PHYs will meet the limits in 202.5.2.2? If all PHYs meet the PAM2 limit at their specified rate, and additionally 10G PHYs meet the PAM4 limit at their specified rate. Need assistance crafting this text. Should this be speed or data rate?)

P225, L26:  
 Replace, "in PAM2 mode" with "for 2.5 Gb/s and 5 G/bs data rates"

P225, L28:  
 Replace, "in PAM4 mode" with "for 10 G/bs data rates"

CI 202 SC 202.5.1.1 P 226 L 40 # 231

Muma, Scott Microchip  
 Comment Type T Comment Status D test

Test fixture 1 can be used to make all the measurements that test fixtures 3 and 4 enable, without requiring a wideband balun. Combining test fixtures/setups to all use test fixture 1 for -T1 is more efficient.

**SuggestedRemedy**

1. Delete Figures 202-31 and 202-32.
2. Update caption of Figure 202-29 to "Transmitter test fixture 1 for -T1 transmitter droop, transmitter linearity, power spectral density, transmit power level, and MDI jitter measurements"
3. Editorial license to update "test fixture 3" and "test fixture 4" to "test fixture 1", and update Figure cross-references for deleted figures to point to Figure 202-29.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 202 SC 202.5.2.4 P 229 L 47 # 229

Muma, Scott Microchip  
 Comment Type T Comment Status D test

Test mode 5 definition has been improved so the editor's note and redundant definition of test mode 5 here can be removed.

**SuggestedRemedy**

1. Delete editor's note on lines 42-46.
2. Delete the paragraph on lines 47-49 and replace with: "The following measurements are performed in test mode 5.

Using the same test fixture as will be used for PSD measurement, the measured transmit power shall be in the range specified in Table 202-15."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

1. Delete editor's note on lines 42-46.
2. Delete the paragraph on lines 47-49 and replace with: "Transmitter power spectral density (PSD) and power level measurements are performed in test mode 5. The measured transmit power shall be in the range specified in Table 202-15 when using the same test fixture as used for PSD measurement."

CI 202 SC 202.5.2.4 P 232 L 25 # 230

Muma, Scott Microchip  
 Comment Type T Comment Status D test

The -V1 measurement should use test fixture 5 in Figure 2-233.

**SuggestedRemedy**

Change: test fixture 4 (see Figure 202-32)  
 To: test fixture 5 (see Figure 202-33)

Proposed Response Response Status W

PROPOSED ACCEPT.

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CI 202 SC 202.5.2.5 P 232 L 33 # 190

Chini, Ahmad Broadcom

Comment Type T Comment Status D EZ

The specification uses Should for T1 and Shall for V1.

*SuggestedRemedy*

Use Shall for both T1 and V1.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Suggest grammar can be improved. Commenter meant to use "should" for both -T1 and -V1.)

Replace, "When measured with 100 W termination for -T1 PHYs, the transmit differential signal at the MDI should be less than the peak-to-peak values specified in Table 202-17. When measured with 50 W termination for -V1 PHYs, the transmit signal at the MDI shall be less than the peak-to-peak values specified in Table 202-17."

with, "For -T1 PHYs, the transmit differential signal at the MDI should be less than the peak-to-peak values specified in Table 202-17 when measured with a 100 W termination. For -V1 PHYs, the transmit signal at the MDI should be less than the peak-to-peak values specified in Table 202-17 when measured with a 50 W termination."

where W is the ohms symbol

CI 202 SC 202.5.3.2 P 233 L 31 # 191

Chini, Ahmad Broadcom

Comment Type T Comment Status D noise rejection

No text is provided for this sub clause

*SuggestedRemedy*

Use the text and diagrams in Chini-3dm\_01a\_0226 and update the table and figure numbers to 202.??

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

(Editor's note: The PHY must meet the noise tolerance levels defined by the target application, which is beyond scope of this specification. Perhaps, it's better to say this than to include an "informative" specification? Or, modify the proposal accordingly?)

Option 1:

Delete Editor's note on P233, L33-35 and insert, "The PHY must meet the noise tolerance levels defined by the target application. Further specification is beyond the scope of this standard."

Option 2:

Insert text and diagrams on page 2 and 3 of Chini-3dm\_01a\_0226 with the following exceptions:

Replace, "This informative specification is provided to verify for the receiver's tolerance to broadband stationary noise from a variety of sources."

with, "The PHY must meet the noise tolerance levels defined by the target application. This minimum specification is provided to verify the receiver's tolerance to broadband stationary noise from a variety of sources."

Add, "Further specification is beyond the scope of this standard." after, "at the MAC/PLS service interface."

Update the table and figure numbering

Delete Editor's note on P233, L33-35. Editorial license to conform to Style.

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CI 202 SC 202.6 P 233 L 49 # 232  
 Muma, Scott Microchip  
 Comment Type T Comment Status D TDD Autoneg  
 Support for auto-negotiation over coaxial cables is not defined in Clause 98. Clause 202 provides other means to determine speed and direction through management and/or startup negotiation. So delete references to Clause 98 auto-negotiation.  
 SuggestedRemedy  
 Delete editor's note at start of 202.6 and delete ", and the communication and self-configuration functions provided by the optional (TBD) Auto-Negotiation (see Clause 98)"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 202 SC 202.7.2 P 236 L 4 # 141  
 Zerna, Conrad NXP  
 Comment Type T Comment Status D link segment  
 Text is missing  
 SuggestedRemedy  
 Copy from section 202.8.2  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Copy from section 202.8.2 with Editor's license granted to adjust text to make it applicable to the -T1 link segment.

CI 202 SC 202.7.2.1 P 236 L 10 # 142  
 Zerna, Conrad NXP  
 Comment Type T Comment Status D link segment  
 Missing limit  
 SuggestedRemedy  
 Copy from section 202.8.2.1  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Copy from section 202.8.2.1 with Editor's license granted to adjust text to make it applicable to the -T1 link segment.

CI 202 SC 202.7.2.2 P 236 L 16 # 143  
 Zerna, Conrad NXP  
 Comment Type T Comment Status D link segment  
 Missing limit  
 SuggestedRemedy  
 Copy from section 202.8.2.2  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Copy from section 202.8.2.2 with Editor's license granted to adjust text to make it applicable to the -T1 link segment.

CI 202 SC 202.8.1.1 P 237 L 6 # 140  
 Zerna, Conrad NXP  
 Comment Type T Comment Status D link segment  
 The  $-0.05\sqrt{f}$  term is wrong.  
 Multiply the 15 into the formula, it is not typical for 802.3  
 SuggestedRemedy  
 Take formula from  
[https://iee802.org/3/dm/public/0125/Zerna\\_802.3dm\\_01\\_250122\\_IL\\_RL.pdf](https://iee802.org/3/dm/public/0125/Zerna_802.3dm_01_250122_IL_RL.pdf), page 6  
 (green line in the graph is limit line)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Take formula from  
[https://iee802.org/3/dm/public/0125/Zerna\\_802.3dm\\_01\\_250122\\_IL\\_RL.pdf](https://iee802.org/3/dm/public/0125/Zerna_802.3dm_01_250122_IL_RL.pdf), page 6  
 (green line in the graph is limit line)  
 Grant Editor's license to insert plot and conform to Style.

IEEE P802.3dm D0.b Asymmetrical Electrical Automotive Ethernet 2nd Task Force review comments

CI 202 SC 202.8.1.5 P 239 L 8 # 144  
 Zerna, Conrad NXP  
 Comment Type T Comment Status D link segment  
 Limit line is for pure cable only and too strict for link assembly  
**SuggestedRemedy**  
 Adopt limit for link segment including connectors, not only cable.  
 Relax limits by 6dB over the entire frequency range  
**Proposed Response Response Status W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 TFTD  
 (Editor's note: Recommend Task Force discussion to confirm that 6dB relaxation is sufficient for the complete link assembly.)  
 Relax limits by 6dB over the entire frequency range  
 Grant Editor's license to update plot and conform to Style.

CI 202 SC 202.12 P 247 L 13 # 234  
 Muma, Scott Microchip  
 Comment Type T Comment Status D TDD delay  
 Given the TDD cycle is 9600ns the LS\_PATH delay may require margin. Recommend increasing by 1 pause quanta for margin.  
**SuggestedRemedy**  
 Change bit times to 1536, Pause Quanta to 3, and Delay to 15360 in Table 202-19 for the row with the LS\_PATH values.  
**Proposed Response Response Status W**  
 PROPOSED ACCEPT.

CI 202 SC 202.12 P 247 L 13 # 233  
 Muma, Scott Microchip  
 Comment Type E Comment Status D EZ  
 The Mode column has the speed in different nomenclature than the rest of the document.  
**SuggestedRemedy**  
 Editorial license to update Mode to 100M+MultiGBASE, 2.5G+100MBASE, 5G+100MBASE, and 10G+100MBASE nomenclature consistent with other usage in clause 202.  
**Proposed Response Response Status W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 (Editor's note: Suggest to clarify exact change.)  
 Replace, "100MBASE-T1/V1" with "100M+MultiGBASE-T1/V1"  
 Replace, "2.5GBASE-T1/V1" with "2.5G+100MBASE-T1/V1"  
 Replace, "5GBASE-T1/V1" with "5G+100MBASE-T1/V1"  
 Replace, "10GBASE-T1/V1" with "10G+100MBASE-T1/V1"