

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI **FM** SC **FM** P3 L4 # 221  
 Pandey, Sujan Velinktech  
 Comment Type **ER** Comment Status **A** EZ  
 automotive Ethernet, 100M+2.5GBASE-T1  
 SuggestedRemedy  
 automotive Ethernet, 100M+2.5GBASE-T1  
 Response Response Status **C**  
 ACCEPT IN PRINCIPLE.  
 Do a global replace of "2.5GBASE" with "2.5GBASE"  
 Val in Clause 202

CI **FM** SC **FM** P3 L7 # 222  
 Pandey, Sujan Velinktech  
 Comment Type **ER** Comment Status **A** EZ  
 2.5G+100MBASE-V1, 100M+5GBASE-V1  
 SuggestedRemedy  
 2.5G+100MBASE-V1, 100M+5GBASE-V1  
 Response Response Status **C**  
 ACCEPT IN PRINCIPLE.  
 Do a global replace of "5GBASE" with "5GBASE"  
 Val in Clause 202

CI **00** SC **0** P L # 324  
 Gorshe, Steve Microchip  
 Comment Type **T** Comment Status **R** EZ  
 SuggestedRemedy  
 Response Response Status **Z**  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

CI **00** SC **0** P L # 320  
 Gorshe, Steve Microchip  
 Comment Type **T** Comment Status **R** EZ  
 SuggestedRemedy  
 Response Response Status **Z**  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

CI **00** SC **0** P L # 319  
 Gorshe, Steve Microchip  
 Comment Type **T** Comment Status **R** EZ  
 SuggestedRemedy  
 Response Response Status **Z**  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

CI **00** SC **0** P L # 318  
 Gorshe, Steve Microchip  
 Comment Type **T** Comment Status **R** EZ  
 SuggestedRemedy  
 Response Response Status **Z**  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

Cl 00 SC 0 P L # 317  
 Gorshe, Steve Microchip  
 Comment Type T Comment Status R EZ

*SuggestedRemedy*

Response Response Status Z  
 REJECT.

This comment was WITHDRAWN by the commenter.

Cl 1 SC 1.4 P31 L19 # 155  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status A EZ

The terms to be defined should be in bold, including the colon.

*SuggestedRemedy*

Format terms to be defined at each header in bold.

Response Response Status C  
 ACCEPT.

Cl 1 SC 1.4.88 P31 L21 # 152  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status A EZ

Definition for XGMII could be read as implying all 3 rates.

*SuggestedRemedy*

Change "with these rates" to "with one of these rates"

Response Response Status C  
 ACCEPT.

Cl 1 SC 1.4.248 P31 L24 # 153  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status A EZ

Definition for coaxial cable is OK as is.

*SuggestedRemedy*

No change to text, delete 1.4.248 from the draft

Response Response Status C  
 ACCEPT.

Cl 1 SC 1.4.249 P31 L27 # 154  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status A EZ

Definition for coaxial cable interface unnecessarily states that te medium is shared. It applies as well to point to point, unshared medium. I have reviewed all the existing uses, and they are specific to clause 11 and should be unaffected by the change.

*SuggestedRemedy*

Insert editing instruction to "Change 1.4.249 as shown:"

Mark "shared" in strikeouts, showing deletion.

Response Response Status C  
 ACCEPT.

Cl 1 SC 1.4.250 P31 L31 # 156  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status A EZ

it is unlikely we will use the definition of coaxial cable section, as it is a subset of the link segment. Furhter, the definition, as is, is quite specific with regards to connectors, and the use in clause 10...

*SuggestedRemedy*

Delete 1.4.250 from the draft.

Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 1 SC 1.4.251 P31 L35 # 157  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status A EZ  
 The term coaxial cable segment is specific to a shared medium segment with terminators on each end (separate from the MDIs). It is unlikely we will have use for it, and if we do, we would need a different definition - so better to have a new term.  
 SuggestedRemedy  
 Delete 1.4.251 from the draft  
 Response Response Status C  
 ACCEPT.

CI 30 SC 30.3.2.1.2 P32 L14 # 158  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D Duplexing Method  
 This is the first place that the draft needs to address the question of do we have one PHY or two, and how they might be differentiated. Suggest we draft text for each proposal in 30.3.2.  
 Note this will eventually need to be done in 30.5., but isn't quite as complicated.  
 SuggestedRemedy  
 Add Editor's note to 30.3.2.1.2:  
 "Editor's Note (to be removed prior to initial Working Group Ballot): 802.3dm will either define one PHY type or will differentiate clauses 201 and 202 to meet distinct identity. Both PHY type options are shown here. When a choice is made, this section needs to be updated."  
 Duplicate each reference to "Clause 200..." to read "Clause 201 ... 100 Mb/s DME ...ACT" or "Clause 202 ... 100 Mb/s PAM 2... TDD" in 30.3.2 subsections (the 6 pairs on page 32).  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Need people to commit to working on this.

CI 30 SC 30.5.1.1.2 P33 L22 # 1  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "/" used instead of "+"  
 SuggestedRemedy  
 replace "5G/100M" with "5G+100M"  
 Response Response Status C  
 ACCEPT.

CI 30 SC 30.5.1.1.2 P33 L24 # 2  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "/" used instead of "+"  
 SuggestedRemedy  
 replace "5G/100M" with "5G+100M"  
 Response Response Status C  
 ACCEPT.

CI 30 SC 30.5.1.1.2 P33 L31 # 3  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "/" used instead of "+"  
 SuggestedRemedy  
 replace "10G/100M" with "10G+100M"  
 Response Response Status C  
 ACCEPT.

CI 30 SC 30.5.1.1.2 P33 L33 # 4  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "/" used instead of "+"  
 SuggestedRemedy  
 replace "10G/100M" with "10G+100M"  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

Cl 30 SC 30.6.1.1.5 P33 L33 # 159

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

Comment Type T Comment Status A ACT Autonegotiation

Clause 202 does not appear to use auto-negotiation (clause 98 or otherwise), and hence the Auto-Negotiation attributes are specific to clause 201.

#### SuggestedRemedy

Change "as specified in Clause 200" to "as specified in Clause 201" at Page 33, lines 48 through 52, Page 34 Lines 5 through 8, and Page 34 Lines 15 through 18 (3 sets of 4 instances each)

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.1.7.4 P35 L28 # 166

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

Comment Type E Comment Status A EZ

Editing instruction appears to be in italics as header... (font is sans & too large)

#### SuggestedRemedy

Reformat instructions at P35 L28, P35 L50 using "Editing Instruction" type.

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.1.7.4 P35 L37 # 160

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

Comment Type T Comment Status D Duplexing Method

Clause 202 does not appear to specify use of transmit/ receive fault. Therefore these TBDs can be assigned to clause 201.  
(if clause 202 adds transmit/receive fault, suggest adding both the clause 201 references here, as well as the clause 202 references - that way we will have them)

#### SuggestedRemedy

Change TBD at page 35, line 35 to an external cross reference to 149.4.2.2  
Change TBD at page 35, line 41 to 201.6.2.2  
Change TBD at page 36, line 6 to 201.6.2.3  
Change TBD at page 36, line 10 to an external cross reference to 149.4.2.3

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.7.4 P35 L41 # 5

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

Typo "M" in "2.5GMBASE-T1" is too much

#### SuggestedRemedy

replace "2.5GMBASE-T1" with "2.5GBASE-T1"

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.1.7.4 P35 L41 # 223

Pandey, Sujan Velinktech

Comment Type ER Comment Status A EZ

100M+2.5GMBASE-T1, ...

#### SuggestedRemedy

100M+2.5GBASE-T1, ...

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.1.7.4 P35 L43 # 6

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

Typo "M" in "5GMBASE-V1" is too much

#### SuggestedRemedy

replace "5GMBASE-V1" with "5GBASE-V1"

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.1.7.4 P35 L43 # 224

Pandey, Sujan Velinktech

Comment Type ER Comment Status A EZ

100M+5GMBASE-T1, ...

#### SuggestedRemedy

100M+5GBASE-T1, ...

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 45 SC 45.2.1.7.5 P36 L10 # 7 [REDACTED]  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "M" in "2.5GBASE-T1" is too much  
 SuggestedRemedy  
 replace "2.5GBASE-T1" with "2.5GBASE-T1"  
 Response Response Status C  
 ACCEPT.

CI 45 SC 45.2.1.7.5 P36 L10 # 225 [REDACTED]  
 Pandey, Sujun Velinktech  
 Comment Type ER Comment Status A EZ  
 2.5GBASE-T1  
 SuggestedRemedy  
 2.5GBASE-T1  
 Response Response Status C  
 ACCEPT.

CI 45 SC 45.2.1.7.5 P36 L12 # 8 [REDACTED]  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "M" in "5GBASE-V1" is too much  
 SuggestedRemedy  
 replace "5GBASE-V1" with "5GBASE-V1"  
 Response Response Status C  
 ACCEPT.

CI 45 SC 45.2.1.7.5 P36 L12 # 226 [REDACTED]  
 Pandey, Sujun Velinktech  
 Comment Type ER Comment Status A EZ  
 2.5GBASE-T1  
 SuggestedRemedy  
 2.5GBASE-T1  
 Response Response Status C  
 ACCEPT.

CI 45 SC 45.2.1.60f.1 P37 L24 # 9 [REDACTED]  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo only "PMA type" is mentionned, where this applies also to PMD. This is different than the style used in 45.2.1.32.1 to 45.2.1.33.6  
 Similar issue is also on lines 27, 32, 35, 40, 43, 48, 51. And on page 38 lines: 4, 7, 12, 16, 20, 23, 28, 31, 36, 39, 44, 47, 52. And on Page 39 lines: 2, 7, 10  
 SuggestedRemedy  
 replace "PMA type" with "PMA/PMD type"

Response Response Status C  
 ACCEPT.

CI 45 SC 45.2.1.60f.2 P37 L29 # 10 [REDACTED]  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo in sub-section title. It cannot be both T1 and V1.  
 SuggestedRemedy  
 replace "100M+10GBASE-T1/V1" with "100M+10GBASE-V1"

Response Response Status C  
 ACCEPT.

CI 45 SC 45.2.1.214 P40 L7 # 11 [REDACTED]  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Title of Table includes only BASE-T1 type, while content also include BASE-V1 type  
 SuggestedRemedy  
 Replace "T1" with "T1/V1"

Response Response Status C  
 ACCEPT IN PRINCIPLE.

Add editing instruction before 45.22.1.24: Change the title of the following subsection as follows:  
 Change the title to add "/V1" after T1 in underline

Modify the editing instruction on P40/L3 to read: Change the title of Table 45-178 as follows and replace ...(the reset is the same).

Change the table title to add "/V1" after T1 in underline.

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Cl 45 SC 45.2.1.214.2 P40 L39 # 12

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status R EZ

Not only the first sentence need to change. Since there is one more bit added the whole description of 45.2.1.214.2 needs to be updated with more bits and include the corresponding text for the newly defined modes.

#### SuggestedRemedy

Add the following to line 45: "When these bits are set to 00000, the mode of operation is 100BASE-T1. When these bits are set to 00001, the mode of operation is 1000BASE-T1. When these bits are set to 00010, the mode of operation is 10BASE-T1L. When these bits are set to 00011, the mode of operation is 10BASE-T1S. When these bits are set to 00100, the mode of operation is 2.5GBASE-T1. When these bits are set to 00101, the mode of operation is 5GBASE-T1. When these bits are set to 00110, the mode of operation is 10GBASE-T1. When these bits are set to 00111, the mode of operation is 25GBASE-T1. When these bits are set to 01000, the mode of operation is 10BASE-T1M. When these bits are set to 10000, the mode of operation is 100M+2.5GBASE-T1. When these bits are set to 10001, the mode of operation is 2.5G+100MBASE-T1. When these bits are set to 10010, the mode of operation is 100M+2.5GBASE-V1. When these bits are set to 10011, the mode of operation is 2.5G+100MBASE-V1. When these bits are set to 10100, the mode of operation is 100M+5GBASE-T1. When these bits are set to 10101, the mode of operation is 5G+100MBASE-T1. When these bits are set to 10110, the mode of operation is 100M+5GBASE-V1. When these bits are set to 10111, the mode of operation is 5G+100MBASE-V1. When these bits are set to 11000, the mode of operation is 100M+10GBASE-T1. When these bits are set to 11001, the mode of operation is 10G+100MBASE-T1. When these bits are set to 11010, the mode of operation is 100M+10GBASE-V1. When these bits are set to 11011, the mode of operation is 10G+100MBASE-V1. These bits shall be ignored when the Auto-Negotiation enable bit 7.512.12 is set to one."

Response Response Status C

REJECT.

The list of which PHY type is selected based on the setting of the bits was removed from the 45.2.1.214.2 text by IEEE Std 802.3da-202x. Therefore, it will not longer exist when IEEE Std 802.3dm-202x is published.

Cl 46 SC 46.1 P41 L19 # 167

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

Comment Type T Comment Status A EZ

Inserted language could be interpreted to mean that the asymmetric phys have 'all of these rates' in one direction. Note that the same change is not needed in 46.1.3, where a diferent change is needed.

#### SuggestedRemedy

Change "with these rates in one direction" to "with at least one of these rates in one direction" at P41 L19, P41 L34.

Response Response Status C

ACCEPT IN PRINCIPLE.

The Clause and subclause were update to reflect that this is in 46.1, not 45.1.

Cl 46 SC 46.1.2 P41 L34 # 13

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status D Asymmetric

The text gives the "BASE" name of the PHYs only for the symmetric PHYs and not for the Asymmetric PHYs.

#### SuggestedRemedy

replace: "2.5GBASE, 5GBASE, and 10GBASE PHY types (including asymmetric PHYs with these rates in one direction and 100 Mb/s in the reverse direction)" with: "2.5GBASE, 100M+2.5GBASE, 2.5G+100MBASE, 5GBASE, 100M+5GBASE, 5G+100MBASE, 10GBASE, 100M+10GBASE and 10G+100MBASE PHY types"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Is this really necessary? TFTD

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

Cl 46 SC 46.1.3 P41 L41 # 168  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D Asymmetric  
 The text here isn't speaking about PHY types but rather about MAC data rates, so the added text doesn't make sense as written.  
 SuggestedRemedy  
 At P41 L41, delete "(including asymmetric PHYs with these rates in one direction and 100 Mb/s in the reverse direction)" inserted text, and implement the change (with marks inserted - sorry , it just became a mess...) to read:  
 The XGMII supports MAC data rates of 2.5 Gb/s, 5 Gb/s, and 10 Gb/s as defined within this clause. A compliant device may implement any subset of these rates in at least one direction. Symmetric operation at 10 Mb/s and 100 Mb/s is supported by the MII defined in Clause 22 and operation at 1000 Mb/s by the GMII defined in Clause 35. Asymmetric operation is supported at 100 Mb/s in one direction when at least one of specified multigigabit rates is used in the other direction.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 46 SC 46.3.2.1 P42 L18 # 62  
 Kleinwaechter, Mathias in-tech  
 Comment Type E Comment Status A EZ  
 The sentence could be improved stilistically.  
 SuggestedRemedy  
 The frequency of RX\_CLK may be derived from the received data or it may correspond to a nominal clock (e.g., TX\_CLK).  
 Response Response Status C  
 ACCEPT.

Cl 46 SC 46.6.1 P42 L27 # 102  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ  
 delete as it is not needed  
 SuggestedRemedy  
 Delete: 46.6.1 Introduction  
 Response Response Status C  
 ACCEPT.

Cl 46 SC 46.6.2 P42 L29 # 103  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ  
 delete as it is not needed  
 SuggestedRemedy  
 Delete: 46.6.2 Identification  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 46 SC 46.6.3.1 P42 L34 # 169  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D Asymmetric

A new option is needed for asymmetric PHYs, the existing text that was edited relates to MAC data rates, not PHYs, and hence isn't quite right..

**SuggestedRemedy**

Insert 46.6.2.3 Major capabilities/options into the draft  
 Insert new row at end of table (unchanged rows not shown):

Item: ASYM

Feature: Support of Asymmetric Multigigabit PHYs

Subclause 46.1.2

Value/comment: (blank)

Status: O

Support: Yes[] No[]

In 46.6.3.1:

Add editing instruction: Change PICs items G1, G2, and G3, and insert new row G3a after row G3, as shown (unchanged rows not shown):

Add table showing addition of "in at least one direction" to Value/Comment for G1, G2, and G3.

(general row format is:

Item: Gn

Feature: PHY support of x Gb/s MAC data rate

Subclause: 46.1.3

Value/Comment: Support of MAC data rate of x Gb/s /UL in at least one direction /UL

Status: PHY: O.1

Support: Yes [] N/A []

Insert new row after row for G3 in 46.6.3.1:

Item: G3a

Feature: Asymmetric support of 100 Mb/s

Subclause: 46.1.3

Value/Comment: Support MAC data rate of 100 Mb/s in one direction when at least one of 2.5 Gb/s, 5 Gb/s, or 10 Gb/s is supported in the other.

Status: ASYM:M PHY:O

Support: Yes[] N/A[]

Remove existing edits to 46.6.3.1 shown on page 43.

Proposed Response Response Status W

PROPOSED ACCEPT.

Consider mocking up to share with the group.

CI 98 SC 98 P43 L50 # 187  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status A ACT Autonegotiation

Big Ticket Items - PHY relationships & Auto-Neg.

If we intend to have multiple PHY types, we need a method to select between them. That means a separate sublayer above the PMA/PCS. Clause 201 uses Clause 98 auto-neg (at least partly). Even if we don't use auto-neg, but have fixed selections, we still need control from that external sub-layer and a way to select.

It is reasonable that they should be able to auto-negotiate and we could solve some of the problems and enable wider Ethernet compatibility by bringing clause 98 into the text.

Clause 98 is mentioned in clause 201, and there is some work needed to bring a new PHY type into it.

If we take another approach work similar to creating an auto-neg sublayer/protocol with priority resolution and ability to select between PHY types in other clauses is needed.

**SuggestedRemedy**

Bring clause 98 into the draft.

Add editor's note (to be removed prior to Working Group Ballot): Contributor's to consider whether autonegotiation should be extended to include V1 PHYs. At the moment it only applies to T1 PHYs.

Bring 98.5.1 State diagram variables into the draft, add variables:

2.5Gig+100MT1 represents that 2.5G+100MBASE PMA is the signal source

5Gig+100MT1 represents that 5G+100MBASE PMA is the signal source

10Gig+100MT1 represents that 10G+100MBASE PMA is the signal source

Bring 98B in the draft, with the following Editor's Note: (to be removed prior to Working Group ballot): Contributions encouraged to resolve priority resolution for MultiGig+100MBASE-T1 PHYs.

Response Response Status C

ACCEPT IN PRINCIPLE.

Bring in Clause 98 Header.

Bring in Annex 98B. Add Editor's note with reference to

[https://www.ieee802.org/3/dm/public/0725/Lo\\_3dm\\_02\\_072925.pdf](https://www.ieee802.org/3/dm/public/0725/Lo_3dm_02_072925.pdf), slides 8 and 9.

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CI 104 SC 104 P43 L 52 # 189  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D Power

Big Ticket Items - Powering

If we want to support clause 104 powering, this is where it would go. Clause 104 will require mention of the new PHY type. It may also be worth considering using clause 189's powering protocol rather than clause 104.

Additionally, we need to consider how far we want to go in specifying PoC

## SuggestedRemedy

Insert clause 104 (104.1.3) into the draft, including Table 104-a from IEEE P802.3dg D2.3, with editing instruction: "Change Table 104-a (inserted by IEEE Std 802.3dg-202x) as follows (unchanged rows not shown)

Show row for Type F PSE/PD, and add 2.5G+100MBASE-T1, 5G+100MBASE-T1, 10G+100MBASE-T1, and the 100M+xG... counterparts to the Compatible PHYs column.

Add Editor's Note (to be removed prior to Working Group Ballot): Need to consider whether power detection and classification is desired for Power over Coax, and whether to extend clause 104 (or 189) to support PoC.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

How do we want to do powering for Coax? Create a new Clause, create an Annex like we've done for Coupling and screening attenuation?

CI 200 SC 200 P44 L 5 # 14  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ

Typo "100M+2.5GBASE-T1" 1 "M" too much after the "G"

## SuggestedRemedy

replace "100M+2.5GBASE-T1" with: 100M+2.5GBASE-T1"

Response Response Status C

ACCEPT.

CI 200 SC 200 P44 L 9 # 15  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ

Typo "100M+5GBASE-V1" 1 "M" too much after the "G"

## SuggestedRemedy

replace "100M+5GBASE-V1" with "100M+5GBASE-V1"

Response Response Status C

ACCEPT.

CI 200 SC 200 P44 L 9 # 64  
 Kleinwaechter, Mathias in-tech  
 Comment Type ER Comment Status A EZ

typo

## SuggestedRemedy

100M+5GBASE-V1

Response Response Status C

ACCEPT.

CI 200 SC 200 P44 L 9 # 295  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A EZ

mis-spelling ( extra M after G) : "5GBASE" should be replaced by 5GBASE

## SuggestedRemedy

see comment

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 200 SC 200.1.1 P44 L 34 # 104

Wienckowski, Natalie

IVN Solutions LLC

Comment Type T Comment Status A EZ

missing text

**SuggestedRemedy**

Change: PHY\_S HS\_TX to PHY\_D

To: PHY\_S HS\_TX to PHY\_D HS\_RX

Make the same change in 201.1.1 and 202.1.1

Response Response Status C

ACCEPT IN PRINCIPLE.

Val to implement 202.1.1

CI 200 SC 200.1.2 P45 L 16 # 105

Wienckowski, Natalie

IVN Solutions LLC

Comment Type E Comment Status A EZ

The PHY/PMD types should be part of the Nomenclature subclause.

**SuggestedRemedy**

Delete: 200.1.2 PHY/PMD types

Change italicized text to: The following table depicts the characteristics of each of the 12 PHY types,

x+y depicts the transmit and receive speeds, where x is the transmit speed and y is the receive speed

T1 - single shielded balanced pair of conductors (SBP)

V1 - single coaxial cable (Coax)

Delete all italicized text below the table.

Make the same change in 201.1.2 and 202.1.2.

Response Response Status C

ACCEPT.

CI 200 SC 200.1.2 P45 L 25 # 171

Zimmerman, George

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

Comment Type T Comment Status A EZ

We don't specify the cable type, but we do specify the transmission medium. Further, "SBP" isn't a defined abbreviation, neither is Coax". It also doesn't make sense to define them - the PHY doesn't care whether the medium is constructed coaxially, with or without a shield. It cares about the fact that the medium is differential or unbalanced. these PHYs could be used on balanced or unbalanced board traces as well.

Same comment applies to Table 201-2 and 202-2.

**SuggestedRemedy**

Change "Cable Type" to "Medium" at P45 L26 (Table 200-2), P73 L41 (Table 201-2), and P144 L43, (Table 202-2)

In all relevant entries for Table 200-2, 201-2, and 202-2, Change "SBP" to "100 Ohm Balanced differential pair" and Change "Coax" to "Unbalanced medium"

Response Response Status C

ACCEPT IN PRINCIPLE.

This is in table 200-1, 201-2, and 202-2

Change: Cable Type

To: Medium Interface

Change: SBP

To: Differential (balanced)

Change: Coax

To: Single-ended (unbalanced)

Val to update Table 202-2.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 200 SC 200.1.2 P45 L26 # 424

Long, Richard TE Connectivity

Comment Type T Comment Status X late

The use of a different "transmit speed" and "receive speed" here is confusing because it implies that the same link have different transmit and receive speeds. This should be a reference to transmit direction, rather than transmit speed. Also M and G alone are not appropriate units and should be labeled as Mb/s or Gb/s. Also applies to Table 201-2 (page 73/74) and 202-2 (page 144/145)

**SuggestedRemedy**

Use "Uplink speed (b/s)" and "Downlink speed (b/s)" or "Forward direction speed (b/s)" and "Reverse direction speed (b/s)" Apply the same changes to Table 201-2 (page 73/74) and 202-2 (page 144/145)

Proposed Response Response Status O

CI 200 SC 200.1.2 P45 L40 # 16

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

Typo "100M+5GMBASE-V1" 1 "M" too much after the "G"

**SuggestedRemedy**

replace "100M+5GMBASE-V1" with "100M+5GBASE-V1"

Response Response Status C

ACCEPT.

CI 200 SC 200.1.2 P45 L47 # 170

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

Comment Type E Comment Status A EZ

The note (italicized text) after Table 200-1 is already in the draft in 200.1.1

**SuggestedRemedy**

Delete P45 L46 through P46 L2

Response Response Status C

ACCEPT.

CI 200 SC 200.1.2 P45 L48 # 17

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

Lines 48 to 54 and Line 1 of page 46 are duplicates of lines 1-12

**SuggestedRemedy**

remove Lines 48 to 54 and Line 1 of page 46

**Response**

Response Status C

ACCEPT.

CI 200 SC 200.1.4.1 P46 L14 # 172

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

Comment Type E Comment Status A EZ

It seems that some edits to the draft from the new nomenclature remain in the clean copy.

**SuggestedRemedy**

Delete struck-out Red text, (and "1" on P46 29), and remove underline and green color to new text on P46, 47, 51, 52, 55, 58. 60

**Response**

Response Status C

ACCEPT.

CI 200 SC 200.1.4.4 P46 L30 # 18

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

Typo: "1" at the end of the line is too much

**SuggestedRemedy**

replace "(LS\_PATH)1" with "(LS\_PATH)"

**Response**

Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 200 SC 200.1.5 P46 L44 # 106

Wienckowski, Natalie

IVN Solutions LLC

Comment Type E Comment Status A EZ  
typo

**SuggestedRemedy**

change: high speed pathS\_PATH)  
To: high speed path (HS\_PATH)

Response Response Status C  
ACCEPT.

CI 200 SC 200.1.5 P46 L44 # 19

Lasry, Ariel

Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ  
Typo

**SuggestedRemedy**

replace "pathS\_PATH)" with "path (HS\_PATH)"

Response Response Status C  
ACCEPT.

CI 200 SC 200.4.2.2.17 P54 L38 # 328

Johnson, Samuel

Infineon

Comment Type T Comment Status R EZ  
Mapping of logic0 -> +1 and logic1 -> -1 seems non-intuitive

**SuggestedRemedy**

If this is used by PAM2 in other standards, then leave unchanged. Otherwise, propose  
Logic0 -> -1  
Logic1 -> +1

Response Response Status C  
REJECT.

This is common with 802.3ch and other Automotive PHYs.

CI 200 SC 200.5.1 P55 L50 # 20

Lasry, Ariel

Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ  
I assume "MII" is editorial typo, as the group agreed to use XGMII for both directions

**SuggestedRemedy**

replace "MII" with "XGMII"

Response Response Status C  
ACCEPT.

CI 200 SC 200.11 P64 L15 # 165

Zimmerman, George

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

Comment Type E Comment Status A EZ  
The term link segment used in clauses 200, 201, and 202 either refers to balanced pairs or to an unbalanced coax link segment. The section should say "used in this subclause", or, better yet, just delete the sentence - it adds little value.

**SuggestedRemedy**

Delete the sentence "The term link segment used in this clause..." from the first paragraph of 200.11, 200.12, 201.11, 201.12, 202.7, and 202.8.

Response Response Status C  
ACCEPT.

Val to implement changes in 202.

CI 200 SC 200.11.1 P64 L21 # 173

Zimmerman, George

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

Comment Type E Comment Status A EZ  
There is an extra word hanging at the front of the sentence.

**SuggestedRemedy**

Delete "Parameters "

Response Response Status C  
ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 200 SC 200.11.1 P64 L21 # 227

Pandey, Sujan

Velinktech

Comment Type ER Comment Status A EZ

Parameters The transmission ...

SuggestedRemedy

The transmission ...

Response Response Status C

ACCEPT.

CI 200 SC 200.12.2 P65 L44 # 174

Zimmerman, George

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

Comment Type E Comment Status A EZ

The notion of crosstalk is independent of the medium type, and will generally come at ganged connector interfaces even on shielded media. The titles appear to be appropriate for coax as well as differential paired media.

SuggestedRemedy

Delete note at P65 L44

Response Response Status C

ACCEPT.

CI 200 SC 200.13. P66 L1 # 164

Zimmerman, George

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

Comment Type T Comment Status R Common MDI

Clauses 201 & 202 each have this same form, but different approaches to the upper frequency. If we have one PHY or the other, we can just copy from that clause. If we have 2 PHYs they will have different specifications for this. Suggest there is no value having this specification in clause 200.

SuggestedRemedy

Delete 200.13 content (and subclause) in its entirety. (leave placeholder)

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI 200 SC 200.13.2.1 P49 L17 # 63

Kleinwaechter, Mathias

in-tech

Comment Type ER Comment Status A EZ

The sentence has a grammatical issue. "characteristic is impedance" -> the "is" must be deleted.

SuggestedRemedy

For balanced cabling, a nominal differential characteristic impedance of 100  $\Omega$  is used, and for coaxial cabling a nominal characteristic impedance of 50  $\Omega$  is used.

Response Response Status C

ACCEPT.

CI 200 SC 200.13.2.1 P66 L15 # 228

Pandey, Sujan

Velinktech

Comment Type ER Comment Status A Common MDI

The differential impedance at the MDI for each transmit/receiver channel ...

SuggestedRemedy

The differential impedance at the MDI for each transmit/receive channel ...

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 200 SC 200.13.2.1 P66 L18 # 175  
Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
Comment Type T Comment Status A Common MDI

It isn't reasonable to include coaxial cabling in a section where you are talking about the T1 interface (even though later the coax section references this). Technically, the interface to the medium in a coax, unbalanced case will be different than it is for a differential balanced case - in addition to the simple fact that the return loss is a 50 ohm impedance for coax, and needs to be specified separately. Separating the two will force the task force to discuss the technical principles.

**SuggestedRemedy**

Change the second sentence of 200.13.2.1 to "For the -T1 PMD, a nominal differential characteristic impedance of 100  $\Omega$  is used."

Copy 200.13.2.1 to 200.14.2.1 (including the plot), replacing "The MDI return loss for coax cables is as specified in 200.13.2.1.", changing "T1" to "V1" in the 2nd and third paragraphs, and changing the second sentence of the first paragraph to "For the -V1 PMD, a nominal characteristic impedance of 50  $\Omega$  is used."

Response Response Status C

ACCEPT IN PRINCIPLE.

Make this change as defined in 200.13, 200.14, 201.13, and 201.14.

Val to make this change in 202.9 and 202.10.

CI 200 SC 200.13.2.1 P66 L35 # 161  
Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
Comment Type E Comment Status A Common MDI

The Note regarding Fmax should be an editor's note. I note that clauses 201 and 202 each have this same equation, and 201 scales with Fmax, but 202 does not - suggesting there is no agreement on this point

**SuggestedRemedy**

replace "Note... established." at line 35 with "Editor's Note (to be removed prior to Working Group Ballot): Commenters to consider what Fmax should be, and whether it should scale. See clauses 201 and 202 for differences."

Response Response Status C

ACCEPT IN PRINCIPLE.

Also make this change in 201.13.2.1.

Delete Editor's note.

Change: For MultiG+100M/100M+MultiGBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is 4000 MHz.

To: For 10G+100M/100M+10GBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is 4000 MHz.

For 5G+100M/100M+5GBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is 4000 MHz.

For 2.5G+100M/100M+2.5GBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is TBD MHz.

CI 200 SC 200.17 P52 L3 # 65  
Kleinwaechter, Mathias in-tech  
Comment Type ER Comment Status A EZ  
typo

**SuggestedRemedy**

100M+.25GBASE-V1

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 200 SC 200.17 P52 L5 # 66  
 Kleinwaechter, Mathias in-tech  
 Comment Type ER Comment Status A EZ  
 typo  
 SuggestedRemedy  
 100M+5GBASE-V1  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17 P69 L3 # 21  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+2.5GBASE-T1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+2.5GBASE-T1" with: 100M+2.5GBASE-T1"  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17 P69 L5 # 22  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+5GBASE-V1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+5GBASE-V1" with "100M+5GBASE-V1"  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.1 P69 L13 # 23  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+2.5GBASE-T1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+2.5GBASE-T1" with: 100M+2.5GBASE-T1"  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.1 P69 L15 # 24  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+5GBASE-V1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+5GBASE-V1" with "100M+5GBASE-V1"  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.2.2 P53 L25 # 67  
 Kleinwaechter, Mathias in-tech  
 Comment Type ER Comment Status A EZ  
 typo  
 SuggestedRemedy  
 100M+.25GBASE-V1  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.2.2 P53 L28 # 68  
 Kleinwaechter, Mathias in-tech  
 Comment Type ER Comment Status A EZ  
 typo  
 SuggestedRemedy  
 100M+5GBASE-V1  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.2.2 P70 L25 # 25  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+2.5GBASE-T1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+2.5GBASE-T1" with: 100M+2.5GBASE-T1"  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 200 SC 200.17.2.2 P70 L28 # 26  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+5GMBASE-V1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+5GMBASE-V1" with "100M+5GBASE-V1"  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.3 P53 L53 # 69  
 Kleinwaechter, Mathias in-tech  
 Comment Type ER Comment Status A EZ  
 typo  
 SuggestedRemedy  
 100M+.25GBASE-V1  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.3 P54 L1 # 70  
 Kleinwaechter, Mathias in-tech  
 Comment Type ER Comment Status A EZ  
 typo  
 SuggestedRemedy  
 100M+5GBASE-V1  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.4 P70 L53 # 27  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+2.5GMBASE-T1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+2.5GMBASE-T1" with: 100M+2.5GBASE-T1"  
 Response Response Status C  
 ACCEPT.

CI 200 SC 200.17.4 P71 L1 # 28  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+5GMBASE-V1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+5GMBASE-V1" with "100M+5GBASE-V1"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201 P72 L3 # 29  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+2.5GMBASE-T1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+2.5GMBASE-T1" with: 100M+2.5GBASE-T1"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201 P72 L6 # 30  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo "100M+5GMBASE-V1" 1 "M" too much after the "G"  
 SuggestedRemedy  
 replace "100M+5GMBASE-V1" with "100M+5GBASE-V1"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.1.1 P72 L39 # 298  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A EZ  
 "at receives at y speed" should be replaced by " and recieves at y speed"; grammatical error.  
 SuggestedRemedy  
 see comment  
 Response Response Status C  
 ACCEPT.

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.1 P72 L39 # 229  
 Pandey, Sujan Velinktech  
 Comment Type ER Comment Status A EZ  
 speed, where x+y indicates the PHY transmits at "x" speed at receives at "y" speed  
 SuggestedRemedy  
 speed, where x+y indicates the PHY transmits at "x" speed and receives at "y" speed  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Change "at" to "and"

CI 201 SC 201.1.1 P72 L42 # 299  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A EZ  
 HS\_RX' is missing after 'PHY\_D'  
 SuggestedRemedy  
 see comment  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.1.1 P72 L48 # 297  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status D ACT Nomenclature  
 PHY\_D and PHY\_S notations are not self-descriptive.  
 SuggestedRemedy  
 PHY\_D is replaced by LSHS, and PHY\_S is replaced by HSLS  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 The definitions of PHY\_D and PHY\_S can be found in 201.1.1. LSHS and HSLS are not defined in the draft.

CI 201 SC 201.1.1 P73 L12 # 176  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status A EZ  
 inappropriate use of "shall" - requirement on the reader.  
 SuggestedRemedy  
 Change the second sentence of the paragraph starting on line 11 (Additionally...) to "When incorporating Clause 149 requirements which use the scaling factor "S" by reference, refer to Table 201-1 rather than Table 149-1."  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.1.4 P74 L22 # 182  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status A ACT Autonegotiation  
 The requirement that optional autoneg shall meet clause 98 is missing - but autoneg is included elsewhere in clause 201. In clause 149 it went in this section.  
 SuggestedRemedy  
 Add text to 201.1.4:  
 Auto-Negotiation (Clause 98) may optionally be used by MultiG+100M/100M+MultiGBASE-T1/V1 devices to detect the abilities (modes of operation) supported by the device at the other end of a link segment, determine common abilities, and configure for normal operation. Auto-Negotiation is performed upon link startup through the use of half-duplex differential Manchester encoding. The implementation of the Auto-Negotiation function is optional. If Auto-Negotiation is implemented, it shall meet the requirements of Clause 98.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Put this text after the text added in comments #401 and #402.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.4 P74 L23 # 183  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D ACT Autonegotiation

The description of leader/follower negotiation formerly went here.

**SuggestedRemedy**

Add the following text (after the autoneg text if the previous comment is implemented):  
 A MultiG+100M/100M+MultiGBASE-T1/V1 PHY shall be capable of operating as LEADER or FOLLOWER, per runtime configuration. A LEADER PHY uses a local clock to determine the timing of transmitter operations. A FOLLOWER PHY recovers the clock from the received signal and uses it to determine the timing of transmitter operations. When Auto-Negotiation is used, the LEADER-FOLLOWER relationship between two devices sharing a link segment is established during Auto-Negotiation (see Clause 98). If Auto-Negotiation is not used, a LEADER-FOLLOWER relationship shall be established by management or hardware configuration of the PHYs, and the LEADER and FOLLOWER are synchronized by the PHY Link Synchronization function in the PHY (see 201.7.3).  
 NOTE—Annex K describes that the optional alternative terminology "leader" "follower" was formerly known as "master" and "slave".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Ragnar and George to review text and provide an update by Wednesday, January 21st.

Add the following text after the text added by comment #182:  
 A MultiG+100M/100M+MultiGBASE-T1/V1 PHY can o as LEADER or FOLLOWER, per runtime configuration. A LEADER PHY uses a local clock to determine the timing of transmitter operations. A FOLLOWER PHY recovers the clock from the received signal and uses it to determine the timing of transmitter operations. When Auto-Negotiation is used, the LEADER-FOLLOWER relationship between two devices sharing a link segment is established during Auto-Negotiation (see Clause 98). If Auto-Negotiation is not used, a LEADER-FOLLOWER relationship is established by management or hardware configuration of the PHYs, and the LEADER and FOLLOWER are synchronized by the PHY Link Synchronization function in the PHY (see 201.7.3).  
 NOTE—Annex K describes that the optional alternative terminology "leader" "follower" was formerly known as "master" and "slave".

Implement suggested remedy with Editor making sure the reference is to what was 201.7.3 in D0.a.

CI 201 SC 201.1.4 P75 L7 # 207  
 Abedinzadeh, Bizhan Infineon  
 Comment Type E Comment Status A ACT EEE

Quiet-refresh signaling is not needed for non-echo-cancelled PHYs

**SuggestedRemedy**

delete tx\_lpi\_active signal from Figure 201-1

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #300

CI 201 SC 201.1.4 P75 L7 # 300  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A ACT EEE

From figure 201-1, tx\_lpi\_active to be removed as EEE is not defined yet

**SuggestedRemedy**

see comment

Response Response Status C

ACCEPT IN PRINCIPLE.

Remove the following from Figure 201-1:  
 - tx\_lpi\_active and associated line  
 - remove NOTE 2 on the Figure

CI 201 SC 201.1.4 P75 L32 # 343  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D PHY\_S

Missing LSS Tx path

**SuggestedRemedy**

Add LSS Tx Path

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.4 P75 L49 # 177  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status A EZ  
 typo. "received clock signal back the PMA TRANSMIT" - same typo on NOTE 1 on Figure 201-1 and 201-2 (note - these are also clause 149 errors)  
 SuggestedRemedy  
 Change "back" to "by" in NOTE 1 on Figures 201-1 and 201-2.  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.1.4 P75 L49 # 31  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Typo missing "HS\_TX" before "PMA TRANSMIT"  
 SuggestedRemedy  
 add "HS\_TX " before "PMA TRANSMIT"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.1.4 P75 L50 # 179  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status A ACT EEE  
 NOTE 2 is incorrect and misleading. There are no functions shown with dashed lines, and the signals are required if EEE is provided - they aren't optional in and of themselves. (note - these are also clause 149 errors)  
 SuggestedRemedy  
 Change NOTE 2 to read: "rx\_lpi\_active and alert\_detect are only required when optional EEE capability is implemented."  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 See comment #300

CI 201 SC 201.1.4 P76 L33 # 208  
 Abedinzadeh, Bizhan Infineon  
 Comment Type E Comment Status A ACT EEE  
 Quiet-refresh signaling is not needed for non-echo-cancelled PHYs  
 SuggestedRemedy  
 delete rx\_lpi\_active and alert\_detect signals from Figure 201-2  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.

See comment #301.

CI 201 SC 201.1.4 P76 L33 # 301  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A ACT EEE  
 From figure 201-2, rx\_lpi\_active, aleret\_detect to be removed as EEE is not defined yet  
 SuggestedRemedy  
 see comment  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.

Remove the following from Figure 201-2:  
 - rx\_lpi\_active and associated line  
 - alert\_detect and associated line  
 - remove NOTE 2 on the Figure

CI 201 SC 201.1.4 P76 L41 # 344  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status A ACT Autonegotiation  
 Clock recovery is optional for leader  
 SuggestedRemedy  
 Mark "Clock Recovery" optional  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.

In Figure 201-2, in the clock recovery box add "(follower only)"

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.4 P76 L49 # 32

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

Typo missing "LS\_TX" before "PMA TRANSMIT"

**SuggestedRemedy**

add "LS\_TX " before "PMA TRANSMIT"

Response Response Status C

ACCEPT.

CI 201 SC 201.1.4 P76 L50 # 178

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

Comment Type T Comment Status A ACT EEE

NOTE 2 is incorrect and misleading. There is only one signal shown with a dashed line, and it is required if EEE is provided - it isn't optional in and of itself. (note - these are also clause 149 errors)

**SuggestedRemedy**

Change NOTE 2 to read: "tx\_lpi\_active is only required when optional EEE capability is implemented."

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #301.

CI 201 SC 201.1.4.1 P77 L4 # 401

Muma, Scott Microchip

Comment Type T Comment Status A ACT Introduction

I would recommend describing the PCS layer from the PHY\_D/PHY\_S perspective rather than HS\_PATH/LS\_PATH. The wording in this paragraphs shows how challenging it is to talk about a PCS from a path perspective, but then to say it contains a management interface, and XGMII interface, etc. when this is referring to 2 different interfaces in separate PHY instances.

**SuggestedRemedy**

Describe the PHY\_S PCS sublayer which has an XGMII interface, a single management interface, a PMA interface, etc. Describe the data format of the PHY\_S Tx referring to 149.3 of the HS\_TX as desired. Add any specifics needed for LS\_RX.

Response Response Status C

ACCEPT IN PRINCIPLE.

Add text:

Editor to add an intro paragraph before the following. With references to new Figure 201-1, [https://www.ieee802.org/3/dm/public/0126/PHY\\_S%20PHY\\_D.pdf](https://www.ieee802.org/3/dm/public/0126/PHY_S%20PHY_D.pdf).

The PHY\_S device includes the high-speed transmit function and low-speed receive function required for asymmetric operation over the link segment. The top-level arrangement of the PCS, PMA, synchronization, monitoring, and clock-recovery blocks is shown in Figure 201-1. While the block diagram illustrates data, status, and control flow among these elements, the detailed functional definitions are provided in the remainder of Clause 201.

The PHY\_D device includes the low-speed transmit function and high-speed receive function required for asymmetric operation over the link segment. The top-level arrangement of the PCS, PMA, synchronization, monitoring, and clock-recovery blocks is shown in Figure 201-2. While the block diagram illustrates data, status, and control flow among these elements, the detailed functional definitions are provided in the remainder of Clause 201.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

---

CI 201 SC 201.1.4.1 P77 L11 # 191

van Dyck, Peter Infineon

Comment Type E Comment Status A EZ

Not a proper sentence

*SuggestedRemedy*

The HS\_PATH contains the PCS functions as specified in 149.3,...

Response Response Status C

ACCEPT IN PRINCIPLE.

Change: In the HS\_PATH, the PCS functions as specified in 149.3, ...

To: The HS\_PATH contains the PCS functions as specified in 149.3, ...

---

CI 201 SC 201.1.4.2 P77 L16 # 33

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type T Comment Status A EZ

Missing text similar to the first paragraph of 201.1.4.1. Needed to identify the coupling to XGMII also with the other PHYs

*SuggestedRemedy*

Add as first paragraph of 201.1.4.2:

"For the low speed path, the LS\_TX and LS\_RX PCS couples a 10 Gigabit Media Independent Interface (XGMII), as specified in Clause 46, to the 100M+2.5GBASE-T1/V1, 100M+5GBASE-T1/V1, or 100M+10GBASE-T1/V1 Physical Medium Attachment (PMA) sublayer. In addition to the normal mode of operation, the PCS supports a training mode. Furthermore, the PCS contains a management interface. The LS\_TX PCS is in the PHY\_D and the LS\_RX PCS is in the PHY\_S."

Response Response Status C

ACCEPT.

---

CI 201 SC 201.1.4.2 P77 L17 # 402

Muma, Scott Microchip

Comment Type T Comment Status A ACT Introduction

I would recommend describing the PCS layer from the PHY\_D/PHY\_S perspective rather than HS\_PATH/LS\_PATH. The wording in this paragraphs shows how challenging it is to talk about a PCS from a path perspective, but then to say it contains a management interface, and XGMII interface, etc. when this is referring to 2 different interfaces in separate PHY instances.

*SuggestedRemedy*

Describe the PHY\_D PCS sublayer which has an XGMII interface, a single management interface, a PMA interface, etc. Describe the data format of the PHY\_D Tx as the LS\_TX and add any specifics needed for HS\_RX.

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #401.

---

CI 201 SC 201.1.4.2 P77 L18 # 108

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

grammar

*SuggestedRemedy*

change "TXD<31:0>, TXC<3:0>" to "TXD<31:0> and TXC<3:0>"

Response Response Status C

ACCEPT.

corrected page number

---

CI 201 SC 201.1.4.2 P77 L23 # 109

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

typo

*SuggestedRemedy*

change "Reserved" to "reserved"

Response Response Status C

ACCEPT.

corrected page number

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.4.2 P77 L24 # 72

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

Comment Type E Comment Status A EZ - pull

There are two different ways that RS-FEC encoding is referenced throughout the draft, parent document, and related published amendments. I believe the encoding should be structured as RS-FEC(x,y,z) - with no space between 'FEC' and '('. Editor may additionally wish to consider submitting a Maintenance Request to harmonize usage across all documents.

#### SuggestedRemedy

Grant Editorial license to replace occurrences of RS-FEC (x,y,etc.) with RS-FEC(x,y,etc.) throughout the draft.

Response Response Status C

ACCEPT.

Do a search in the text and in the Figures, as this can be found in both.

Val to check Clause 202.

Also need to submit a Maintenance request as this is not consistent in 802.3.

CI 201 SC 201.1.4.2 P77 L25 # 302

Razavi, Alireza Infineon

Comment Type E Comment Status A EZ

word Finally should be removed

#### SuggestedRemedy

see comment

Response Response Status C

ACCEPT.

CI 201 SC 201.1.4.2 P77 L26 # 110

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

wording

#### SuggestedRemedy

change "low data rate direction" to "low speed path" or "LS\_PATH"

Response Response Status C

ACCEPT IN PRINCIPLE.

Change: The low data rate direction PCS transmit functions are described in 201.2.2.2.

To: The LS\_PATH contains the PCS functions as specified in 201.4.2.2.

CI 201 SC 201.1.4.2 P77 L27 # 34

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

wrong cross reference. Low data rate PCS transmit functions are described in 201.4.2.2

#### SuggestedRemedy

replace cross reference to "201.2.2.2" with a cross reference to "201.4.2.2"

Response Response Status C

ACCEPT.

CI 201 SC 201.1.4.2 P77 L39 # 345

Jonsson, Ragnar Infineon

Comment Type T Comment Status A ACT EEE

EEE should be removed

#### SuggestedRemedy

Remove all reference to EEE

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #193.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.4.2 P77 L39 # 192  
 van Dyck, Peter Infineon  
 Comment Type E Comment Status A EZ  
 Wrong reference: (see 201.3.5.2)  
 SuggestedRemedy  
 (see 201.4.5)  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Change: (see 201.3.5.2)  
 To: (see 201.4.5)

CI 201 SC 201.1.4.2 P77 L40 # 276  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A ACT EEE  
 remove EEE, as it is not defined  
 SuggestedRemedy  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Remove all reference to EEE as covered by other "ACT EEE" comments and those on  
 page 4 of  
[https://www.ieee802.org/3/dm/public/0126/EEE%20Removal%20from%20802.3dm%20V0.a](https://www.ieee802.org/3/dm/public/0126/EEE%20Removal%20from%20802.3dm%20V0.a.pdf)  
 .pdf, taking Option 1 where there are two options.

CI 201 SC 201.1.4.2 P77 L40 # 193  
 van Dyck, Peter Infineon  
 Comment Type T Comment Status A ACT EEE  
 "such as EEE and OAM" EEE should be removed  
 SuggestedRemedy  
 Replace with "such as OAM"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.1.4.3 P77 L52 # 112  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status R EZ  
 typo: check how many spaces are there between "provides" and "communications"  
 SuggestedRemedy  
 change "provides communications" to "provides communications"  
 Response Response Status C  
 REJECT.  
 There is a single space. The space is large because of the justification to both edges.  
 corrected page number

CI 201 SC 201.1.4.3 P77 L48 # 111  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status R EZ  
 wording: insert "shielded" between "single" and "balanced"  
 If this comment is accepted, many places need to be inserted.  
 SuggestedRemedy  
 change "a single balanced pair of conductors" to "a single shielded balanced pair of  
 conductors"  
 Response Response Status C  
 REJECT.  
 802.3ch and 802.3cy just say "a single balanced pair of conductors".  
 corrected page number

CI 201 SC 201.1.4.3 P77 L52 # 113  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status A EZ  
 typo  
 SuggestedRemedy  
 change "x" to "x"  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Change the letter "x" to the multiplication sign.  
 corrected page number

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.4.3 P77 L 52 # 403

Muma, Scott Microchip

Comment Type T Comment Status D ACT PCS

This paragraphs switches from the PMA being a sublayer to being 2 ends of the path. The PMA is a sublayer, so talking about an HS\_PATH PMA or LS\_PATH PMA makes it challenging to maintain clarity. The following paragraphs on PHY Control switches back to sublayer since the PHY control would control an HS\_TX/LS\_RX PMA, not an HS\_PATH PMA.

#### SuggestedRemedy

Change this paragraph to: The PMA provides full duplex communications at 117.1875 MBd in one direction and 5625 x S MBd in the other direction. See Table 201–1 for the definition of S.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

CI 201 SC 201.1.4.3 P78 L 2 # 346

Jonsson, Ragnar Infineon

Comment Type E Comment Status A ACT Autonegotiation

Autoneg is optional

#### SuggestedRemedy

Clarify that Autoneg is optional, by putting the word "optional" before Autoneg

Response Response Status C

ACCEPT IN PRINCIPLE.

Change: following the completion of Auto-Negotiation or PHY Link Synchronization and

To: following the completion of PHY Link Synchronization or optional Auto-Negotiation and

CI 201 SC 201.1.4.3 P78 L 3 # 114

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status R EZ

wording:

When talking about all PHYs, regardless of transmit speed or cable type, use: MultiG+100M/100M+MultiGBASE-T1/V1

#### SuggestedRemedy

change "PHY" to "MultiG+100M/100M+MultiGBASE-T1/V1"

Response Response Status C

REJECT.

The use of "PHY" here is consistent with other 802.3 clauses.

corrected page number

CI 201 SC 201.1.4.4 P78 L 18 # 347

Jonsson, Ragnar Infineon

Comment Type T Comment Status A ACT EEE

EEE should be removed

#### SuggestedRemedy

Remove all reference to EEE

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete the Editor's note.

Add: MultiG+100M/100M+MultiGBASE-T1/V1 does not support EEE.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.4.5 P78 L28 # 348  
Jonsson, Ragnar Infineon  
Comment Type E Comment Status D ACT Link Sync  
Link Synchronization is not half-duplex  
SuggestedRemedy  
Remove text about Link Sync beeing half-duplex  
Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.  
Solved by comment #401, if accepted.  
If #401 not accepted:  
Delete sentence: Link Synchronization operates in a half-duplex fashion.

CI 201 SC 201.1.5 P78 L49 # 349  
Jonsson, Ragnar Infineon  
Comment Type T Comment Status A ACT EEE  
EEE should be removed  
SuggestedRemedy  
Remove item "i)" from the list  
Response Response Status C  
ACCEPT.

CI 201 SC 201.1.5 P78 L50 # 194  
van Dyck, Peter Infineon  
Comment Type T Comment Status A ACT EEE  
Non echo-cancelled PHY doesn't need quiet-refresh signaling to be energy efficient  
SuggestedRemedy  
Delete item i) (P78 L50)  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
See comment #349.

CI 201 SC 201.1.5 P78 L51 # 277  
Razavi, Alireza Infineon  
Comment Type T Comment Status A ACT EEE  
LPI mode is not defined in Clause 201, so PHY has 2 basic modes not 3 basic modes  
SuggestedRemedy  
Remove optional LPI signaling objective, or add full normative definition of LPI operation for these PHYs.  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
See comment #349.

CI 201 SC 201.1.5 P78 L52 # 350  
Jonsson, Ragnar Infineon  
Comment Type T Comment Status A ACT EEE  
EEE should be removed  
SuggestedRemedy  
Only two modes and remove LPI reference  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
See comment #195.

CI 201 SC 201.1.5 P78 L52 # 195  
van Dyck, Peter Infineon  
Comment Type T Comment Status A ACT EEE  
Non echo-cancelled PHY doesn't need quiet-refresh signaling to be energy efficient  
SuggestedRemedy  
Change "The PHY may operate in three basic modes: the normal data mode, the training mode, or an optional LPI mode." to read "The PHY may operate in two basic modes: the normal data mode or the training mode."  
Response Response Status C  
ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.1.6 P79 L26 # 351  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status A EZ  
 Missing figure  
 SuggestedRemedy  
 Add figure referenced in this line  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Delete the reference to the figure per comment #268.

CI 201 SC 201.1.6 P79 L26 # 278  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A EZ  
 remove this phrase '(See Figure <REF>)'  
 SuggestedRemedy  
 see comment  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.1.6 P79 L26 # 268  
 Lo, William Axonne Inc  
 Comment Type T Comment Status A EZ  
 No need to have a figure and it is going to be difficult and not instructive even with a drawing showing the RS-Frame encoded as DME. The stream of DME symbols will be self evident with a combination of 201.4.2.2.16, Figure 201-16, and the output of the data path in Figure 201-11  
 SuggestedRemedy  
 Remove (See Figure <REF>)  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.2 P79 L48 # 115  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D ACT Nomenclature  
 wording  
 SuggestedRemedy  
 change "PHY\_S and PHY\_D" to "MultiG+100M/100M+MultiGBASE-T1/V1"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 corrected page number

CI 201 SC 201.2 P79 L50 # 116  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D ACT Nomenclature  
 wording  
 SuggestedRemedy  
 change "PHY\_S and PHY\_D" to "MultiG+100M/100M+MultiGBASE-T1/V1 transfer"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE. corrected page number  
 change "PHY\_S and PHY\_D"  
 to "MultiG+100M/100M+MultiGBASE-T1/V1"

CI 201 SC 201.2.1.1.3 P80 L41 # 35  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status D ACT Link Monitor  
 Is the PMA Link Monitor function reference to 149.4.2.5 correct? There is a specific Link Monitor function under 201.7.2 which is specific for ACT  
 SuggestedRemedy  
 change the reference to "201.7.2"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.1.2.1 P81 L8 # 36  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status D ACT Nomenclature  
 "US\_TX" is not defined.  
 SuggestedRemedy  
 change to "MultiG+100M/100+MultiGBASE-T1/V1"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 201 SC 201.2.1.2.1 P81 L8 # 196  
 van Dyck, Peter Infineon  
 Comment Type E Comment Status D ACT Nomenclature  
 "US\_TX link is established"  
 SuggestedRemedy  
 Replace with "PHY link is established"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change "US\_TX link is established"  
 To "MultiG+100M/100+MultiGBASE-T1/V1 link is established"

CI 201 SC 201.2.2 P81 L24 # 117  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status D ACT Nomenclature  
 wording: these service primitives are not only for LS\_PATH  
 SuggestedRemedy  
 change "The low speed path" to "MultiG+100M/100M+MultiGBASE-T1/V1"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 corrected page number

CI 201 SC 201.2.2 P81 L41 # 37  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status R ACT EEE  
 Missing text for optional EEE related primitives which are shown in Figures 201-3 and 201-4. Also visible in Figures 201-1 and 201-2  
 SuggestedRemedy  
 Copy missing lines from 149.2.2  
 Response Response Status C  
 REJECT.  
 EEE is not supported.

CI 201 SC 201.2.2 P82 L # 197  
 van Dyck, Peter Infineon  
 Comment Type T Comment Status A ACT EEE  
 Primitive PMA\_PCS\_TX\_LPI STATUS.request is not defined or needed.  
 SuggestedRemedy  
 Remove PMA\_PCS\_TX\_LPI\_STATUS.request from Figure 201-3  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 See comment #279.

CI 201 SC 201.2.2 P82 L3 # 352  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status R ACT PMA  
 PMA\_LINK signals are optional  
 SuggestedRemedy  
 Mark PMA\_LINK.request and indication optional  
 Response Response Status C  
 REJECT.  
 802.3ch also had optional autoneg, and PMA\_LINK was not marked as optional

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2 P82 L24 # 353  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status A ACT EEE  
 EEE should be removed  
 SuggestedRemedy  
 Remove LPI status request signal  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 See comment #279.

CI 201 SC 201.2.2 P82 L24 # 279  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A ACT EEE  
 From figure 201-3, PMA\_PCS\_TX\_LPI\_STATUS\_request to be removed as EEE is not defined yet  
 SuggestedRemedy  
 see comment  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Remove the following from Figure 201-3:  
 - PMA\_PCS\_TX\_LPI\_STATUS\_request and associated line  
 - remove the NOTE on the Figure

CI 201 SC 201.2.2 P83 L # 198  
 van Dyck, Peter Infineon  
 Comment Type T Comment Status A ACT EEE  
 Primitives PMA\_PCS\_RX\_LPI STATUS.request and PMA\_ALERTDETECT are not defined or needed,  
 SuggestedRemedy  
 Remove PMA\_PCS\_RX\_LPI\_STATUS.request and PMA\_ALERTDETECT.indication from Figure 201-4  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 See comment #280.

CI 201 SC 201.2.2 P83 L24 # 280  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A ACT EEE  
 From figure 201-4, PMA\_PCS\_RX\_LPI\_STATUS\_request, PMA\_ALERTDETECT.induction to be removed as EEE is not defined yet  
 SuggestedRemedy  
 see comment  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Remove the following from Figure 201-3:  
 - PMA\_PCS\_RX\_LPI\_STATUS\_request and associated line  
 - PMA\_ALERTDETECT.induction and associated line  
 - remove the NOTE on the Figure

CI 201 SC 201.2.2.1 P84 L43 # 107  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ  
 SuggestedRemedy  
 Adjust tab settings so "FOLLOWER" doesn't run in to "This".  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.2.2.1 P84 L43 # 281  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A EZ  
 Missing space in 'FOLLOWERThis value'.  
 SuggestedRemedy  
 Insert a space: 'FOLLOWER This value'.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Correct per comment #107

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2.1.1 P83 L24 # 354  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status A ACT EEE  
 EEE should be removed  
 SuggestedRemedy  
 Remove LPI status and Alert-Detect signals  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 See comment #280.

CI 201 SC 201.2.2.2 P84 L27 # 118  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type T Comment Status A ACT Asymmetric  
 Since 802.3dm is asymmetric transmission, the use of "and" will restrict optimal PHY design.  
 SuggestedRemedy  
 change "and" to "or"  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 The sentence was deleted by #356.

CI 201 SC 201.2.2.2 P84 L29 # 296  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A EZ  
 both " LEADER-FOLLOWER" and "LEADER/FOLLOWER" phrases are used.  
 SuggestedRemedy  
 for consistency, only one of them should be used  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Use LEADER-FOLLOWER as this is the predominate usage in 802.3, as MASTER-SLAVE.  
 Change throughout the draft.  
 Val to check clause 202.

CI 201 SC 201.2.2.2 P84 L29 # 355  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status R ACT Autonegotiation  
 Autoneg needs to support selection of PHY-S vs PHY-D  
 SuggestedRemedy  
 Add Autoneg support for selecting PHY-S vs PHY-D  
 Response Response Status Z  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

CI 201 SC 201.2.2.2.1 P84 L43 # 230  
 Pandey, Sujana Velinktech  
 Comment Type ER Comment Status A EZ  
 FOLLOWERThis ...  
 SuggestedRemedy  
 FOLLOWER This  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Correct per comment #107

CI 201 SC 201.2.2.2.1 P84 L43 # 38  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 space missing between "FOLLOWER" and "This"  
 SuggestedRemedy  
 Insert between "FOLLOWER" and "This"  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Correct per comment #107

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2.3 P85 L5 # 119

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ  
typo

## SuggestedRemedy

change "in201.4.2.2" to "in 201.4.2.2"

Response Response Status C

ACCEPT.  
corrected page number

CI 201 SC 201.2.2.3 P84 L26 # 356

Jonsson, Ragnar Infineon

Comment Type T Comment Status A ACT Autonegotiation  
It is optional for PHY-D to be a follower and PHY-S to be a master

## SuggestedRemedy

See comment

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete: Each PHY in a MultiG+100M/100M+MultiGBASE-T1/V1 link is capable of operating as a LEADER PHY and as a FOLLOWER PHY.

Comment #118, is now obsolete.

CI 201 SC 201.2.2.3 P85 L5 # 282

Razavi, Alireza Infineon

Comment Type E Comment Status A EZ  
Missing space in reference 'in201.4.2.2'.

## SuggestedRemedy

Insert a space: 'in 201.4.2.2'.

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.3 P85 L5 # 199

van Dyck, Peter Infineon

Comment Type E Comment Status A EZ  
"in201.4.2.2" space missing

## SuggestedRemedy

Replace with "in 201.4.2.2"

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.3 P85 L5 # 231

Pandey, Sujan Velinktech

Comment Type ER Comment Status A EZ  
for the HS\_TX and in201.4.2.2 for ...

## SuggestedRemedy

for the HS\_TX and in 201.4.2.2 for ...

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.3 P85 L5 # 78

Wienckowski, Natalie IVN Solutions LLC

Comment Type E Comment Status A EZ  
missing space

## SuggestedRemedy

Add space between "in" and "201.4.2.2".

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2.3.1 P85 L16 # 120

Wang, Frank Realtek Semiconductor Corp.

Comment Type T Comment Status A EZ

{-1, -1/3, +1/3, +1} is only for the normal operation of 10G mode.

**SuggestedRemedy**

change "{-1, -1/3, +1/3, +1} in normal operation." to the following:  
{-1, -1/3, +1/3, +1} in normal operation for 10G mode.  
{-1, +1} in normal operation for 2.5G mode and 5G mode.

Response Response Status C

ACCEPT.

corrected page number

CI 201 SC 201.2.2.3.1 P85 L17 # 39

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type T Comment Status A EZ

values -1/3 and +1/3 may only be used by 10G+100MBASE-T1/V1 PHY

**SuggestedRemedy**

add after "operation": "for 10G+100MBASE-T1/V1 PHY"  
Ad a new line with:  
"{-1, +1} in normal operation for 2.5G+100MBASE-T1/V1 and 5G+100MBASE-T1/V1  
PHYs."

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.3.1 P85 L18 # 378

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status R EZ

wording: since there is only one case, I suggest to remove "when zeros are to be transmitted in the following case:"

**SuggestedRemedy**

change:  
0 when zeros are to be transmitted in the following case:  
when PMA\_TXMODE.indication is SEND\_Z during PMA training.

to:

0 when PMA\_TXMODE.indication is SEND\_Z during PMA training.

Response Response Status C

REJECT.

This is the standard structure in 802.3.

CI 201 SC 201.2.2.3.1 P85 L23 # 357

Jonsson, Ragnar Infineon

Comment Type E Comment Status A EZ

Not the same clarity for DME signal as PAM2 signal in line 17

**SuggestedRemedy**

Clarify the meaning of DME, by adding a reference to Clause 201.4.2.2.16

Response Response Status C

ACCEPT IN PRINCIPLE.

After "DME" add (see 201.4.2.2.16)

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2.3.1 P85 L23 # 396

Muma, Scott

Microchip

Comment Type TR Comment Status D DME

It's not clear what it means when tx\_symb has the value DME. DME should not be in the PCS layer, it should be in the PMA layer as in Clause 147: "the DME encoder/decoder is contained in the PMA (see 147.4)"

**Suggested Remedy**

tx\_symb should be the logic symbol values, and the DME encoder/decoder functions should be removed from the PCS and added to the PMA.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

New Response requested:

In 201.2.2.3.1, P85/L23

Change: DME

To: { DME0, DME1}

In Figure 201-10 remove the "DME mapper" box and replace with " symb\_tx ".

Move 201.4.2.2.16 to 201.6.2.2.1

201.6.2.2.1 Differential Manchester encoding (DME)

During transmission, PMA\_UNITDATA.request conveys the tx\_symb variable, An, to the PMA, which can take on the values of DME1 and DME0

Move P103 L16 - 51 here.

P96L53 Change: These bits are then sent one bit at a time as a DME symbol.

To: These bits are then sent one bit at a time.

P104L9 Change: The received DME symbols are demapped

To: The received symbols are demapped

P104L10 Delete: See 201.4.2.2.16 for details on the DME symbols.

P104L21 Change: received DME training framing

To: received training framing

P104L44 Change: PCS shall form a DME stream

To: PCS shall form a bit stream

P107L23 Change: See 201.4.2.2.16 for details on the DME symbols.

To: See 201.6.2.2.1 for details on the DME symbols.

=====

Posted:

In 201.2.2.3.1, P85/L23

Change: DME

To: {0, 1}

In Figure 201-10 remove the "DME mapper" box and replace with "An".

Move 201.4.2.2.16 to 201.6.2.2.1

201.6.2.2.1 Differential Manchester encoding (DME)

During transmission, PMA\_UNITDATA.request conveys the tx\_symb variable, An, to the PMA, which can take on the values of "1" and "0".

P103 L16 - 51 here.

P96L53 Change: These bits are then sent one bit at a time as a DME symbol.

To: These bits are then sent one bit at a time.

P98L40 (Figure 201-11): Remove "Bit to DME" block

P99L28 (Figure 201-12): Remove "DME to Bit" block

P104L9 Change: The received DME symbols are demapped

To: The received symbols are demapped

P104L10 Delete: See 201.4.2.2.16 for details on the DME symbols.

P104L21 Change: received DME training framing

To: received training framing

P104L44 Change: PCS shall form a DME stream

To: PCS shall form a bit stream

P104L45 Change: rx\_DME\_0 to rx\_DME\_299

To: rx\_0 to rx\_299

P107L23 Change: See 201.4.2.2.16 for details on the DME symbols.

To: See 201.6.2.2.1 for details on the DME symbols.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2.3.1 P85 L24 # 121

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status R EZ

wording: since there is only one case, I suggest to remove "when zeros are to be transmitted in the following case:"

**SuggestedRemedy**

change:

0 when zeros are to be transmitted in the following case:  
when PMA\_TXMODE.indication is SEND\_Z during PMA training.

to:

0 when PMA\_TXMODE.indication is SEND\_Z during PMA training.

Response Response Status C

REJECT.

This is the standard structure in 802.3.

corrected page number and line number

CI 201 SC 201.2.2.4.1 P85 L45 # 122

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

grammar: comma aftrer "During reception"

**SuggestedRemedy**

change "reception" to "reception,"

Response Response Status C

ACCEPT.

corrected page number and line number

CI 201 SC 201.2.2.4.2 P85 L50 # 40

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type T Comment Status A EZ

It is not only the low speed path PMA that generates PMA\_UNITDATA.indication(rx\_symb) messages. Also the high speed path.

**SuggestedRemedy**

delete "low speed path"

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.4.2 P85 L52 # 41

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

ambiguous use of 2.5G. Other Clauses use the PHY name

**SuggestedRemedy**

replace "2.5G" with "100M+2.5GBASE-T1/V1"

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.4.2 P85 L52 # 42

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

ambiguous use of 5G. Other Clauses use the PHY name

**SuggestedRemedy**

replace "5G" with "100M+5GBASE-T1/V1"

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.4.2 P85 L52 # 250

McCarthy, Frank Infineon

Comment Type E Comment Status A EZ

semicolon should be a comma

**SuggestedRemedy**

Response Response Status C

ACCEPT.

CI 201 SC 201.2.2.4.2 P85 L52 # 43

Lasry, Ariel Qualcomm Technologies Inc.

Comment Type E Comment Status A EZ

ambiguous use of 10G. Other Clauses use the PHY name

**SuggestedRemedy**

replace "10G" with "100M+10GBASE-T1/V1"

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2.4.2 P85 L 53 # 251  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 semicolon should be a comma  
 SuggestedRemedy

Response Response Status C  
 ACCEPT.

CI 201 SC 201.2.2.5.3 P86 L 37 # 269  
 Lo, William Axonne Inc  
 Comment Type T Comment Status A ACT PMA  
 The fix here is simple if we add some missing text in another comment. Let's make the simple fix here first  
 SuggestedRemedy  
 1) Delete Editor's note  
 2) Change 201.6.2.3 for HS\_RX and TBD. To:  
 201.4.2.3 for LS\_RX.

Response Response Status C  
 ACCEPT IN PRINCIPLE.

Delete Editor's note

Change: Change 201.6.2.3 for HS\_RX and TBD.

To: 201.5.2.3 for HS\_RX and 201.6.2.3 for LS\_RX.

CI 201 SC 201.2.2.5.3 P86 L 37 # 200  
 van Dyck, Peter Infineon  
 Comment Type E Comment Status A ACT PMA  
 "201.6.2.3 for HS\_RX" wrong RX

SuggestedRemedy  
 Replace with "201.6.2.3 for LS\_RX"

Response Response Status C  
 ACCEPT IN PRINCIPLE.

Change per comment #269.

CI 201 SC 201.2.2.5.3 P86 L 37 # 358  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status A ACT PMA  
 Reference to wrong clause  
 SuggestedRemedy  
 Reference Clause 201.5 instead of 149.4.2.3  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.

Change per comment #269.

CI 201 SC 201.2.2.5.3 P86 L 37 # 359  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status A ACT PMA  
 Change second HS\_RX tp LS\_RX  
 SuggestedRemedy  
 See comment

Response Response Status C  
 ACCEPT IN PRINCIPLE.

Change per comment #269.

CI 201 SC 201.2.2.5.3 P86 L 37 # 283  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A ACT PMA  
 TBD can be removed "The effect of receipt of this primitive is specified in 149.4.2.3 for HS\_RX and 201.6.2.3 for HS\_RX and TBD."

SuggestedRemedy  
 Replaced by "The effect of receipt of this primitive is specified in 149.4.2.3 for HS\_RX and 201.6.2.3 for LS\_RX."

Response Response Status C  
 ACCEPT IN PRINCIPLE.

Change per comment #269.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.2.2.5.3 P86 L37 # 360

Jonsson, Ragnar Infineon

Comment Type E Comment Status A ACT PMA

Remove "and TBD", unless there is specific clause to be referenced

**SuggestedRemedy**

See comment

Response Response Status C

ACCEPT IN PRINCIPLE.

Change per comment #269.

CI 201 SC 201.2.2.7.3 P87 L # 270

Lo, William Axonne Inc

Comment Type T Comment Status A ACT PMA

Fix the references.

**SuggestedRemedy**

- 1) Delete the contents in the entire section including the editor's note
- 2) Add the following text:  
The effect of receipt of this primitive is specified in Figure 149–33, 149.4.2.4, 201.3.2.3, 201.4.2.3, and 201.7.2.1.3.

Response Response Status C

ACCEPT IN PRINCIPLE.

- 1) Delete the contents in the entire section including the editor's note
- 2) Add the following text:  
The effect of receipt of this primitive is specified in Figure 201-1, Figure 201-2, Figure 201-5, Figure 201-9, Figure 201-17, 201.3.2.3, 201.4.2.3, and 201.7.1.

CI 201 SC 201.2.2.7.3 P87 L28 # 361

Jonsson, Ragnar Infineon

Comment Type E Comment Status A ACT PMA

Remove "TBD", unless there is specific clause to be referenced

**SuggestedRemedy**

See comment

Response Response Status C

ACCEPT IN PRINCIPLE.

Change per comment #270.

CI 201 SC 201.2.4 P96 L # 201

van Dyck, Peter Infineon

Comment Type E Comment Status A EZ

Leftmost vertical line is out of place.

**SuggestedRemedy**

Align leftmost vertical line arrow top and bottom to touch dotted lines at XGMII and PHY D PMA SERVICE INTERFACE. Align label "PCS" to not overlap line and be centered

Response Response Status C

ACCEPT.

CI 201 SC 201.3 P88 L24 # 390

Muma, Scott Microchip

Comment Type T Comment Status D ACT PCS

The PCS is a sublayer within the PHY comprising a transmit and receive, which makes describing it only as HS\_PATH functions a challenge in the current text structure.

**SuggestedRemedy**

Describe the functions/structure of a PHY\_S PCS in one subclause, including subclauses for the HS\_TX and LS\_RX. Then in another subclause describe the functions/structure of a PHY\_D PCS, including subclauses for the HS\_RX and LS\_TX. This will be consistent with the layered structure of the document rather than mixing the layer and path within one description.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

The reorganization is a good idea, but specific text is needed.

See #390, #391, #392, #393

CI 201 SC 201.3.1 P88 L32 # 123

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D refer vs. include wording

**SuggestedRemedy**

change "MultiGBASE-T1" to "MultiG+100MBASE-T1/V1"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Dependant on decision regarding comment #44.

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

Cl 201 SC 201.3.1 P88 L 32 # 44  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status D refer vs. include  
 lines 32-34 are same as clause 149.3.1  
 SuggestedRemedy  
 replace lines 32-34 with "PCS service interface is specified as in 149.3.1"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 201 SC 201.3.2 P89 L 20 # 252  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 line should not go through pma\_data\_mode  
 SuggestedRemedy  
 Response Response Status C  
 ACCEPT.

Cl 201 SC 201.3.2 P89 L 20 # 73  
 Zhu, Infineon  
 Comment Type E Comment Status A EZ  
 pcs\_data\_mode text is blocked  
 SuggestedRemedy  
 adjust text position  
 Response Response Status C  
 ACCEPT.

Cl 201 SC 201.3.2 P89 L 29 # 45  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status R ACT EEE  
 Figure 201-5 HS\_TX PCS TRANSMIT block is missing a dashed output arrow down to PHY\_S PMA SERVICE INTERFACE. The dashed arrow is for "tx\_lpi\_active"  
 SuggestedRemedy  
 add the arrow  
 Response Response Status C  
 REJECT.  
 EEE is not supported

Cl 201 SC 201.3.2 P89 L 29 # 46  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Figure 201-5 "pcs\_data\_mode" text is over the arrow  
 SuggestedRemedy  
 move the text to the right of the arrow  
 Response Response Status C  
 ACCEPT.

Cl 201 SC 201.3.2 P92 L 42 # 257  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status R EZ - pull  
 The 1:18 refers to the ratio of the transfer rates and only if rate adaptation is not needed.  
 SuggestedRemedy  
 For the 10G HS\_PATH, it takes 1800 PMA\_UNITDATA transfers to send an RS-FEC frame of data. For the 10G HS\_PATH, if the ratio of the XGMII to PMA transfer rates is exactly 1:18, then the transmit process does not need to perform rate adaptation.  
 Response Response Status Z  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2 P92 L45 # 258  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status R EZ - pull

The 1:36 refers to the ratio of the transfer rates and only if rate adaptation is not needed.

**SuggestedRemedy**

For 2.5G and 5G HS\_PATH, it takes 3600 PMA\_UNITDATA transfers to send an RS-FEC frame of data. For 2.5G and 5G HS\_PATH, if the PCS is connected to an XGMII and PMA sublayer where the ratio of their transfer rates is exactly 1:36, then the transmit process does not need to perform rate adaptation.

Response Response Status Z  
 REJECT.

This comment was WITHDRAWN by the commenter.

CI 201 SC 201.3.2.2 P89 L20 # 362  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status A EZ  
 "pcs\_data\_mode" is overlapping the line

**SuggestedRemedy**

See comment

Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P90 L7 # 259  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 In fig 201-6, the S\_n are from the training frame, and the A\_n are from the 2.5G/5G data stream D\_n[0]. There should be a note explaining this in the figure.

**SuggestedRemedy**

The S\_n are from the training fram, and the A\_n are from the 2.5G and 5G HS\_PATH when the PAM2 mapper is used.

Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L1 # 47  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ

typo: dot at end of line

**SuggestedRemedy**

remove "." at end of line

Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L1 # 284  
 Razavi, Alireza Infineon  
 Comment Type E Comment Status A EZ  
 Extra punctuation in figure reference 'Figure 149-6. .'.

**SuggestedRemedy**

Remove the extra period.

Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L1 # 79  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ  
 extra period

**SuggestedRemedy**

Remove duplicate period at end of sentence.

Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L15 # 363  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status A EZ  
 Typo: "ad" instead of "and"

**SuggestedRemedy**

See comment

Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2.2 P91 L15 # 253  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 "ad" should be "and" in block name  
 SuggestedRemedy  
 Interleave and RS-FEC(360,326) encoder  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L15 # 232  
 Pandey, Sujun Velinktech  
 Comment Type ER Comment Status A EZ  
 Interleaver ad RS-FEC (360,326) encoder  
 SuggestedRemedy  
 Interleaver and RS-FEC (360,326) encoder  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L21 # 49  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Figure 201-7 uses "10G Path" but Figure 201-6 uses "PAM4 data path".  
 SuggestedRemedy  
 replace "10G Path" with "PAM4 path"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L23 # 50  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Figure 201-7 uses "2.5G, 5G Path" but Figure 201-6 uses "PAM2 training/data path".  
 SuggestedRemedy  
 replace "2.5G, 5G Path" with "PAM2 path"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L30 # 254  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status D refer vs. include  
 Add interleaving description  
 SuggestedRemedy  
 Figure shown for L = 1, which means no interleaving. The L parameter specifies the number of FEC blocks interleaved together.  
 Proposed Response Response Status W  
 PROPOSED REJECT.

There is a reference to 149.3.2.2. 149.3.2.2.15 defines interleaving.

CI 201 SC 201.3.2.2 P91 L32 # 51  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Figure 201-7 NOTE 3 for consistency with above comments 2.5G, 5G and 10G should be replaced  
 SuggestedRemedy  
 Replace: "For 2.5G and 5G" with "For PAM2 path".  
 Replace "10G" with "PAM4 path"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P91 L34 # 48  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status D ACT Nomenclature  
 The Figure is for HS\_TX not HS\_PATH. HS\_PATH would also include the HS\_RX which is not there.  
 SuggestedRemedy  
 replace "HS\_PATH" with "HS\_TX"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2.2 P92 L1 # 80  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ  
extra period  
SuggestedRemedy  
Remove duplicate period at end of sentence.  
Response Response Status C  
ACCEPT.

CI 201 SC 201.3.2.2 P92 L1 # 285  
Razavi, Alireza Infineon  
Comment Type E Comment Status R EZ  
reference to 'Figure 149-7' should be remove .  
SuggestedRemedy  
see comment  
Response Response Status C  
REJECT.  
If this comment were to be implemented, many other changes would need to be made for similar references to 149.

CI 201 SC 201.3.2.2 P92 L1 # 52  
Lasry, Ariel Qualcomm Technologies Inc.  
Comment Type E Comment Status A EZ  
typo: dot at end of line  
SuggestedRemedy  
remove " ." at end of line  
Response Response Status C  
ACCEPT.

CI 201 SC 201.3.2.2 P92 L19 # 53  
Lasry, Ariel Qualcomm Technologies Inc.  
Comment Type E Comment Status A EZ  
Figure 201-8 uses "10G Path" not consistent with "PAM4 data path".  
SuggestedRemedy  
replace "10G Path" with "PAM4 path"  
Response Response Status C  
ACCEPT.

CI 201 SC 201.3.2.2 P92 L21 # 54  
Lasry, Ariel Qualcomm Technologies Inc.  
Comment Type E Comment Status A EZ  
Figure 201-8 uses "2.5G, 5G Path" not consistent with "PAM2 training/data path".  
SuggestedRemedy  
replace "2.5G, 5G Path" with "PAM2 path"  
Response Response Status C  
ACCEPT.

CI 201 SC 201.3.2.2 P92 L32 # 256  
McCarthy, Frank Infineon  
Comment Type E Comment Status R EZ  
Note 1 is confusing.  
SuggestedRemedy  
At the top of this figure, the mapping of a 64B/65B block into eight data characters, D0 to D7, for the XGMII is shown.  
Response Response Status C  
REJECT.  
This is common with 802.3ch and other Automotive PHYs.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2.2 P92 L34 # 255  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status D refer vs. include  
 Add interleaving description  
 SuggestedRemedy  
 Figure shown for L = 1, which means no interleaving. The L parameter specifies the number of FEC blocks interleaved together.  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 There is a reference to 149.3.2.2. 149.3.2.2.15 defines interleaving.

CI 201 SC 201.3.2.2 P92 L35 # 55  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 Figure 201-8 NOTE 3 for consistency with above comments 2.5G, 5G and 10G should be replaced  
 SuggestedRemedy  
 Replace: "For 2.5G and 5G" with "For PAM2 path".  
 Replace "10G" with "PAM4 path"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L36 # 56  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 The Figure is for HS\_RX not HS\_PATH. HS\_PATH would also include the HS\_TX which is not there.  
 SuggestedRemedy  
 replace "HS\_PATH" with "HS\_RX"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L41 # 57  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 "10G HS\_PATH".  
 Terminology: "10G" is not defined.  
 The 1800 PMA\_UNITDATA transfers are only for the HS\_TX. Not for the HS\_PATH which consists of both the HS\_TX and HS\_RX  
 SuggestedRemedy  
 replace "10G HS\_PATH" with "PAM4 path HS\_TX (10Gb/s)"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L44 # 58  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 "2.5G and 5G HS\_PATH".  
 Terminology: "2.5G" and "5G" are not defined.  
 The 3600 PMA\_UNITDATA transfers are only for the HS\_TX. Not for the HS\_PATH which consists of both the HS\_TX and HS\_RX  
 SuggestedRemedy  
 replace "2.5G and 5G HS\_PATH" with "PAM2 path HS\_TX (2.5Gb/s and 5Gb/s)"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L47 # 59  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 "10G HS\_PATH" in consistency to previous comments this needs to be updated  
 SuggestedRemedy  
 replace "10G HS\_PATH" with "PAM4 path HS\_TX (10Gb/s)"  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2.2 P92 L48 # 260  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 There should be commas around respectively.  
 SuggestedRemedy  
 and 149.3.2.2.21, respectively, with the  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L51 # 60  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 "2.5G and 5G HS\_PATH" in consistency to previous comments this needs to be updated  
 SuggestedRemedy  
 replace "2.5G and 5G HS\_PATH" with "PAM2 path HS\_TX (2.5Gb/s and 5Gb/s)"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L52 # 261  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 comma should be after D\_n  
 SuggestedRemedy  
 presented as D\_n, where  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L53 # 74  
 Zhu, Infineon  
 Comment Type E Comment Status A EZ  
 ... are presented as, Dn where' -- comma may be mis-positioned  
 SuggestedRemedy  
 change to '... are presented as Dn, where'  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P92 L53 # 262  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 "is scrambled" should be "and are scrambled"  
 SuggestedRemedy  
 The bits of the interleaved RS-FEC superframe are presented as Dn, where n is an index indicating the symbol number, and are scrambled using an additive scrambler.  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P93 L1 # 263  
 McCarthy, Frank Infineon  
 Comment Type E Comment Status A EZ  
 Replace "The DS<sub>n</sub> is applied as additive scrambler sequence to incoming data bits D<sub>n</sub> to generate a single scrambled data A<sub>n</sub> as shown in Equation (201–1)." with the proposed change, which includes defining D<sub>n</sub> for the 2.5G and 5G HS\_PATH.  
 SuggestedRemedy  
 All incoming 2.5G and 5G HS\_PATH data bits are D<sub>n</sub>, and D<sub>n</sub> is represented in Figure 201-6 as D<sub>n</sub>[0]. The DS<sub>n</sub> are applied as an additive scrambler sequence to each incoming data bit, D<sub>n</sub>, to generate a single scrambled data bit, A<sub>n</sub>, as shown in Equation (201–1).  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.3.2.2 P93 L8 # 61  
 Lasry, Ariel Qualcomm Technologies Inc.  
 Comment Type E Comment Status A EZ  
 "2.5G and 5G HS\_PATH" in consistency to previous comments this needs to be updated  
 SuggestedRemedy  
 replace "2.5G and 5G HS\_PATH" with "PAM2 path HS\_TX (2.5Gb/s and 5Gb/s)"  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2.2 P93 L9 # 180

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

Comment Type E Comment Status A EZ

Just to say "encode ... as specified." doesn't write the requirement. The requirement is actually written below on line 18 - this line isn't needed - 18 just needs to be written as a requirement. Additionally, lines 6 through 17 are unnecessary.

#### SuggestedRemedy

Change P93 L18 to read "For the 2.5G and 5G HS\_PATH, each consecutive output symbol, An shall be mapped to a PAM2 encoded symbol M(n) as follows:"  
Delete lines 6 through 16.

Response Response Status C

ACCEPT IN PRINCIPLE.

Make consistent with working change in comment #61.

Delete lines 6 through 16.

Change P93 L18 to read "For the PAM2 path HS\_TX, each consecutive output symbol, An shall be mapped to a PAM2 encoded symbol M(n) as follows:"

CI 201 SC 201.3.2.2 P93 L19 # 329

Johnson, Samuel Infineon

Comment Type T Comment Status R EZ

Mapping of logic0 -> +1 and logic1 -> -1 seems non-intuitive

#### SuggestedRemedy

If this is used by PAM2 in other standards, then leave unchanged. Otherwise, propose  
Logic0 -> -1  
Logic1 -> +1

Response Response Status C

REJECT.

This is common with 802.3ch and other Automotive PHYs.

corrected page number and line number

CI 201 SC 201.3.2.3 P93 L24 # 264

McCarthy, Frank Infineon

Comment Type E Comment Status A EZ

"including, compliance" should be "includes compliance"

#### SuggestedRemedy

The PCS receive function for HS\_PATH shall conform to the PCS 64B/65B receive state diagram in Figure 149-18, and the PCS Receive bit ordering in Figure 201-8 includes compliance with the associated state variables specified in 201.3.6.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implemented by solution to comment #181.

CI 201 SC 201.3.2.3 P93 L26 # 181

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

Comment Type T Comment Status A EZ

There are no state variables specified in 201.3.6. Only "S" is mentioned there, and S is already taken care of earlier for referneces.

#### SuggestedRemedy

Delete "including, compliance with the associated state variables specified in 201.3.6"

Response Response Status C

ACCEPT.

CI 201 SC 201.3.2.3 P93 L30 # 233

Pandey, Sujan Velinktech

Comment Type ER Comment Status A EZ

The received symbols are demaped and descrambling performed

#### SuggestedRemedy

The received symbols are demaped and descrambled

Response Response Status C

ACCEPT IN PRINCIPLE.

Implemented by solution to comment #265.

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2.3 P93 L 30 # 81  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ  
grammer  
SuggestedRemedy  
Change "descrambling performed" to "descrambling is performed".  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
Implemented by solution to comment #265.

CI 201 SC 201.3.2.3 P93 L 30 # 265  
McCarthy, Frank Infineon  
Comment Type E Comment Status A EZ  
"are demapped and descrambling performed." should be ""are demapped, and descrambling is performed."  
SuggestedRemedy  
The received symbols are demapped, and descrambling is performed.  
Response Response Status C  
ACCEPT.

CI 201 SC 201.3.2.3 P93 L 41 # 234  
Pandey, Sujun Velinktech  
Comment Type ER Comment Status A EZ  
... PCS Receive checks the received PAM2 framing and signals the reliable ...  
SuggestedRemedy  
... PCS Receive checks the received PAM2 framing and signals for the reliable ...  
Response Response Status C  
ACCEPT.

CI 201 SC 201.3.2.3.1 P94 L 10 # 184  
Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
Comment Type T Comment Status A EZ  
Missing shall. There is one for the formation of the PAM2 stream, but not for the PAM4 stream. Additionally, while its nice to reference clause 149, 149.3.2.3.1 is sufficiently short you might as well put it here - AND - it is parallel to the new text needed for 2.5Gb/s and 5Gb/s  
SuggestedRemedy  
change "forms a PAM4 stream" to "shall form a PAM4 stream".  
Consider simply replacing the first paragraph on 201.3.2.3.1 with the text of 149.3.2.3.1  
Response Response Status C  
ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.3.2.3.1 P94 L10 # 185  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type T Comment Status D Duplexing Method

General comment, Big Ticket Item - MultiSpeed PHYs.

We need to decide whether we are specifying one (or 2) PMA/PCS types with multiple speed modes or one (or 2) PMA/PCS types per speed.

Most of the language says we have a PMA/PCS per speed, and this is how it is usually done. However, the language here, and elsewhere, describes the speeds as "modes" of a PHY - as though we had a multi-speed PHY. This is the first reference, but it occurs in many places. 2.5G, 5G, or 10G are not "modes" - the text refers to "in 10G" or "in 10G mode" (or 2.5G, or 5G...) in many places. There is a 2.5G+100MBASE-T1/V1 PHY transmitting 2.5 Gb/s, (and a 100M+2.5GBASE-T1/V1 PHY receiveing at 2.5Gb/s, and the other speeds similarly have their own phys).

While these edits are clear on clause 201 - they equally apply to 202, where the description of the phy is confused in that it speed-selects during PHY training, without a separate auto-neg sublayer (See 202.4.2.4.5) suggesting a multi-speed PHY.

## SuggestedRemedy

Assuming at least clause 201 is one PMA/PCS per speed, Change "When operating in the data mode in 10G, the HS\_RX PCS forms" to "When operating in the data mode, a 100M+10GBASE-T1/V1 PHY's HS\_RX PCS shall form", and change, "When operating in the data mode in 2.5G and 5G, the HS\_RX PCS" to "When operating in the data mode, a 100M+2.5GBASE-T1/V1 PHY and a 100M+10GBASE-T1/V1 PHY's HS\_RX PCS's each"... Similarly, change at P117 L35, "and the PHY is transmitting in 10G mode, it shall transmit" to "a 10G+100MBASE-T1/V1 PHY shall transmit..."

201.8.1

Change at P117 L38, "and the PHY is transmitting in 5G or 2.5G mode, it shall transmit" to "a 2.5G+100MBASE-T1/V1 PHY or a 5G+100MBASE-T1/V1 PHY shall each transmit..."

201.8.2.2

Change at P121 L6, "when transmitting in 10G mode" to "for a 10G+100MBASE-T1/V1 PHY"

Change at P121 L6, "For 5G and 2.5G modes" to "For 5G+100MBASE-T1/V1 or 2.5G+100MBASE-T1/V1 PHYs"

Editorial license to replace other "mode" usage

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

TFTD

CI 201 SC 201.4 P95 L14 # 391  
 Muma, Scott Microchip  
 Comment Type T Comment Status D ACT PCS

The PCS is a sublayer within the PHY comprising a transmit and receive, which makes describing it only as LS\_PATH functions a challenge in the current text structure.

## SuggestedRemedy

Describe the functions/structure of a PHY\_S PCS in one subclause, including subclauses for the HS\_TX and LS\_RX. Then in another subclause describe the functions/structure of a PHY\_D PCS, including subclauses for the HS\_RX and LS\_TX. This will be consistent with the layered structure of the document rather than mixing the layer and path within one description.

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

TFTD

The reorganization is a good idea, but specific text is needed.

See #390, #391, #392, #393

CI 201 SC 201.4.2.2 P96 L42 # 124  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status A EZ  
 wording

## SuggestedRemedy

change "MultiGBASE-T1" to "100M+MultiGBASE-T1/V1"

Response Response Status C  
 ACCEPT.

corrected page number

CI 201 SC 201.4.2.2 P96 L43 # 82  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type T Comment Status A EZ  
 copy paste error from Clause 149

## SuggestedRemedy

Change: MultiGBASE-T1 PCS  
 To: 100M+MultiGBASE-T1/V1

Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.4.2.2 P96 L51 # 125

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ  
wording

**SuggestedRemedy**

change: "take four 65B blocks and append a 10-bit OAM field followed by 6 reserved bits set to all 1s to each group."  
to: "take 1 group of 4 65B blocks and append a 10-bit OAM field followed by 6 reserved bits set to all 1s to it."

Response Response Status C  
ACCEPT.

CI 201 SC 201.4.2.2 P97 L2 # 126

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ  
wording

**SuggestedRemedy**

change "T" to "T"

Response Response Status C  
ACCEPT IN PRINCIPLE. corrected page number  
"T" should be in italics.

CI 201 SC 201.4.2.2 P97 L3 # 425

Long, Richard TE Connectivity

Comment Type E Comment Status X late  
The symbol period is an exact value and can be written as such, instead of a formula

**SuggestedRemedy**

Use 8.533 ns instead of "1000/117.1875 ns"

Proposed Response Response Status O

CI 201 SC 201.4.2.2 P97 L12 # 216

van Dyck, Peter Infineon

Comment Type E Comment Status A EZ  
"defined in 201.3.5.1" This section defines how Tn is derived for Sn in HS\_PATH, Sn and Tn are not defined in the draft for LS\_PATH, which has a different training frame than the HS\_PATH.

**SuggestedRemedy**

Change to "defined in 201.4.5.1"  
For definition of Sn for LS\_PATH and Clause 201.4.5.1 see comment for Clause 201.4.5

Response Response Status C  
ACCEPT IN PRINCIPLE.

Change: 201.3.5.1

To: 201.4.5.1

Comment #217 implements the rest of the request.

CI 201 SC 201.4.2.2 P97 L12 # 202

van Dyck, Peter Infineon

Comment Type E Comment Status A EZ  
"(Tn)" the n should be subscript and this should be italic.

**SuggestedRemedy**

See comment

Response Response Status C  
ACCEPT.

CI 201 SC 201.4.2.2 P97 L12 # 127

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ  
wording

**SuggestedRemedy**

change "Tn" to "Tn"

Response Response Status C  
ACCEPT IN PRINCIPLE. corrected page number  
"Tn" should be in italics.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.4.2.2.2 P98 L35 # 75

Zhu, Infineon

Comment Type T Comment Status A EZ - pull

the bit ordering in the figure looks like Bit299 is sent first

#### SuggestedRemedy

Bit ordering in Figure shall be reversed from Bit0...Bit299 to Bit299...Bit0 to reflect that Bit0 is transmitted first

Response Response Status C

ACCEPT IN PRINCIPLE.

Update figure as shown in <https://www.ieee802.org/3/dm/public/0126/Fig%20201-11%20comment%2075.pdf>.

Add a note to the figure that reads: Bit to DME mapping is done in the PMA.

CI 201 SC 201.4.2.2.15 P103 L3 # 128

Wang, Frank Realtek Semiconductor Corp.

Comment Type T Comment Status A EZ

wording: since there is no interleaver in LS\_TX, "interleaved" should be removed

#### SuggestedRemedy

change "the interleaved RS-FEC" to "the RS-FEC"

Response Response Status C

ACCEPT.

CI 201 SC 201.4.2.2.15 P103 L3 # 271

Lo, William Axonne Inc

Comment Type T Comment Status A EZ

There is no interleaving or superframes in the LS\_PATH

#### SuggestedRemedy

Change: interleaved RS-FEC superframe  
To: RS-FEC frame

Response Response Status C

ACCEPT.

CI 201 SC 201.4.2.2.16 P103 L12 # 395

Muma, Scott Microchip

Comment Type TR Comment Status D DME

DME encoding may be better done as a PMA function similar to other existing 802.3 clauses

#### SuggestedRemedy

Move DME encoding from PCS to PMA.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment #396.

CI 201 SC 201.4.2.3.1 P104 L46 # 203

van Dyck, Peter Infineon

Comment Type E Comment Status A EZ

"block lock" underscore missing

#### SuggestedRemedy

Replace with "block\_lock"

Response Response Status C

ACCEPT IN PRINCIPLE.

Make the same correction on P94/L15

CI 201 SC 201.4.3 P105 L18 # 129

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

grammar: comma after "mode"

#### SuggestedRemedy

change "mode" to "mode,"

Response Response Status C

ACCEPT.

corrected page number

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.4.3 P105 L19 # 130  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type T Comment Status A EZ  
The initial condition of the scrambler is missed.  
SuggestedRemedy  
change: "by setting the data input to the scrambler to zero"  
to: "by setting zero input and any non-zero initial condition to the scrambler"  
Response Response Status C  
ACCEPT.  
corrected page number

CI 201 SC 201.4.5 P105 L5 # 286  
Razavi, Alireza Infineon  
Comment Type E Comment Status A EZ  
enumeration is not correct and all of them are a)  
SuggestedRemedy  
enumeration should be updated  
Response Response Status C  
ACCEPT.

CI 201 SC 201.4.5 P105 L34 # 415  
Long, Richard TE Connectivity  
Comment Type E Comment Status X late  
Wording, the use of abbreviations muxed/demuxed is not needed  
SuggestedRemedy  
Use "multiplexed or demultiplexed" instead of "muxed/demuxed."  
Proposed Response Response Status O

CI 201 SC 201.4.5 P105 L34 # 287  
Razavi, Alireza Infineon  
Comment Type E Comment Status A EZ  
64/65 blocks  
SuggestedRemedy  
64/65 blocks" replaced by "64B/65B blocks"  
Response Response Status C  
ACCEPT.

CI 201 SC 201.4.5 P106 L3 # 272  
Lo, William Axonne Inc  
Comment Type T Comment Status A EZ  
Add the following sentence for clarity.  
SuggestedRemedy  
After the training frame is assembled, it is scrambled and DME encoded as described in 201.4.2.2.15 and 201.4.2.2.16 respectively.  
Response Response Status C  
ACCEPT.

CI 201 SC 201.4.5 P106 L32 # 217  
van Dyck, Peter Infineon  
Comment Type E Comment Status D ACT PMA  
Definition of Sn for LS\_PATH is missing, definition of Tn for LS\_PATH (Clause 201.4.5.1) is missing.  
SuggestedRemedy  
For definition of Sn, append below text and equation to Clause 201.4.5, page 106, line 18:  
"Sn defines the training frame bit at time n, see Equation (201-...)"  
use equation found in Sn.pdf  
For definition of Tn, append the below text as Clause 201.4.5.1, page 106, line 18:  
"201.4.5.1 Generation of symbol Tn  
The bit Sn is encoded to the DME transmit symbol Tn applying the following rules:  
— A "clock transition" shall always be generated at the start of each bit.  
— A "data transition" in the middle of a nominal bit period shall be generated if the bit to be transmitted is a logical '1'. Otherwise, no transition shall be generated until the next bit"  
Proposed Response Response Status W  
PROPOSED ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.4.5.1 P106 L19 # 273

Lo, William Axonne Inc

Comment Type T Comment Status A ACT PMA

Need to talk about setting scr\_status during descrambling.

**SuggestedRemedy**

1) Add section 201.4.5.1 PMA training mode descrambler polynomials

2) Text should be:

The PHY shall acquire descrambler state synchronization to the DME training sequence and report success through scr\_status.

Response Response Status C

ACCEPT IN PRINCIPLE.

Accomplished by solution to comment #204.

CI 201 SC 201.4.5.2 P106 L # 204

van Dyck, Peter Infineon

Comment Type E Comment Status A ACT PMA

The PMA training mode descrambler polynomial, section 201.4.5.2 is missing for LS\_PATH

**SuggestedRemedy**

Add the below text at Page 106 Line 18:

201.4.5.2 PMA training mode descrambler polynomial

The PHY shall acquire descrambler state synchronization to the DME training sequence and report success through scr\_status. For side-stream descrambling, the low speed receiver employs the receiver descrambler generator polynomial per 201.4.4.

Response Response Status C

ACCEPT IN PRINCIPLE.

It should be 201.4.5.1, not 201.4.5.2.

Add the below text at Page 106 Line 18:

201.4.5.1 PMA training mode descrambler polynomial

The PHY shall acquire descrambler state synchronization to the DME training sequence and report success through scr\_status. For side-stream descrambling, the low speed receiver employs the receiver descrambler generator polynomial per 201.4.4.

CI 201 SC 201.5 P107 L12 # 392

Muma, Scott Microchip

Comment Type T Comment Status D ACT PMA

The PMA sublayer description in 149.4 describes a PMA sublayer contained within a single PHY. Attempting to reference it to describe the HS\_PATH functions of the PMA could lead to some unintended misunderstandings since the HS\_PATH functions are not in a single PHY.

**SuggestedRemedy**

Describe the functions/structure of a PHY\_S PMA sublayer in one subclause, including subclauses for the HS\_TX and LS\_RX. Then in another subclause describe the functions/structure of a PHY\_D PMA sublayer, including subclauses for the HS\_RX and LS\_TX.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

The reorganization is a good idea, but specific text is needed.

See #390, #391, #392, #393

CI 201 SC 201.5 P107 L17 # 364

Jonsson, Ragnar Infineon

Comment Type T Comment Status A ACT EEE

EEE should be removed

**SuggestedRemedy**

Add to list "3) No EEE support"

Response Response Status C

ACCEPT IN PRINCIPLE.

Add to list: 3) EEE is not supported

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.6 P107 L 19 # 393

Muma, Scott

Microchip

Comment Type T Comment Status D ACT LS PMA

The PMA sublayer description from an LS\_PATH only perspective is extremely challenging to understand from the text. The PMA transmit and receive functions defined exist in 2 distinct instances of the PMA sublayer even though the single PMA sublayer is defined as containing a transmit and receive function. Similarly a single PHY control function instance does not interact with both ends of the LS\_PATH.

#### SuggestedRemedy

Describe the functions/structure of a PHY\_S PMA sublayer in one subclause, including subclauses for the HS\_TX and LS\_RX. Then in another subclause describe the functions/structure of a PHY\_D PMA sublayer, including subclauses for the HS\_RX and LS\_TX.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

The reorganization is a good idea, but specific text is needed.

See #390, #391, #392, #393

CI 201 SC 201.6.1 P107 L 26 # 365

Jonsson, Ragnar

Infineon

Comment Type T Comment Status A ACT PMA

Text missing for this section

#### SuggestedRemedy

Add text corresponding to Figure 149-26 and Clause 149.4.2

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved by solution to comment #288.

CI 201 SC 201.6.2 P107 L # 288

Razavi, Alireza

Infineon

Comment Type T Comment Status A ACT PMA

figure for pma refrence diagram is missing.

#### SuggestedRemedy

figure can be copied from 149-26 with removing the dashed line signals related to EEE

Response Response Status C

ACCEPT IN PRINCIPLE.

Add text to 201.6.1: The PMA couples messages from the PMA service interface specified in 201.2.2 to the 100M+MultiGBASE-T1/V1 baseband medium, specified in 201.11 to -T1 and in 201.12 for -V1.

The interface between the PMA and the baseband medium is the Medium Dependent Interface (MDI), which is specified in 201.13 to -T1 and in 201.14 for -V1.

Copy Figure 149-26 I nto 201.6.1 with the following changes:

- remove all dashed lines and associated names
- rename PMA RECEIVE to HS\_RX PMA RECEIVE
- rename PMA TRANSMIT to LS\_TX PMA TRANSMIT

Replace Figure <REF> in 201.6.2 with reference to this added Figure.

CI 201 SC 201.6.2 P107 L 36 # 366

Jonsson, Ragnar

Infineon

Comment Type E Comment Status A ACT PMA

Reference figure is missin

#### SuggestedRemedy

Add figure referenced in this line

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #288

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.6.2 P107 L38 # 367  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status A ACT PMA  
 Reference figure is missin  
 SuggestedRemedy  
 Add figure referenced in this line  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 See comment #288

CI 201 SC 201.6.2.1 P107 L50 # 368  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D Reset  
 Change 100ms to 50ms (see also Caluse 202.4.2.1)  
 SuggestedRemedy  
 See comment  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 TFTD for both Clause 201 and 202.  
 Val to make any necessary change in 202.

CI 201 SC 201.6.2.1 P108 L15 # 370  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D ACT Autonegotiation  
 Support for PHY-D as follower should be optional  
 SuggestedRemedy  
 See comment  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Does ACT want/need Auto negotiation? Does it make sense to Auto negotiate between Symmetric and Asymmetric PHYs?

CI 201 SC 201.6.2.2 P108 L4 # 369  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status A EZ  
 Clarify that Coax is also single "pair"  
 SuggestedRemedy  
 Add the word "signle" in front of "Coax cable"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.6.2.3 P108 L34 # 133  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status A EZ  
 wording: remove "low speed direction"  
 SuggestedRemedy  
 change "The low speed direction PMA Receiver" to "The PMA Receiver"  
 Response Response Status C  
 ACCEPT IN PRINCIPLE. corrected page number  
 change "The low speed direction PMA Receive"  
 to "The PMA Receive"

CI 201 SC 201.6.2.3 P108 L27 # 131  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status A EZ - pull  
 wording: remove "low speed"  
 SuggestedRemedy  
 change "The low speed PMA Receiver" to "The PMA Receiver"  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 corrected page number  
 change "The low speed PMA Receive" to "The PMA Receive"

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.6.2.3 P108 L27 # 379  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ  
wording: add "The" before "PMA Receive contains"  
SuggestedRemedy  
change "PMA Receive contains" to "The PMA Receive contains"  
Response Response Status C  
ACCEPT.

CI 201 SC 201.6.2.3 P108 L28 # 132  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ  
There is no such comma in 149.4.2.3.  
SuggestedRemedy  
change "MDI," to "MDI"  
Response Response Status C  
ACCEPT.  
corrected page number

CI 201 SC 201.6.2.3 P108 L31 # 371  
Jonsson, Ragnar Infineon  
Comment Type E Comment Status A EZ  
RFER is missing 10<sup>-10</sup> after 2x  
SuggestedRemedy  
See comment  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
Change 2x to 2 x 10<sup>-10</sup>

CI 201 SC 201.6.2.3 P108 L35 # 134  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ  
period is missed  
SuggestedRemedy  
change "accordingly" to "accordingly."  
Response Response Status C  
ACCEPT.  
corrected page number

CI 201 SC 201.6.2.3 P108 L35 # 235  
Pandey, Sujan Velinktech  
Comment Type ER Comment Status A EZ  
loc\_rcvr\_status varialbe accordingly  
SuggestedRemedy  
loc\_rcvr\_status varialbe accordingly.  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
Add missing period.

CI 201 SC 201.6.2.3 P108 L35 # 83  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ  
missing period  
SuggestedRemedy  
Add a period after accordingly.  
Response Response Status C  
ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.6.2.4 P108 L48 # 372

Jonsson, Ragnar Infineon

Comment Type T Comment Status A ACT LS PMA

There are significant updates from clause 149 that need to be added

**SuggestedRemedy**

See comment

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved by comment #394 when references to 149 are replaced by new content inserted by that comment.

CI 201 SC 201.7 P109 L3 # 394

Muma, Scott Microchip

Comment Type T Comment Status A ACT PMA

This contradicts the text in 201.5 that says the HS\_PATH PMA functions are specified in 149.4 as 149.4 defines all of these functions already.

**SuggestedRemedy**

Describing the PMA in terms of PHY\_S/PHY\_D instance functions rather than HS\_PATH/LS\_PATH functions may remove the contradiction if there are some common functions between the PHY\_S and PHY\_D.

Response Response Status C

ACCEPT IN PRINCIPLE.

In order to fix this, we need to bring the 149 text into 201.5 and correct a number of items. The references can then be made to 201.5.x instead of 149.

See 3dm\_d0pa\_Comment\_394.pdf for proposed changes to 201.5.  
There was an extensive set of changes that are easier to see in a file.

CI 201 SC 201.7 P109 L3 # 373

Jonsson, Ragnar Infineon

Comment Type E Comment Status A EZ

Use HS and LS instead of "fast" and "slow"

**SuggestedRemedy**

See comment

Response Response Status C

ACCEPT IN PRINCIPLE.

Change: fast and slow directions

To: HS\_PATH and LS\_PATH

CI 201 SC 201.7 P109 L3 # 135

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status D Nomenclature

wording

**SuggestedRemedy**

change "fast and slow directions" to "HS\_PATH and LS\_PATH"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.7.1 P109 L16 # 205

van Dyck, Peter Infineon

Comment Type E Comment Status A EZ

LS\_PATH uses DME during training, not PAM2

**SuggestedRemedy**

Modify text with: "In the TRAINING state, PAM 2 transmission is used for HS\_PATH, DME transmission is used for LS\_PATH and ...."

Response Response Status C

ACCEPT IN PRINCIPLE.

Change: In the TRAINING state, PAM 2 transmission is used and PHY capabilities are exchanged with Infofields as specified in 149.4.2.4.5.

To: In the TRAINING state, PHY capabilities are exchanged with Infofields as specified in 149.4.2.4.5. PAM 2 transmission is used for HS\_PATH and DME is used for LS\_PATH.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

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**CI 201**    **SC 201.7.1**    **P109**    **L16**    # **374**

Jonsson, Ragnar    Infineon

**Comment Type**    **T**    **Comment Status**    **A**    **ACT PMA**

PAM2 is only used for training in HS direction

**SuggestedRemedy**

Update text to clarify that PAM2 is used in HS direction and add "DMA is used in LS direction as specified in Clause ..."

**Response**    **Response Status**    **C**

ACCEPT IN PRINCIPLE.

Change: In the TRAINING state, PAM 2 transmission is used and PHY capabilities are exchanged with Infocfields as specified in 149.4.2.4.5.

To: In the TRAINING state, PAM 2 transmission is used in the HS direction and DME is used in the LS direction, PHY capabilities are exchanged with Infocfields as specified in 149.4.2.4.5.

Editorial license to change reference to text pulled into 201.

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**CI 201**    **SC 201.7.1**    **P109**    **L16**    # **136**

Wang, Frank    Realtek Semiconductor Corp.

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

In the training state, HS\_PATH and LS\_PATH use different modulation.

**SuggestedRemedy**

change "PAM 2 transmission is used" to " PAM2 transmission is used for HS\_PATH and DME transmission is used for LS\_PATH,"

**Response**    **Response Status**    **C**

ACCEPT IN PRINCIPLE.

See solution in comment #205.

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**CI 201**    **SC 201.7.1**    **P109**    **L29**    # **375**

Jonsson, Ragnar    Infineon

**Comment Type**    **T**    **Comment Status**    **D**    **ACT Startup**

100ms is too long, all times in Table 201-6 should be scaled down by 50%

**SuggestedRemedy**

See comment

**Proposed Response**    **Response Status**    **W**

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

Consider comments 375, 376, 213, 399, and 215 together.

---

**CI 201**    **SC 201.7.1**    **P109**    **L42**    # **376**

Jonsson, Ragnar    Infineon

**Comment Type**    **T**    **Comment Status**    **D**    **ACT Startup**

100ms is too long, all times in Table 201-7 should be scaled down by 50%

**SuggestedRemedy**

See comment

**Proposed Response**    **Response Status**    **W**

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

Consider comments 375, 376, 213, 399, and 215 together.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.7.2.1 P110 L18 # 405

Muma, Scott

Microchip

Comment Type ER Comment Status A ACT PHY Control

The state variables subclause of the Link Monitor seems to be incorrect. It has variables for the PHY control state diagram and the PHY control state diagram is a subclause of the variables.

#### SuggestedRemedy

Move the PHY control variables/timers to the state variables section of the PHY Control function. Make the PHY Control state diagram subclause a subclause fo the PHY control function or nmove to the PMA state diagrams in 201.7.8

Response Response Status C

ACCEPT IN PRINCIPLE.

See 3dm\_d0pa\_Comment\_405.pdf for proposed changes to 201.7.  
There was an extensive set of changes that are easier to see in a file.

Also, delete 201.7.7 and 201.7.8 as they have been moved earlier in 201.7 in the proposed text.

CI 201 SC 201.7.2.1.3 P111 L4 # 289

Razavi, Alireza

Infineon

Comment Type E Comment Status A ACT PHY Control

EEE is not defined. this section should be removed " and the EEE Refresh monitor state diagram for the fast data path is shown in Figure 149–34."

#### SuggestedRemedy

see comment

Response Response Status C

ACCEPT IN PRINCIPLE.

See solution to comment #405 which resolves this.

CI 201 SC 201.7.2.1.3 P111 L6 # 209

Abedinzadeh, Bizhan

Infineon

Comment Type T Comment Status D ACT PHY control

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

#### SuggestedRemedy

The restart should be only triggered in Link Sync state machine, Figure 201-20  
LINK\_GOOD\_CHECK transition to TRANSMIT\_DISABLE.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.7.2.1.3 P111 L6 # 210

Abedinzadeh, Bizhan

Infineon

Comment Type E Comment Status A EZ

Figure 201-17 remove MASTER/en\_slave\_tx

#### SuggestedRemedy

The terms should be changed to LEADER/en\_follower\_tx

Response Response Status C

ACCEPT.

CI 201 SC 201.7.2.1.3 P111 L6 # 211

Abedinzadeh, Bizhan

Infineon

Comment Type T Comment Status D ACT PHY control

Figure 201-17 transition from COUNTDOW to TX SWITCH should be changed.

#### SuggestedRemedy

((phy\_role=PHY\_S\*loc\_countd-won\_done)\*infofield\_complete + phy\_role=PHY\_D

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.7.2.1.3 P111 L6 # 212

Abedinzadeh, Bizhan

Infineon

Comment Type T Comment Status D ACT PHY control

Figure 201-17 , need a state Follower transmits and Leader is silent

#### SuggestedRemedy

Add a state from SILENT to Training where only Follower will enter. In this state Follower should be sending SEND\_T. This state shall last for min wait time of 300us. The silent period for FOLLOWER in silent state should be reduced to allow for this extra state.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

CI 201 SC 201.7.2.1.3 P111 L6 # 213

Abedinzadeh, Bizhan

Infineon

Comment Type T Comment Status D ACT Startup

Figure 201-17. Reduction of min wait timers, allow for quicker linkup

#### SuggestedRemedy

Min wait timer for SILENT and PCS TEST should be reduced to 500us

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

Consider comments 375, 376, 213, 399, and 215 together.

CI 201 SC 201.7.2.1.3 P111 L22 # 76

Zhu,

Infineon

Comment Type E Comment Status A EZ

to unify the names of roles

#### SuggestedRemedy

change to Leader and Follower

Response Response Status C

ACCEPT.

CI 201 SC 201.7.2.1.3 P111 L23 # 290

Razavi, Alireza

Infineon

Comment Type E Comment Status A EZ

en\_slave\_tx should be replaced by en\_follower\_tx

#### SuggestedRemedy

see comment

Response Response Status C

ACCEPT.

CI 201 SC 201.7.2.1.3 P111 L40 # 404

Muma, Scott

Microchip

Comment Type TR Comment Status D ACT PHY Control

The rem\_countdown\_done is defined as "set to TRUE once the receiver has transitioned from PAM2 to PAM4." So it only works for 10G. How shall it be set to true for 2.5G/5G PHY\_D HS\_RX? No need to wait in that case, but need a variable phy\_type to determine if wait is required, or redefine rem\_countdown\_done to work for 2.5G/5G.

#### SuggestedRemedy

Change (phy\_role = PHY\_D \* rem\_countdown\_done) to (phy\_role = PHY\_D \* (rem\_countdown\_done + phy\_type != 100M+10GBASE-T1/V1))

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change definition of rem\_countdown\_done

Change: is set to TRUE once the receiver has transitioned from PAM2 to PAM4.

To: is set to TRUE once the receiver has transitioned from receiving training frames to data frames.

Revisit later this week.

If not changed, add Editor's note to consider the proper wording.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.7.3 P112 L18 # 266

McCarthy, Frank

Infineon

Comment Type T Comment Status R ACT Link Sync

Should add arrows from the reception of the Leader link sync pulse to the following transmitted pulse from the follower. This would be like a timing diagram showing the leader pulse detection at the follower causing the follower to reply with the follower pulse. The leader pulse must cause the follower to respond so that the timing between the leader and follower is stable.

SuggestedRemedy

See comment

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

See also comment #267.

CI 201 SC 201.7.3 P112 L32 # 416

Long, Richard

TE Connectivity

Comment Type E Comment Status X late

Missing spaces

SuggestedRemedy

Add a space between 50 and ppm (line 32), 34.133 and ns (line 36), 1024 and ns (line 37), 50 and ns (line 41)

Proposed Response Response Status O

CI 201 SC 201.7.3 P112 L42 # 267

McCarthy, Frank

Infineon

Comment Type T Comment Status A ACT Link Sync

For each SEND\_S pulse that the follower detects, the follower is allowed to answer with one SEND\_S pulse to the Leader. If follower does not detect a SEND\_S pulse from the leader, then the follower skips transmitting its SEND\_S pulse. A question is should a missing SEND\_S pulse from the leader cause the follower to wait for three consecutive pulses from the leader before sending additional SEND\_S pulses to the leader? Should the leader send a "reverse polarity" SEND\_S pulse to indicate that the leader detected the SEND\_S pulses from the follower? This would provide a "closed-loop" link-synchronization method, i.e. the follower would never leave before the leader had detected its SEND\_S pulses.

SuggestedRemedy

Add text describing behavior when SEND\_S pulse is missing.

Response Response Status C

ACCEPT IN PRINCIPLE.

New proposed text: (Note, comment 266 has been withdrawn.)

Replace paragraph starting on P112/L39 with the following text.

When the FOLLOWER detects a sufficient number of the LEADER's SEND\_S pulses to determine that the LEADER is active, the FOLLOWER shall output one SEND\_S pulse 435 +/- 50ns after the detection of the LEADER's most-recent SEND\_S pulse. For each subsequent SEND\_S pulse detected from the LEADER, the FOLLOWER shall output one SEND\_S pulse with timing as shown in Figure 201-19. This pattern shall repeat until the LEADER detects a sufficient number of the FOLLOWER's SEND\_S pulses to determine that the FOLLOWER is active. Then, the LEADER shall stop outputting SEND\_S pulses and enter the SILENT\_WAIT state as shown in Figure 201-20. Likewise, after the FOLLOWER determines that the LEADER has stopped outputting SEND\_S pulses, the FOLLOWER shall also enter the SILENT\_WAIT state.

CI 201 SC 201.7.3 P112 L44 # 291

Razavi, Alireza

Infineon

Comment Type E Comment Status A EZ

misspelling SENDS\_S should be replaced by SEND\_S

SuggestedRemedy

see comment

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.7.3.1 P114 L4 # 84  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ  
missing space  
SuggestedRemedy  
Add a non-breaking space between 3.1 and us. Also change "u" to the symbol for micro.  
Response Response Status C  
ACCEPT.

CI 201 SC 201.7.3.2 P114 L20 # 398  
Muma, Scott Microchip  
Comment Type TR Comment Status A ACT PHY Control  
98.5.2 defines both break\_link\_timer\_[HSM] and break\_link\_timer\_[LSM], so it's ambiguous which should be used since clause 98 AN is not being used.  
SuggestedRemedy  
After see 98.5.2 Add: Refer to break\_link\_timer\_[HSM].  
Response Response Status C  
ACCEPT.

CI 201 SC 201.7.3.2 P114 L20 # 77  
Zhu, Infineon  
Comment Type T Comment Status D ACT Link Sync  
break\_link\_timer is currently fixed at 300-305us but can be more flexible for different implementations  
SuggestedRemedy  
change to a minimum value corresponding to different link speeds  
Proposed Response Response Status W  
PROPOSED REJECT.  
The commenter has not provided a specific remedy that can be implemented.

CI 201 SC 201.7.3.2 P114 L23 # 215  
Abedinzadeh, Bizhan Infineon  
Comment Type T Comment Status D ACT Startup  
Link\_fail\_inhibit\_timer shall be reduced  
SuggestedRemedy  
Propose changing from 100ms to 50ms  
Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.  
TFTD  
Consider comments 375, 376, 213, 399, and 215 together.

CI 201 SC 201.7.3.2 P114 L23 # 399  
Muma, Scott Microchip  
Comment Type T Comment Status D ACT Startup  
The link\_fail\_inhibit\_timer\_[HCD] is defined in 98.5.2 as a timer to allow the PHY to determine link integrity. It says "this timer shall expire 97 ms to 98 ms after entering the AN GOOD CHECK state." This state does not exist in the diagram, but assume LINK\_GOOD\_CHECK is intended instead of AN GOOD CHECK. 97-98ms seems like a very long time to determine link integrity. Suggest 49 to 50 ms or any reasonable value by consensus.  
SuggestedRemedy  
Replace "see 98.5.2" with: Timer for qualifying a link\_status=FAIL indication or a link\_status=OK indication when a link is first being established. A link will be considered "failed" only if the link\_fail\_inhibit\_timer has expired and the link has still not gone into the link\_status=OK state. The expiration time of the link\_fail\_inhibit\_timer shall be 49 ms to 50 ms after entering the LINK\_GOOD\_CHECK state.  
Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.  
TFTD  
Consider comments 375, 376, 213, 399, and 215 together.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.7.3.4 P115 L1 # 397  
 Muma, Scott Microchip  
 Comment Type TR Comment Status A ACT PHY Control  
 The figure shows setting sync\_tx\_symb to 0 or 1, but these are not valid settings according to 201.7.3.3. Valid settings are SEND\_S and SEND\_Z. Compare to Figure 149-31  
 SuggestedRemedy  
 Change the diagram to be SEND\_Z in place of 0 and SEND\_S in place of 1 when assigning sync\_tx\_symb.  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.7.7 P116 L26 # 407  
 Muma, Scott Microchip  
 Comment Type TR Comment Status A ACT PHY Control  
 Why is this specific to 100M+MultiGBASE-T1/V1 when it's under the Common PMA Functions section?  
 SuggestedRemedy  
 Possibly delete this section or correct depending on other changes/intent.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 See comment #405. This is moved as part of that response.

CI 201 SC 201.7.8 P116 L30 # 406  
 Muma, Scott Microchip  
 Comment Type TR Comment Status A ACT PHY Control  
 Subclause 149.4.4 doesn't contain any state diagrams, so this reference is incorrect. Assuming 149.4.5 was intended, now the only new information is the PHY Control state diagram which will conflict with the PHY control state diagram in 201.7.2.3  
 SuggestedRemedy  
 Provide the intended PHY Control state diagram.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Resolved with response to comment #405.

CI 201 SC 201.8 P116 L35 # 137  
 Wang, Frank Realtek Semiconductor Corp.  
 Comment Type E Comment Status A EZ  
 typo  
 SuggestedRemedy  
 change "forthe high speed path" to "for the HS\_PATH"  
 Response Response Status C  
 ACCEPT. corrected page number

CI 201 SC 201.8 P116 L35 # 206  
 van Dyck, Peter Infineon  
 Comment Type E Comment Status A EZ  
 "forthe" space missing  
 SuggestedRemedy  
 Replace with "for the"  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.8 P116 L36 # 334  
 Jonsson, Ragnar Infineon  
 Comment Type E Comment Status A EZ  
 missing space between 'for' and 'the'  
 SuggestedRemedy  
 for the high speed path  
 Response Response Status C  
 ACCEPT.

CI 201 SC 201.8.1 P117 L26 # 85  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ  
 SuggestedRemedy  
 change character type of 94.2.9.1 to "External"  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.8.1 P117 L26 # 243  
 Sakunia, Saket Infineon Technologies  
 Comment Type E Comment Status A EZ  
 External text reference 94.2.9.1, should be in green  
 SuggestedRemedy

Response Response Status C  
 ACCEPT.

CI 201 SC 201.8.1 P117 L26 # 336  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D ACT tests  
 For 5G and 2.5G NRZ mode, should not use the term JP03A, JP03B pattern anymore, otherwise when digital team implement it, if use the same bit sequence, it will be not what we want for NRZ mode. Or should put note on what is JP03A, JP03B pattern for NRZ mode  
 SuggestedRemedy

Change the text to: "Test mode 2 is for transmitter jitter testing on the MDI when the transmitter is in LEADER timing mode.  
 For 10G HS\_PATH, when test mode 2 is enabled, the PHY shall transmit a continuous pattern of JP03A (as specified in 94.2.9.1) or JP03B (as specified in 94.2.9.2) with the transmitted symbols timed from its local clock source. For 2.5G and 5G HS\_PATH, the JP03A and JP03B signals shall be replaced with the equivalent PAM2 signals, using repeated sequence of {0,1} instead of repeated sequence of {0,3}."

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Included in response for comment #337.

CI 201 SC 201.8.1 P117 L27 # 86  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ

SuggestedRemedy  
 change character type of 94.2.9.2 to "External"

Response Response Status C  
 ACCEPT.

CI 201 SC 201.8.1 P117 L27 # 244  
 Sakunia, Saket Infineon Technologies  
 Comment Type E Comment Status A EZ  
 External text reference 94.2.9.1, should be in green  
 SuggestedRemedy

Response Response Status C  
 ACCEPT.

CI 201 SC 201.8.1 P117 L27 # 337  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D ACT tests  
 For PAM4 signal, to measure EOJ, need JP03B pattern since two bits form one symbol, while for NRZ signal, it's not necessary to define such a ptttern anymore, can just use 1010 pattern to get duty cycle distortion (fine to call it EOJ for consistency) as in other NRZ standard (i.e. clause 130 5G KR). Also OK to define another NRZ pattern similar to JP03B pattern for consistency, maybe call it JP01B pattern  
 SuggestedRemedy

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Change: When test mode 2 is enabled, the PHY shall transmit a continuous pattern of JP03A (as specified in 94.2.9.1) or JP03B (as specified in 94.2.9.2) with the transmitted symbols timed from its local clock source.

To: When test mode 2 is enabled, when transmitting PAM4, the PHY shall transmit a continuous pattern of JP03A (as specified in 94.2.9.1) or JP03B (as specified in 94.2.9.2) with the transmitted symbols timed from its local clock source.  
 When test mode 2 is enabled, when transmitting PAM2, the PHY shall transmit a continuous pattern of 0101 with the transmitted symbols timed from its local clock source.

Also need to modify 2.8.2.3.1, Table 201-9  
 Add column on the left called "modulation". This should be PAM4 for rows 2-4 and PAM2 for the 5th row.  
 Change the Test pattern in row 5 to be 0101 (as specified in 130.7.1.9)

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.8.1 P117 L38 # 87  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ

**SuggestedRemedy**

change character type of 94.3.10.8 to "External"

Response Response Status C  
ACCEPT.

CI 201 SC 201.8.1 P117 L50 # 138  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ

wording

**SuggestedRemedy**

change "2.5GBASE-T1, 5GBASE-T1, or 10GBASE-T1" to  
"multiG+100M/100M+MultiGBASE-T1/V1"

Response Response Status C  
ACCEPT.  
corrected page number

CI 201 SC 201.8.2.1 P120 L48 # 380  
Johnson, Samuel Infineon  
Comment Type T Comment Status D ACT tests

For Output Droop Test, the measurement requires a frequency-locked clock.

**SuggestedRemedy**

Add to section "201.8.2.1 Maximum output droop" after existing text

"It is recommended that a FOLLOWER PHY nominally operating in XTAL-less mode  
should include a method to use a reference clock provided by the measurement device."

Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.

Accomplished by implementation of comment #335 solution.

CI 201 SC 201.8.2.2 P121 L4 # 88  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ

**SuggestedRemedy**

change character type of 120D.3.1.2 to "External"

Response Response Status C  
ACCEPT.

CI 201 SC 201.8.2.2 P121 L8 # 240  
Sakunia, Saket Infineon Technologies  
Comment Type T Comment Status D ACT tests

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**

Update the Value of Np used in calculation to reflect the value of expected PoC/PoDL  
components.

Proposed Response Response Status W  
PROPOSED REJECT.

The commenter has not provided a suggested value of Np to use.

Also, Np is not in 201.8.2.2.

CI 201 SC 201.8.2.2 P122 L1 # 381  
Johnson, Samuel Infineon  
Comment Type T Comment Status D ACT tests

For Linearity Test, the measurement requires a frequency-locked clock.

**SuggestedRemedy**

Add to section "201.8.2.2 Transmitter linearity" after existing text

"It is recommended that a FOLLOWER PHY nominally operating in XTAL-less mode  
should include a method to use a reference clock provided by the measurement device."

Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.

Accomplished by implementation of comment #335 solution.

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.8.2.3 P121 L21 # 303

Penumuchu, Venkat

Infineon Technologies

Comment Type TR Comment Status D ACT tests

The J value is 1 for 10G & 5G and 2 for 2.5G

SuggestedRemedy

J=1 for 5G, J=2 for 2.5G

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

change the second coulumn in the table 201-8, use J=1 for 5G, and use J=2 for 2.5G.

CI 201 SC 201.8.2.3 P121 L40 # 338

Jonsson, Ragnar

Infineon

Comment Type T Comment Status D ACT tests

The jitter spec is 6ps for Follower, should it be data rate dependent as what for Leader? CH spec for 2.5G is 8ps, higher than DM one.

SuggestedRemedy

Change "6 ps" to "6/S ps", "3 ps" to "3/S ps" and "60 ps" to "60/S ps"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.8.2.3.1 P122 L3 # 417

Long, Richard

TE Connectivity

Comment Type E Comment Status X late

Use of \* instead of x operator, also appears in line 31 and 35, page 129 line 37 and page 130 line 8

SuggestedRemedy

Change 10\*J to 10xJ or remove \* and use 10J, also make changes in line 31 and 35, page 129 line 37 and page 130 line 8

Proposed Response Response Status O

CI 201 SC 201.8.2.4 P122 L39 # 382

Johnson, Samuel

Infineon

Comment Type T Comment Status D ACT tests

For PSD Test, the measurement requires a frequency-locked clock.

SuggestedRemedy

Add to section "201.8.2.4 "Transmitter power spectral desnsity (PSD) and power level" after the existing text:

"It is recommended that a FOLLOWER PHY nominally operating in XTAL-less mode should include a method to use a reference clock provided by the measurement device."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Accomplished by implementation of comment #335 solution.

CI 201 SC 201.8.2.4 P123 L16 # 236

Pandey, Sujan

Velinktech

Comment Type ER Comment Status A EZ

all "HZ"

SuggestedRemedy

Hz

Response Response Status C

ACCEPT IN PRINCIPLE.

Scan the document and replace all instances of "HZ" with "Hz".

Val to update Clause 202.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.8.2.6 P125 L28 # 330

Johnson, Samuel

Infineon

Comment Type T Comment Status D ACT transmitter

To prevent overlockingg digital logic, and to allow for natural VCO frequency variation, we prefer to operate open-loop atbetween -20 and 0% of nominal frequency. Current spec is -10 / +10%

#### SuggestedRemedy

For the FOLLOWER PHY running off free-running clock, shall be within the range we prefer 5624 \* S MHz +/-20%

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change the text to:

"For the FOLLOWER PHY running off free-running clock, shall be within the range 5624 \* S MHz +1/-20% and the short term rate of frequency variation shall be less than 1% / second

CI 201 SC 201.8.2.6 P125 L29 # 341

Jonsson, Ragnar

Infineon

Comment Type T Comment Status D ACT transmitter

What does short term mean? How short? Need clear definition

#### SuggestedRemedy

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD what that correct meaning is

A specific length of time, or number of bits, etc. should be specified.

CI 201 SC 201.8.2.6 P125 L29 # 377

Jonsson, Ragnar

Infineon

Comment Type T Comment Status R ACT transmitter

Clock accuracy in crystal-less mode: change +/-10% should be +/-20%

#### SuggestedRemedy

See comment

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI 201 SC 201.8.2.6 P125 L30 # 418

Long, Richard

TE Connectivity

Comment Type E Comment Status X late

Extra spaces

#### SuggestedRemedy

Remove extra space between 10 and % and 1 and %? Also page 183, line 42, 30 and %.

Proposed Response Response Status O

CI 201 SC 201.8.2.8 P125 L9 # 241

Sakunia, Saket

Infineon Technologies

Comment Type T Comment Status D ACT transmitter

Table 201-11 the Max transmit swing values are significantly higher than 802.3ch. This causes un-necessary complications in implementing PHY's in Lower geometries.

#### SuggestedRemedy

Please revert the values back to 802.3ch, of 1.3V max

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

Consider with comment #340 which changes the 10G voltage.

Should the 2.5G voltage be raised?

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.8.3.2 P125 L46 # 190

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

Comment Type T Comment Status D ACT noise

While this test is labeled alien crosstalk, it has, for some time, been the only test in the standard for receiver noise tolerance. With the expected use of shielded media, it is time to rename it - because people think there is no alien crosstalk so they don't need to pay attention.

#### SuggestedRemedy

Change "Alien crosstalk noise rejection" to "Broadband stationary noise rejection" at P125 L46  
 Make same change at P225 L45 to 202.5.3.2.  
 Change "tolerance to alien crosstalk noise." at line 48, to "tolerance to broadband stationary noise from a variety of sources."  
 Change the title of Table 201-12 to "Broadband noise source, high speed" at P126 L44 (after Table 201-12), add Editor's note (to be removed prior to SA ballot) - Contributors to consider whether to specify additional noise sources, such as line spectra from power management ICs, or other common self-noise from associated components.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 201 SC 201.8.3.2 P126 L1 # 292

Razavi, Alireza Infineon

Comment Type E Comment Status A EZ

gamma is missing after specification "specification the frame loss ratio is less than"

#### SuggestedRemedy

see comment

Response Response Status C

ACCEPT.

CI 201 SC 201.8.3.2 P126 L38 # 242

Sakunia, Saket Infineon Technologies

Comment Type T Comment Status D ACT noise

The alien crosstalk noise source between T1 and V1 shows a 3 dBm/Hz reduction when scaled to signal levels. In differential architectures, common-mode noise is typically rejected. In contrast, single-ended architectures convert this common-mode noise into additive noise. As a result, coaxial systems are generally more vulnerable to such interference. Also Applicable for TDD

#### SuggestedRemedy

The Alien cross talk level for Coax needs to be evaluated differently.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Accomplished by implementation of comment #190 solution.

CI 201 SC 201.9.1 P127 L51 # 245

Sakunia, Saket Infineon Technologies

Comment Type E Comment Status A EZ

External text reference 94.2.9.1, should be in green

#### SuggestedRemedy

Response Response Status C

ACCEPT.

CI 201 SC 201.9.1 P127 L51 # 89

Wienckowski, Natalie IVN Solutions LLC

Comment Type E Comment Status A EZ

#### SuggestedRemedy

change character type of 94.2.9.1 to "External"

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.9.1 P127 L 52 # 246  
 Sakunia, Saket Infineon Technologies  
 Comment Type E Comment Status A EZ  
 External text reference 94.2.9.1, should be in green  
 SuggestedRemedy

Response Response Status C  
 ACCEPT.

CI 201 SC 201.9.1 P127 L 52 # 90  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ  
 SuggestedRemedy

change character type of 94.2.9.2 to "External"

Response Response Status C  
 ACCEPT.

CI 201 SC 201.9.1 P127 L 52 # 342  
 Jonsson, Ragnar Infineon  
 Comment Type T Comment Status D ACT tests  
 Similar as above, low speed mode, JP03A and JP03B pattern need to be reclarified, is DME applied or not?

## SuggestedRemedy

Change paragraph to: "Test mode 2 is for transmitter jitter testing on the MDI when the transmitter is in LEADER timing mode. When test mode 2 is enabled, the PHY shall transmit a continuous pattern based on JP03A (as specified in 94.2.9.1) or JP03B (as specified in 94.2.9.2) with the transmitted symbols timed from its local clock source. The JP03A and JP03B signals shall be replaced with the equivalent DME signals, using repeated sequence of {0,1} instead of repeated sequence of {0,3}."

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

TFTD

Text is needed or comment will be rejected.

CI 201 SC 201.9.1 P128 L 2 # 91  
 Wienckowski, Natalie IVN Solutions LLC  
 Comment Type E Comment Status A EZ

## SuggestedRemedy

change character type of 94.3.10.8 to "External"

Response Response Status C  
 ACCEPT.

CI 201 SC 201.9.2 P132 L 46 # 333  
 Johnson, Samuel Infineon  
 Comment Type T Comment Status D ACT clock  
 For the LEADER to provide a optimal reference clock for the FOLLOWER to use in XTAL-less operation with minimal jitter, define a maximum rise and fall time of the 100MHz transmission.

See this presentation for reference:

[https://www.ieee802.org/3/dm/public/1125/Razavi\\_3dm\\_02a\\_1125.pdf](https://www.ieee802.org/3/dm/public/1125/Razavi_3dm_02a_1125.pdf)

## SuggestedRemedy

Create section 201.9.2.8 "Transmitter Rise and Fall Time" and add text:

"For the LEADER to provide a optimal reference clock for the FOLLOWER to use in XTAL-less operation with minimal jitter, a maximum rise and fall time is defined for the 100MHz transmission.

--The rise and fall transition time between 20% and 80% levels of the steady state voltage amplitude shall be less than TBD ns.

--Measurement shall be performed using an all-ones sequence applied to the DME mapper. This sequence generates a deterministic square wave with frequency of 117MHz

--Testmode 4 shall be used for this measurement"

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.

Create section 201.9.2.8 "Transmitter Rise and Fall Time" and add text:

"The transmitter rise and fall time requirements specified in this subclause apply when the PHY\_D is used to provide a reference clock for XTAL-less operation of PHY\_S. Limiting the transmitter transition times reduces deterministic jitter of the derived reference at the receiving PHY.

The rise/fall transition time between 20% and 80% levels of the steady state voltage amplitude shall be less than 1.5 ns. The rise time and fall time shall be measured at MDI using Test mode 4. "

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.9.2.2 P128 L48 # 92  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ

## SuggestedRemedy

change character type of 85.8.3.3.4 to "External"

Response Response Status C  
ACCEPT.

CI 201 SC 201.9.2.5 P130 L1 # 237  
Pandey, Sujun Velinktech  
Comment Type ER Comment Status A EZ

## SuggestedRemedy

dBm/Hz

Response Response Status C  
ACCEPT IN PRINCIPLE.

Replace all instances of "dBm" with "dBm".

Val to check clause 202.

CI 201 SC 201.9.2.5 P130 L40 # 247  
Sakunia, Saket Infineon Technologies  
Comment Type T Comment Status D ACT tests

Low Speed transmitter upped PSD mask needs to be extended beyond 400MHz. It should cover the same frequency region as High Speed Transmit PSD mask. Not doing that leaves the system vulnerable to devices introducing high frequency content beyond 400MHz

## SuggestedRemedy

Extend the upper limit of PSD mask for the Low speed transmit, specify to 3500MHz

Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.

For the UpperPSD mask in equation 201-8, change 400 to 3500

CI 201 SC 201.9.2.5 P131 L1 # 293  
Razavi, Alireza Infineon  
Comment Type E Comment Status A EZ

in lines 2 and 3, wrong notation: dBm/Hz should be replaced with 'dBm/Hz'

## SuggestedRemedy

see comment

Response Response Status C  
ACCEPT.

CI 201 SC 201.9.2.5 P131 L2 # 238  
Pandey, Sujun Velinktech  
Comment Type ER Comment Status A EZ

## SuggestedRemedy

dBm/Hz

Response Response Status C  
ACCEPT IN PRINCIPLE.

See response to comment #237.

CI 201 SC 201.9.2.6 P132 L36 # 294  
Razavi, Alireza Infineon  
Comment Type E Comment Status A EZ

complex sentence and spelling error "the transmit signalof a 100M+MultiGBASE-V1 transmitter shall be" can be replaced by "the transmit signal shall be"

## SuggestedRemedy

see comment

Response Response Status C  
ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.9.2.6 P132 L36 # 93  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type E Comment Status A EZ  
missing space  
SuggestedRemedy  
Add a space between "signal" and "of".  
Response Response Status C  
ACCEPT.

CI 201 SC 201.9.2.6 P132 L36 # 239  
Pandey, Sujun Velinktech  
Comment Type ER Comment Status A EZ  
... the transmit signalof ...  
SuggestedRemedy  
... the transmit signal of ...  
Response Response Status C  
ACCEPT.

CI 201 SC 201.9.3 P133 L1 # 248  
Sakunia, Saket Infineon Technologies  
Comment Type T Comment Status D ACT tests  
Alien cross talk noise bandwidth should cover the high speed transmission frequency range.  
SuggestedRemedy  
Extend the noise bandwidth of Alien Cross Talk noise to 3500MHz  
Proposed Response Response Status W  
PROPOSED ACCEPT.

CI 201 SC 201.11.1.1 P133 L46 # 384  
Cheng, Xiaoyue Infineon  
Comment Type T Comment Status D ACT Link Segment  
Insertion loss spec starts from 3MHz, but return loss spec starts from 1MHz  
SuggestedRemedy  
Modify insertion loss spec to start from1MHz  
Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.  
Change return loss spec to start at 3 MHz.

CI 201 SC 201.11.1.1 P133 L51 # 383  
Cheng, Xiaoyue Infineon  
Comment Type E Comment Status D ACT Link Segment  
The unit for Fmax should be GHz or MHz, not Gb/s  
SuggestedRemedy  
Change to GHz  
Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.  
Use MHz to be consistent with the rest of the draft.  
Change 2 Gb/s to 2,000 MHz  
Change 4 Gb/s to 4,000 MHz

CI 201 SC 201.11.1.3 P135 L31 # 249  
Sakunia, Saket Infineon Technologies  
Comment Type E Comment Status A EZ  
Return loss instead of "IIReturn Loss"  
SuggestedRemedy  
Response Response Status C  
ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.11.1.6 P135 L48 # 386  
 Cheng, Xiaoyue Infineon  
 Comment Type E Comment Status D ACT Link Segment  
 should be link segment delay  
 SuggestedRemedy  
 change link delay to link segment delay  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 This is the common title for this subclause throughout 802.3.

CI 201 SC 201.11.1.6 P135 L49 # 387  
 Cheng, Xiaoyue Infineon  
 Comment Type E Comment Status D ACT Link Segment  
 should be link segment delay  
 SuggestedRemedy  
 change link delay to link segment delay  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 This is the common title for this subclause throughout 802.3.

CI 201 SC 201.11.1.6 P135 L50 # 385  
 Cheng, Xiaoyue Infineon  
 Comment Type T Comment Status D ACT Link Segment  
 maximum link segment delay. No frequency range  
 SuggestedRemedy  
 Add "at all frequencies between 2 MHz and Fmax" at the end of the sentence.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: The maximum link delay of each MultiG+100M/100M+MultiGBASE-T1 link shall be 160 ns.  
 To: The propagation delay of a MultiG+100M/100M+MultiGBASE-T1 link segment shall not exceed 160 ns at all frequencies between 2 MHz and Fmax MHz.

CI 201 SC 201.12.1.6 P136 L49 # 388  
 Cheng, Xiaoyue Infineon  
 Comment Type E Comment Status D ACT Link Segment  
 should be link segment delay  
 SuggestedRemedy  
 change link delay to link segment delay  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 This is the common title for this subclause throughout 802.3.

CI 201 SC 201.12.1.6 P136 L50 # 389  
 Cheng, Xiaoyue Infineon  
 Comment Type E Comment Status D ACT Link Segment  
 should be link segment delay  
 SuggestedRemedy  
 change link delay to link segment delay  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change: The maximum link delay of each MultiG+100M/100M+MultiGBASE-V1 link shall be 160 ns.  
 To: The propagation delay of a MultiG+100M/100M+MultiGBASE-V1 link segment shall not exceed 160 ns at all frequencies between 2 MHz and Fmax MHz.

CI 201 SC 201.13.2.1 P138 L17 # 162  
 Zimmerman, George CME Consulting/ADI,APL Gp, Cisco, Infineon, OnSe  
 Comment Type E Comment Status A EZ  
 Editor's note is not needed as Fmax is already scaled here.  
 SuggestedRemedy  
 Delete editor's note.  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 201 SC 201.14.3 P139 L22 # 188

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

Comment Type T Comment Status A ACT MDI

The MDI fault tolerance for coax can't possibly be 96.8.3. That specifies short circuits & powering voltages for a differential interface. I assume we can't specify connecting the shield ground to a positive voltage, so this would only apply to the signal conductor.

#### SuggestedRemedy

Replace 201.14.3 text with "The signal conductor of the MDI shall, under all operating conditions, withstand without damage the application of short circuits of any wire to the shield ground or positive voltages of up to 50 V dc with the source current limited to 150 mA, as per Table 201-x, for an indefinite period of time. Normal operation shall resume after the short circuit(s) is (are) removed. The signal conductor of the MDI shall also withstand without damage high-voltage transient noises and ESD per application requirements."  
Add Table 201-x - Connection fault  
Signal Conductor  
No fault  
Ground  
+50 V dc  
-50V dc

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement solution in comment #325.

CI 201 SC 201.16 P139 L # 275

Lo, William Axonne Inc

Comment Type T Comment Status R EZ

Add table 201-BBB

#### SuggestedRemedy

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI 201 SC 201.16 P139 L # 274

Lo, William Axonne Inc

Comment Type T Comment Status D ACT Delay

Redo delay constraints

#### SuggestedRemedy

- 1) Delete the entire contents of this section.
- 2) The following paragraphs are taken from 149.10 but modified:

In full duplex mode, predictable operation of the MAC Control PAUSE operation (Clause 31, Annex 31B)also demands that there be an upper bound on the propagation delays through the network. This implies that MAC, MAC Control sublayer, and PHY implementers conform to certain delay maxima, and that network planners and administrators conform to constraints regarding the cable topology and concatenation of devices.

The HS\_PATH delays for an implementation of the PHY link shall not exceed the limits shown in Table 201-AAA. The data delay is measured from the input of a given unit of data at the PHY\_S XGMII to the presentation of the same unit of data by the PHY\_D XGMII.

The LS\_PATH delays for an implementation of the PHY link shall not exceed the limits shown in Table 201-AAA. The data delay is measured from the input of a given unit of data at the PHY\_D XGMII to the presentation of the same unit of data by the PHY\_S XGMII.

NOTE—The physical medium interconnecting two PHYs introduces additional delay in a link.

- 3) Add editor's note:

Do we want to further break down the HS\_TX, HS\_RX, LS\_TX, LS\_RX delays limits or are we ok leaving this as a path delay. If it is the former then we need to define the undetectable reference point in the RS Frame at the MDI so that the TX and RX portions of the delay is measured consistently. It is not clear how to apply a shall statement on the delay limits referenced to an unmeasurable point. At best this can be determined by the vendor using RTL simulations. Maybe it is ok to leave the latter as these limits are loose enough that no vendor will do a bad implementation for fear that their silicon will fail the total path delay when interoperating with other vendors.

- 4) Copy table 149-20 as table 201-AAA here except the Mode is the HS\_PATH.

- 5) Add 1 more row for the LS\_PATH (100BASE-T1), (blank), 512, 1, 5120

- 6) Add editor's note:

Pause quanta are in units of 512 bits where in this case each 100BASE-T1 bit is 10ns. If pause quanta needs to be an integer then the choice can be either 512 or 1024 bits. An implementation of 512 bits for LS\_PATH is possible but may be tight depending on the underlying implementation micro-architecture. 1024 bits seems a bit too loose. We should discuss this choice as a looser number causes the worst case delay to be 10.24 us.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

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

*CI* **201**      *SC* **201-20**      *P***115**      *L***37**      # **214**  
 Abedinzadeh, Bizhan      Infineon  
*Comment Type* **T**      *Comment Status* **D**      *ACT PHY Control*  
 Allow restart from Link Sync when training fails

*SuggestedRemedy*

add loss of loc\_rcvr\_status to condition for state machine to transition from  
 LINK\_GOOD\_CHECK to TRANSMIT\_DISABLE

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

TFTD

*CI* **201**      *SC* **201.8.1**      *P***120**      *L***11**      # **335**  
 Jonsson, Ragnar      Infineon  
*Comment Type* **T**      *Comment Status* **D**      *ACT tests*  
 How to understand the transmit reference clock in the test block diagram? DUT provides  
 reference clock to spectrum analyzer? Spectrum analyzer doesn't need refclk.

*SuggestedRemedy*

change the comment to "the transmit reference clock in the test block diagram" is  
 ambiguous. DUT does provide reference clock to spectrum analyzer. . and ask for its  
 removal

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

Remove the dashed line and transmit reference clock in figures 201-21,22,26,27.

Add the following note to figures 201-21,22,26,27: " NOTE- It is recommended that a  
 FOLLOWER PHY in XTAL-less mode include a method to use a reference clock provided  
 by the measurement device."

*CI* **201**      *SC* **Table 201-11**      *P***125**      *L***15**      # **339**  
 Jonsson, Ragnar      Infineon  
*Comment Type* **T**      *Comment Status* **R**      *EZ*

*SuggestedRemedy*

*Response*      *Response Status* **Z**  
 REJECT.

This comment was WITHDRAWN by the commenter.

*CI* **201**      *SC* **201.8.2.5**      *P***125**      *L***15**      # **340**  
 Jonsson, Ragnar      Infineon  
*Comment Type* **T**      *Comment Status* **D**      *ACT transmitter*

1.7Vdpp will violate power level 2dBm max spec. What's the meaning to increase voltage  
 spec but still keep power level spec to be -1~2dBm?

*SuggestedRemedy*

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

TFTD  
 Consider with comment #241

In table 201-11  
 Change the row for 10G to read  
 10G | 1.5 | 0.75

*CI* **202**      *SC* **202.1.4.1**      *P***147**      *L***13**      # **419**  
 Long, Richard      TE Connectivity  
*Comment Type* **T**      *Comment Status* **X**      *late*

"Modulation order" is not defined in the document so can be added here for clarity

*SuggestedRemedy*

Add to Note, "Modulation order = 2 for PAM4 signaling and modulation order = 1 for PAM2."

*Proposed Response*      *Response Status* **O**

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.1.5 P148 L49 # 139

Wang, Frank Realtek Semiconductor Corp.

Comment Type T Comment Status D Polarity

polarity is only for T1

#### SuggestedRemedy

change "in the connection" to "in the connectionfor the single shielded balanced pair of conductors (T1)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: The term "polarity" may be causing confusion.)

Consider with Comment #140 and Comment #100.

TFTD and consider alternative wordings:

Old: "to detect and correct for media polarity inversions"

New: "to detect and correct for signal inversions"

Old: "detect and correct for incorrect polarity in the connection"

New: "detect and correct for signal inversion"

CI 202 SC 202.1.6 P149 L17 # 140

Wang, Frank Realtek Semiconductor Corp.

Comment Type T Comment Status X Polarity

polarity is only for T1

#### SuggestedRemedy

change "in the connection" to "in the connectionfor the single shielded balanced pair of conductors (T1)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: The term "polarity" may be causing confusion.)

Consider with Comment #139 and #100.

TFTD and consider alternative wordings:

Old: "to detect and correct for media polarity inversions"

New: "to detect and correct for signal inversions"

CI 202 SC 202.1.7 P149 L26 # 71

Maguire, Valerie Copperopolis; aff'l w/ CME Consulting, Microchip, and

Comment Type E Comment Status A EZ

This header and text should have been deleted when the order of the LS\_PATH signaling and HS\_PATH signaling clauses were swapped.

#### SuggestedRemedy

Delete "202.1.7 L" and re-number subsequent clauses.

Response Response Status C

ACCEPT IN PRINCIPLE.

Accommodated by comment #94.

CI 202 SC 202.1.7 P149 L26 # 94

Wienckowski, Natalie IVN Solutions LLC

Comment Type E Comment Status A EZ

delete 202.1.7 as the title is just "L" and there is no content.

#### SuggestedRemedy

Delete: 202.1.7 L

Response Response Status C

ACCEPT.

CI 202 SC 202.1.8 P140 L32 # 95

Wienckowski, Natalie IVN Solutions LLC

Comment Type E Comment Status R EZ

duplicated sentence

#### SuggestedRemedy

Delete one instance of "All MultiG+100M/100M+MultiGBASE-T1 PHY implementations are compatible at the MDI."

Response Response Status C

REJECT.

(Editor's note: Comment applies to text on P149, L32.)

One sentence applies to -T1 and the other applies to -V1. These are not duplicate sentences and the current wording is intentional since -T1 and -V1 PHYs are not compatible with each other at the MDI.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.1.8 P149 L30 # 141  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status R EZ  
align with 149.1.5  
SuggestedRemedy  
change "at the XGMII" to "at the MDI and at the XGMII"  
remove "All MultiG+100M/100M+MultiGBASE-T1 PHY implementations are compatible at the MDI. All MultiG+100M/100M+MultiGBASE-V1 PHY implementations are compatible at the MDI."  
Response Response Status C  
REJECT.  
(Editor's note: Corrected page number in comment record.)  
One sentence applies to -T1 and the other applies to -V1. These are not duplicate sentences and the current wording is intentional since -T1 and -V1 PHYs are not compatible with each other at the MDI.

CI 202 SC 202.2.1.4.2 P154 L2 # 142  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ  
align with 149.2.2.4.2: insert ";  
SuggestedRemedy  
change "100M+10GBASE-T1/V1 as" to "100M+10GBASE-T1/V1; as"  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
(Editor's note: Corrected page number in comment record. Even though there is precedent, the use of ";" doesn't improve clarity. The 6 GHz requirements could be merged.)  
Replace,  
"The nominal rate of the PMA\_UNITDATA.indication primitive is 3 GHz for100M+2.5GBASE-T1/V1 and MultiG+100MBASE-T1/V1, 6 GHz for 100M+5GBASE-T1/V1, and 6 GHz for 100M+10GBASE-T1/V1 as governed by the recovered clock."  
with,  
"The nominal rate of the PMA\_UNITDATA.indication primitive, as governed by the recovered clock, is 3 GHz for100M+2.5GBASE-T1/V1 and MultiG+100MBASE-T1/V1 and 6 GHz for 100M+5GBASE-T1/V1 and 100M+10GBASE-T1/V1."

CI 202 SC 202.2.1.7.3 P155 L33 # 316  
Gorshe, Steve Microchip  
Comment Type T Comment Status A EZ  
The text should be updated to point to the clause 202 equivalent figure and subclauses, which resolves the Editor's Note.  
SuggestedRemedy  
Replace the current text with "The effect of the receipt of this primitive is specified in Figure 202-2, 202.3.2.3, 202.4.2.4 and 202.5." and remove the Editor's Note.  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
(Editor's note: Commenter adds "the" between "of" and "receipt", which is not aligned with similar phrases in the document.)  
Replace the current text with "The effect of receipt of this primitive is specified in Figure 202-2, 202.3.2.3, 202.4.2.4 and 202.5." and remove the Editor's Note.

CI 202 SC 202.3.2.1 P161 L13 # 96  
Wienckowski, Natalie IVN Solutions LLC  
Comment Type T Comment Status A Reset  
Based on the objective: Define optional startup procedure which enables the time from power\_on=FALSE to a state capable of transmitting and receiving valid data to be less than 100 ms, the maximum time available to resume normal operation after reset is 100 ms.  
SuggestedRemedy  
Change "(TBD) ms" to "100 ms."  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
(Editor's note: This is about the control and management interface restoration time following PCS Reset, not the time from power\_on to data transmission. Clause 149 uses 10 ms for this time. Propose to align.)  
Change "(TBD) ms" to "10 ms"

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.3.2.2 P163 L12 # 143  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ  
wording  
SuggestedRemedy  
change "On" to "On"  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
(Editor's note: Corrected page number in comment record.)  
Apply italics font to "On"

CI 202 SC 202.3.2.2.5 P168 L10 # 144  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ  
align with 149.3.2.2.5  
SuggestedRemedy  
change "their mappings to control codes" to "their mappings to MultiG+100M/100M+MultiGBASE-T1/V1 control codes"  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
(Editor's note: Corrected page number in comment record. No change to Suggested Remedy.)  
change "their mappings to control codes" to "their mappings to MultiG+100M/100M+MultiGBASE-T1/V1 control codes"

CI 202 SC 202.3.2.2.5 P168 L14 # 145  
Wang, Frank Realtek Semiconductor Corp.  
Comment Type E Comment Status A EZ  
wording: "for" is missed  
SuggestedRemedy  
change "Control codes MultiG+100M/100M+MultiGBASE-T1/V1" to "Control codes for MultiG+100M/100M+MultiGBASE-T1/V1"  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
(Editor's note: Corrected page number in comment record. There is no ambiguity here so the table title can just be "Control codes" as per Table 82-1, 55-1, 49-1, etc. It only needs more information in clauses which have multiple tables of control codes.)  
change "Control codes MultiG+100M/100M+MultiGBASE-T1/V1"  
to "Control codes"

CI 202 SC 202.3.2.2.22 P172 L29 # 331  
Johnson, Samuel Infineon  
Comment Type T Comment Status R EZ  
For some Testmodes, a frequency locked to the test equipment is required.  
SuggestedRemedy  
It is recommended that a FOLLOWER PHY nominally operating in XTAL-less mode should include a test method to provide a reference clock such that the transmission rate shall be within the range of  $5625 * S \text{ MHz} \pm 50\text{ppm}$ . It is recommended that the reference clock be 117.186MHz  
Response Response Status C  
REJECT.  
This comment was WITHDRAWN by the commenter.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.3.2.2.22 P172 L52 # 332

Johnson, Samuel

Infineon

Comment Type T Comment Status R EZ

Mapping of logic0 -> +1 and logic1 -> -1 seems non-intuitive

**SuggestedRemedy**

If this is used by PAM2 in other standards, then leave unchanged. Otherwise, propose

Logic0 -> -1

Logic1 -> +1

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI 202 SC 202.3.2.2.22 P176 L1 # 97

Wienckowski, Natalie

IVN Solutions LLC

Comment Type E Comment Status A EZ

subject verb agreement

**SuggestedRemedy**

Change "transmit process send out" to "transmit process sends out".

Response Response Status C

ACCEPT.

CI 202 SC 202.3.2.3 P176 L38 # 146

Wang, Frank

Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

wording: "\_" is missed (also for lines 39, 49, and 52)

**SuggestedRemedy**

change "block lock" to "block\_lock"

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Corrected page number in comment record. Added additional location.)

change "block lock" to "block\_lock" in the following locations:

P176, L38 - two locations

P176, L39

P176, L49

P176, L52

P178, L52

CI 202 SC 202.3.2.3 P176 L41 # 98

Wienckowski, Natalie

IVN Solutions LLC

Comment Type E Comment Status A EZ

missing bracket

**SuggestedRemedy**

Change "RXD 31:0>" to "RXD <31:0>"

Response Response Status C

ACCEPT.

CI 202 SC 202.3.5.2.1 P183 L43 # 99

Wienckowski, Natalie

IVN Solutions LLC

Comment Type T Comment Status A Refresh Header

Incorrect number of bytes and awkward wording.

**SuggestedRemedy**

Change "four bytes header" to "eight header bytes"

Response Response Status C

ACCEPT.

CI 202 SC 202.4.2.2 P209 L41 # 400

Muma, Scott

Microchip

Comment Type E Comment Status A EZ

The editor's note can be removed as the descriptions of the timers are up to date with their usage in the diagram

**SuggestedRemedy**

Remove editor's note

Response Response Status C

ACCEPT.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

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**CI 202**      **SC 202.4.2.3**      **P200**      **L7**      # **147**

Wang, Frank      Realtek Semiconductor Corp.

**Comment Type**    **E**      **Comment Status**    **A**      **EZ**  
wording**SuggestedRemedy**

change:  
uses the parameters pcs\_status and scr\_status, and the state of the equalization, and estimation functions to determine  
to:  
uses the parameters pcs\_status and scr\_status, the state of the equalization, and estimation functions to determine  
or  
uses the parameters pcs\_status and scr\_status, and the state of the equalization and estimation functions to determine

**Response**      **Response Status**    **C**

ACCEPT IN PRINCIPLE.

(Editor's note: Corrected page number in comment record. This sentence is hard to parse. Text proposed to resolve comment and improve clarity.)

Replace,  
"The PMA Receive function uses the parameters pcs\_status and scr\_status, and the state of the equalization, and estimation functions to determine the quality of the receiver performance, and generates the loc\_rcvr\_status variable accordingly."

with, "The PMA Receive function uses the parameters pcs\_status and scr\_status, as well as the state of the equalization and estimation functions, to determine the quality of the receiver performance and generates the loc\_rcvr\_status variable accordingly."

---

**CI 202**      **SC 202.4.2.3**      **P200**      **L16**      # **100**

Wienckowski, Natalie      IVN Solutions LLC

**Comment Type**    **T**      **Comment Status**    **D**      **Polarity**  
polarity inversion applies to balanced pair only**SuggestedRemedy**

at the end of the sentence add, "for balanced pair only."

**Proposed Response**      **Response Status**    **W**

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: The term "polarity" may be causing confusion.)

Consider with Comment #139 and #140.

TFTD and consider alternative wordings:  
Old: "to detect and correct for media polarity inversions"  
New: "to detect and correct for signal inversions"

Old: "detect and correct for incorrect polarity in the connection"  
New: "detect and correct for signal inversion"

---

**CI 202**      **SC 202.4.2.4.5**      **P202**      **L24**      # **420**

Long, Richard      TE Connectivity

**Comment Type**    **E**      **Comment Status**    **X**      **late**  
Table 202-10 is not a table in the traditional sense with column headers and rows of data, it appears to be more of a graphic. Also applies to Table 202-11.**SuggestedRemedy**

Change Table 202-10 and 202-11 captions to Figure captions

**Proposed Response**      **Response Status**    **O**

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.4.2.4.5 P202 L46 # 186

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

Comment Type T Comment Status X TDD speeds

Clause 202 related to Big Ticket Item - MultiSpeed PHYs. The PHY\_S has 3 speed capabilities here. In other places of the draft, they are referred to as different PHY types. It appears however, that clause 202 describes a single type with speed selection built in, rather than autonegotiated by a separate sublayer which might select other clauses as the PHY type. Assuming that this is the case, then for interoperability, at least ONE of the speed grades should be mandatory, and the others optional.

Note - while I've made a suggestion here, I'm not taking a side - but we need to be clear. If we really have an auto-negotiating set of PHY types, we need a separate sublayer, which is much more spec-writing work.

#### SuggestedRemedy

Append the following to line 47 (after "10 Gb/s capable.") "2.5 Gb/s support is a mandatory capability, and Oct10<5> should always be set to 1.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Need consensus on whether the intent is a multi-rate PHY that may support any combination of rates including a single rate, 2.5G plus another rate, or if it must support all speeds lower than the maximum rate.)

TFTD

CI 202 SC 202.4.2.4.7 P204 L16 # 148

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

202.4.2.4.7 Phase switch PHY burst count

#### SuggestedRemedy

change "data switch" to "phase switch"

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Corrected page number in comment record. No change to Suggested Remedy.)

change "data switch" to "phase switch"

CI 202 SC 202.4.2.4.11 P205 L47 # 149

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

grammar: comma afrer "PrecoderSel"

#### SuggestedRemedy

change "PrecoderSel and" to "PrecoderSel, and"

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Corrected page number in comment record. No change to Suggested Remedy.)

change "PrecoderSel and" to "PrecoderSel, and"

CI 202 SC 202.4.2.4.11 P205 L52 # 150

Wang, Frank Realtek Semiconductor Corp.

Comment Type T Comment Status A EZ - pull

not only COUNTDOWN stage but also PCS\_TEST stage

#### SuggestedRemedy

change "At any COUNTDOWN stage" to "At any COUNTDOWN stage and PCS\_TEST stage"

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Corrected page number in comment record. "stage" should be "state" and probably doesn't need to be repeated. "and" should be "or".)

Change "At any COUNTDOWN state"

to "At any COUNTDOWN or PCS\_TEST state"

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.4.2.5 P206 L16 # 151

Wang, Frank Realtek Semiconductor Corp.

Comment Type E Comment Status A EZ

wording: " \_ " is missed

SuggestedRemedy

change "link status" to "link\_status"

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Corrected page number in comment record. Clarified that change occurs in 2 locations.)

change "link status" to "link\_status" in two locations on P206, L16

CI 202 SC 202.4.4.1 P209 L3 # 421

Long, Richard TE Connectivity

Comment Type E Comment Status X late

Typo

SuggestedRemedy

Replace "DSIABLE\_TRANSMITTER" with "DISABLE\_TRANSMITTER"

Proposed Response Response Status O

CI 202 SC 202.4.5 P213 L219 # 408

Lee, Ching-Yen Realtek Semiconductor Corp.

Comment Type T Comment Status D Link Monitor

Figure 202-28 needs to be updated.

SuggestedRemedy

A presentation will be provided.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

CI 202 SC 202.5.1 P216 L18 # 220

Chini, Ahmad Broadcom

Comment Type T Comment Status D TDD tests

The test mode 5 text does not correlate with the PSD specification of TDD as in Chini\_3dm\_03a\_0125.pdf where the PSD specified for continous signaling with no quiet gap.

SuggestedRemedy

Change the following sentence

"When test mode 5 is enabled, the PHY shall transmit as in non-test operation and in the LEADER data mode with data set to normal interframe idle signals."

to

When test mode 5 is enabled, the PHY shall transmit idle signals continuously with no quiet gap and with transmit signal level corresponding to the normal mode of operation. The test applies to both LEADER and FOLLOWER. The clock is sourced from a stable clock with 100PPM accuracy for this test.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: ppm isn't capitalized and there should be a space between the Unit and ppm - give Editors license to check and correct. No other change to Suggested Remedy.)

Change the following sentence

"When test mode 5 is enabled, the PHY shall transmit as in non-test operation and in the LEADER data mode with data set to normal interframe idle signals."

to

"When test mode 5 is enabled, the PHY shall transmit idle signals continuously with no quiet gap and with transmit signal level corresponding to the normal mode of operation. The test applies to both LEADER and FOLLOWER. The clock is sourced from a stable clock with 100 ppm accuracy for this test."

Grant Editors license to search and insert a space between a Unit and "ppm".

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

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CI 202 SC 202.5.1 P216 L21 # 307

Gorshe, Steve

Microchip

Comment Type E Comment Status D TDD tests

Better to add the explicitly local clock rate

*SuggestedRemedy*

Replace the paragraph "When test mode 6 ." with "When the test mode 6 is enabled, the PHY shall transmit a continuous pattern of 30 {+1} symbols followed by 30 {-1} symbols with the transmitted symbols timed from its local 3 GHz clock source."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: There is an em-dash before 1 (not a hyphen/minus sign). No other change to Suggested Remedy.)

Replace the paragraph "When test mode 6 ."

with "When the test mode 6 is enabled, the PHY shall transmit a continuous pattern of 30 {+1} symbols followed by 30 {-1} symbols with the transmitted symbols timed from its local 3 GHz clock source."

---

CI 202 SC 202.5.1.1 P216 L35 # 305

Gorshe, Steve

Microchip

Comment Type T Comment Status D TDD tests

As explained in the next comment, test fixture 6 should be removed

*SuggestedRemedy*

Remove the reference to Figure 202-35

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Consider Comment #306 first. Propose to merge this Suggested Remedy into the Response to Comment #306 to accommodate this comment.)

Accommodated by Comment #306.

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CI 202 SC 202.5.1.1 P217 L11 # 422

Long, Richard

TE Connectivity

Comment Type E Comment Status X late

Minor graphics correction

*SuggestedRemedy*

The line ends of the link segment overlap the boxes in Figure 202-31

Proposed Response Response Status O

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CI 202 SC 202.5.1.1 P218 L20 # 306

Gorshe, Steve

Microchip

Comment Type T Comment Status D TDD tests

Test fixture 6 is redundant relative to test fixture 5

*SuggestedRemedy*

Remove Figure 202-35 and replace the Figure 202-34 caption with "Transmitter test fixture 5 for MultiG+100M/100M+MultiGBASE-V1 transmitter droop measurement, transmitter linearity measurement, power spectral density measurement, transmit power level measurement, and MDI jitter"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Remove Figure 202-35 and replace the Figure 202-34 caption with "Transmitter test fixture 5 for MultiG+100M/100M+MultiGBASE-V1 transmitter droop measurement, transmitter linearity measurement, power spectral density measurement, transmit power level measurement, and MDI jitter"

Remove the reference to Figure 202-35 on P216, L35.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.5.2 P218 L36 # 101

Wienckowski, Natalie

IVN Solutions LLC

Comment Type T Comment Status D TDD tests

The 50 ohm load is not a differential load. Change the text to match 201.8.2 and 201.9.2.

#### SuggestedRemedy

Change: Where a load is not specified, the transmitter shall meet the requirements of this clause with a 100 O for MultiG+100M/100M+MultiGBASE-T1 or a 50 O for MultiG+100M/100M+MultiGBASE-V1 resistive differential load connected to each transmitter output.

To: Where a load is not specified, the transmitter shall meet the requirements of this clause with a 100 O resistive differential load connected to each transmitter output when connected to a -T1 link, and a 50 O resistive load connected to each single-ended transmitter output when connected to a -V1 link.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: No change to Suggested Remedy. Added direction that "O" is a stand-in for the ohms symbol.)

Change: "Where a load is not specified, the transmitter shall meet the requirements of this clause with a 100 O for MultiG+100M/100M+MultiGBASE-T1 or a 50 O for MultiG+100M/100M+MultiGBASE-V1 resistive differential load connected to each transmitter output."

To: "Where a load is not specified, the transmitter shall meet the requirements of this clause with a 100 O resistive differential load connected to each transmitter output when connected to a -T1 link, and a 50 O resistive load connected to each single-ended transmitter output when connected to a -V1 link."

where "O" is a stand-in for the ohms symbol.

CI 202 SC 202.5.2.3 P220 L22 # 309

Gorshe, Steve

Microchip

Comment Type T Comment Status D TDD tests

Need to clarify that this pertains to both transmitter timing jitter and transmitter jitter at the MDI

#### SuggestedRemedy

Add the following sentence at the beginning of the first paragraph of 202.5.2.3: "This clause applies to both Transmitter Timing jitter and Transmitter jitter on the MDI."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change clause header from,  
"202.5.2.3 Transmitter timing jitter"

to,  
"202.5.2.3 Transmitter timing jitter and jitter at the MDI"

CI 202 SC 202.5.2.3 P220 L23 # 308

Gorshe, Steve

Microchip

Comment Type T Comment Status D TDD tests

This first paragraph and its two numbered bullets need updating for a correction and greater clarity.

#### SuggestedRemedy

In the first paragraph of 202.5.2.3 delete "using test fixture 2 (see Figure 202-31)". In the first bullet, replace "test mode 1" with "test mode 2 using test fixture 1 for -T1 and test fixture 5 for -V1" In the second numbered bullet, after "test mode 1" add the phrase "using test fixture 2"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Missing close parens after Figure 202-31. No other change to Suggested Remedy.)

In the first paragraph of 202.5.2.3 delete "using test fixture 2 (see Figure 202-31)".

In the first bullet, replace "test mode 1" with "test mode 2 using test fixture 1 for -T1 and test fixture 5 for -V1"

In the second numbered bullet, after "test mode 1" add the phrase "using test fixture 2"

# IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.5.2.3.1 P220 L40 # 310

Gorshe, Steve

Microchip

Comment Type T Comment Status A EZ

This sub-clause doesn't directly pertain to TDD, and the relevant information is captured above.

## SuggestedRemedy

Remove 202.5.2.3.1

Response Response Status C

ACCEPT.

CI 202 SC 202.5.2.3.2 P220 L40 # 311

Gorshe, Steve

Microchip

Comment Type T Comment Status A EZ

This sub-clause doesn't directly pertain to TDD, and the relevant information is captured above.

## SuggestedRemedy

Remove 202.5.2.3.2

Response Response Status C

ACCEPT.

CI 202 SC 202.5.2.4 P224 L1 # 218

Chini, Ahmad

Broadcom

Comment Type T Comment Status D TDD tests

Power spectral density Upper/ Lower Masks shown for 10G+100MBASE-T1 is not correct.

## SuggestedRemedy

Replace with the correct Plot shown in the page 7 of  
[https://www.ieee802.org/3/dm/public/0125/Chini\\_3dm\\_03a\\_0125.pdf](https://www.ieee802.org/3/dm/public/0125/Chini_3dm_03a_0125.pdf)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

CI 202 SC 202.5.2.5 P225 L7 # 219

Chini, Ahmad

Broadcom

Comment Type T Comment Status X TDD tests

Transmitter peak-to-peak output in Table 202-17 does not correlate with TDD Upper PSD MASK and for a PoC corner of 7MHz (corresponding to MDI RL limit line).  
See Chini\_3dm\_01a\_0126.pdf for simulation and calculations.

## SuggestedRemedy

Replace the values in the table 202.17 with max Peak to Peak of 1.3Vpp for 2.5G+100BASE-T1 and 100M+MultiGBASE-T1 and 1.5Vpp for both 5G+100MBASE-T1. 10G+100MBASE-T1 remains to be 1.7Vpp.

Half of the mentioned values apply to V1.  
In addition change V1 to T1 in the first Column

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: Consider if the editor's note on the page before table 202-17 can be removed.)

TFTD

CI 202 SC 202.5.3.2 P225 L46 # 409

Zerna, Conrad

NXP

Comment Type TR Comment Status D TDD noise

Missing limit / model

## SuggestedRemedy

Alien noise model was presented in  
[https://ieee802.org/3/dm/public/1124/Zerna\\_802.3dm\\_02\\_241110\\_TDD\\_proposal.pdf](https://ieee802.org/3/dm/public/1124/Zerna_802.3dm_02_241110_TDD_proposal.pdf), page 4&5, will submit presentation with alien noise model proposal

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.5.3.2 P225 L48 # 321

Gorshe, Steve

Microchip

Comment Type T Comment Status A EZ

There have been no presentations on this topic and the 802.3ch limits may not be appropriate.

#### SuggestedRemedy

Add "Presentations on this topic are needed." to the Editor's Note

Response Response Status C

ACCEPT.

CI 202 SC 202.6 P226 L3 # 304

Gorshe, Steve

Microchip

Comment Type T Comment Status A EZ

Open clause with no text

#### SuggestedRemedy

Insert the following text: "2.5G+100MBASE-T1, 5G+100MBASE-T1, 10G+100MBASE-T1, 2.5G+100MBASE-V1, 5G+100MBASE-V1, 10G+100MBASE-V1, 100M+2.5GMBASE-T1, 100M+5GBASE-T1, 100M+10GBASE-T1, 100M+2.5GBASE-V1, and 100M+5GMBASE-V1, 100M+10GBASE-V12.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1 make extensive use of the management functions that may be provided by the optional MDIO (Clause 45), and the communication and self-configuration functions provided by the optional (TBD pending decision on the need for AN) Auto-Negotiation (See Clause 98)."

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Move text that Auto-Negotiation is TBD/pending decision into the Editor's note. Use style for "see Clause xx" references.)

Insert the following content into clause 202.6, "2.5G+100MBASE-T1, 5G+100MBASE-T1, 10G+100MBASE-T1, 2.5G+100MBASE-V1, 5G+100MBASE-V1, 10G+100MBASE-V1, 100M+2.5GMBASE-T1, 100M+5GBASE-T1, 100M+10GBASE-T1, 100M+2.5GBASE-V1, and 100M+5GMBASE-V1, 100M+10GBASE-V12.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1 make extensive use of the management functions that may be provided by the optional MDIO (see Clause 45), and the communication and self-configuration functions provided by the optional (TBD) Auto-Negotiation (see Clause 98)."

Replace the Editor's Note with, "Need for Auto-Negotiation is TBD."

CI 202 SC 202.7.1.1 P226 L21 # 410

Zerna, Conrad

NXP

Comment Type TR Comment Status D TDD T1 LS

Missing IL limit

#### SuggestedRemedy

Take limit line from [https://ieee802.org/3/dm/public/0125/Zerna\\_802.3dm\\_01\\_250122\\_IL\\_RL.pdf](https://ieee802.org/3/dm/public/0125/Zerna_802.3dm_01_250122_IL_RL.pdf), page 5

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Grant Editor license to insert limit line from [https://ieee802.org/3/dm/public/0125/Zerna\\_802.3dm\\_01\\_250122\\_IL\\_RL.pdf](https://ieee802.org/3/dm/public/0125/Zerna_802.3dm_01_250122_IL_RL.pdf), page 5 - making adjustments as necessary to align with style and add wording on the range of "f", Fmax, etc., as needed to bound limit line and plot.

Delete Editor's Note in the clause.

Grant Editor license to create and insert a plot of this limit line - making adjustments as necessary to align with style.

Grant Editor license to convert plots for existing Equations - making adjustments as necessary to align with style and add wording on the range of "f", Fmax, etc., as needed to bound limit lines and plots.

CI 202 SC 202.7.1.3 P226 L31 # 411

Zerna, Conrad

NXP

Comment Type TR Comment Status D TDD T1 LS

Missing RL limit

#### SuggestedRemedy

Take limit line from [https://ieee802.org/3/dm/public/0125/Zerna\\_802.3dm\\_01\\_250122\\_IL\\_RL.pdf](https://ieee802.org/3/dm/public/0125/Zerna_802.3dm_01_250122_IL_RL.pdf), page 8

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Grant Editor license to insert limit line from [https://ieee802.org/3/dm/public/0125/Zerna\\_802.3dm\\_01\\_250122\\_IL\\_RL.pdf](https://ieee802.org/3/dm/public/0125/Zerna_802.3dm_01_250122_IL_RL.pdf), page 8 - making adjustments as necessary to align with style and add wording on the range of "f", Fmax, etc., as needed to bound limit line and plot.

Delete Editor's Note in the clause.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202	SC 202.7.2	P227	L11	# 412
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Zerna, Conrad NXP

Comment Type **TR** Comment Status **D** TDD T1 LS

Missing limit

*SuggestedRemedy*

Take limit line from  
[https://ieee802.org/3/dm/public/0524/Coax\\_Cables\\_Silvano\\_de\\_Sousa\\_ISAAC\\_Interim\\_may\\_2024\(002\).pdf](https://ieee802.org/3/dm/public/0524/Coax_Cables_Silvano_de_Sousa_ISAAC_Interim_may_2024(002).pdf), page 6

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Grant Editor license to insert limit line from  
[https://ieee802.org/3/dm/public/0524/Coax\\_Cables\\_Silvano\\_de\\_Sousa\\_ISAAC\\_Interim\\_may\\_2024\(002\).pdf](https://ieee802.org/3/dm/public/0524/Coax_Cables_Silvano_de_Sousa_ISAAC_Interim_may_2024(002).pdf), page 6 - making adjustments as necessary to align with style and add wording on the range of "f", Fmax, etc., as needed to bound limit line and plot.

Delete Editor's Note in the clause.

CI 202	SC 202.8.1.1	P228	L12	# 423
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Long, Richard TE Connectivity

Comment Type **E** Comment Status **X** late

Fmax is greater than 10 MHz

*SuggestedRemedy*

Update the Fmax to the actual value or add an editors note to do so if not determined

Proposed Response Response Status **O**

CI 202	SC 202.8.1.4	P230	L1	# 312
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Gorshe, Steve Microchip

Comment Type **T** Comment Status **D** TDD V1 LS

Coupling attenuation only pertains to differential pair cables and is not defined for coaxial cables

*SuggestedRemedy*

Replace the TBD with "Coupling attenuation is not not defined for coaxial cables.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

(Editor's note: "not" appears twice in proposed remedy. The proposed language is not aligned with other transmission clauses that reference link segment/cabling.)

Replace the Editor's Note with "Coupling attenuation is not defined for -V1 link segments."

Grant Editors license to search for "100M+MultiGBASE-V1 and MultiG+100MBASE-V1" and "MultiG+100M/100M+MultiGBASE-V1" and replace with -V1 as appropriate.

Grant Editors license to search for "100M+MultiGBASE-T1 and MultiG+100MBASE-T1" and "MultiG+100M/100M+MultiGBASE-T1" and replace with -T1 as appropriate.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.8.1.5 P230 L9 # 322

Gorshe, Steve

Microchip

Comment Type T Comment Status D TDD V1 LS

Adopt the limits from  
[https://ieee802.org/3/dm/public/0524/Coax\\_Cables\\_Silvano\\_de\\_Sousa\\_ISAAC\\_Interim\\_may\\_2024\(002\).pdf](https://ieee802.org/3/dm/public/0524/Coax_Cables_Silvano_de_Sousa_ISAAC_Interim_may_2024(002).pdf)

*SuggestedRemedy*

Remove the Editor's note and insert,  
"The screening attenuation for 100M+MultiGBASE-V1 and MultiG+100MBASE-V1 link segments, measured in accordance with ISO 19642-11, shall meet the values determined using Equation (202-2X). Additional screening attenuation test methodologies are defined in Annex 149A.

Screening attenuation(f) =  
-75 10=f<3000 dB  
-50 3000=f<5000

where  
f is the frequency in MHz;

Equation (202-2X) is plotted in Figure 202-XX which is provided for information only."

Grant Editor's license to apply to equation, numbering, and figure creation style. Grant Editor's license to add ISO 19642-11 details to subclause 1.3 Normative references.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Remove the Editor's note and insert,  
"The screening attenuation for MultiG+100M/100M+MultiGBASE-V1 link segments, measured in accordance with ISO 19642-11, shall meet the values determined using Equation (202-2X). Additional screening attenuation test methodologies are defined in Annex 149A.

Screening attenuation(f) =  
-75 10=f<3000 dB  
-50 3000=f<5000

where  
f is the frequency in MHz;"

Grant Editor license to apply to equation, numbering, and other style conformance. Grant Editors license to add ISO 19642-11 details to subclause 1.3 Normative references, if needed.

CI 202 SC 202.8.2 P230 L19 # 323

Gorshe, Steve

Microchip

Comment Type T Comment Status A EZ

Since this is a heading for the subsequent subclauses, no text is needed.

*SuggestedRemedy*

Remove the Editor's Note.

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete Editor's Note and insert this text (copied from 149.7.2),  
"Noise coupled between the disturbed link segment and the disturbing link segment is referred to as alien crosstalk noise. Power sum alien near-end crosstalk (PSANEXT) loss and power sum alien attenuation to crosstalk ratio far-end (PSAACRF) are specified to limit the total alien NEXT and alien FEXT coupled between link segments. The test methodologies are specified in Annex 97B."

with "alien crosstalk noise" in italics to align with 149.7.2.

CI 202 SC 202.8.2.1 P230 L24 # 326

Gorshe, Steve

Microchip

Comment Type T Comment Status D TDD V1 LS

Clause 149 is specific to differential pairs. There have been no presentations on this topic, especially regarding its relationship to coaxial cables.

*SuggestedRemedy*

Copy and insert the text currently found in 201.12.2.1 for -T1. Add "Presentations on this topic are needed for -V1." to the Editor's Note.

Grant Editor's license to apply to equation, numbering, and figure creation style.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Consider with comment #413.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.8.2.1 P230 L24 # 413

Zerna, Conrad NXP

Comment Type TR Comment Status D TDD V1 LS

Missing limit

**SuggestedRemedy**

Measurment data has been presented  
[https://iee802.org/3/dm/public/0524/felso\\_3dm\\_01\\_2405.pdf](https://iee802.org/3/dm/public/0524/felso_3dm_01_2405.pdf), will submit a presentation with limit line formula

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Consider with comment #326.

TFTD

CI 202 SC 202.8.2.2 P230 L30 # 327

Gorshe, Steve Microchip

Comment Type T Comment Status X TDD V1 LS

Clause 149 is specific to differential pairs. There have been no presentations on this topic, especially regarding its relationship to coaxial cables.

**SuggestedRemedy**

Copy and insert the text currently found in 201.12.2.2 for -T1. Add "Presentations on this topic are needed for -V1." to the Editor's Note.

Grant Editor's license to apply to equation, numbering, and figure creation style.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Consider with comment #414.

CI 202 SC 202.8.2.2 P230 L30 # 414

Zerna, Conrad NXP

Comment Type TR Comment Status D TDD V1 LS

Missing limit

**SuggestedRemedy**

Measurment data has been presented  
[https://iee802.org/3/dm/public/0524/felso\\_3dm\\_01\\_2405.pdf](https://iee802.org/3/dm/public/0524/felso_3dm_01_2405.pdf), will submit a presentation with limit line formula

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Consider with comment #327.

TFTD

CI 202 SC 202.9.2.1 P231 L17 # 163

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

Comment Type T Comment Status A TDD MDI

If Fmax should scale with baud rate, there should be different Fmax's listed - but there aren't. The link segment parameters are not scaled. If there is a scaling it would only be applicable to 2.5G+100BASE-T1.

**SuggestedRemedy**

Suggest delete editor's note, and add, "For 2.5GBASE-T1

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete Editor's note.

Change: For MultiG+100M/100M+MultiGBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is 4000 MHz.

To: For 10G+100M/100M+10GBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is 4000 MHz.

For 5G+100M/100M+5GBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is 4000 MHz.

For 2.5G+100M/100M+2.5GBASE-T1 the maximum applicable frequency, Fmax, for the MDI return loss is TBD MHz.

## IEEE P802.3dm D0.a Asymmetrical Electrical Automotive Ethernet 1st Task Force review comments

CI 202 SC 202.9.3 P232 L29 # 315  
Gorshe, Steve Microchip  
Comment Type T Comment Status A EZ

**SuggestedRemedy**

Remove the Editor's Note and insert the sentence "MDI fault tolerance shall comply with 96.8.3."

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Add "The" to align with 201.13.3.)

Remove the Editor's Note and insert the sentence "The MDI fault tolerance shall comply with 96.8.3."

CI 202 SC 202.10.1 P232 L11 # 313  
Gorshe, Steve Microchip  
Comment Type T Comment Status A EZ

Since this is indepent of modulation, it can use the same language as 201.14.1.

**SuggestedRemedy**

Replace the TBD with ; "Where coaxial cabling is used, the mechanical interface to the coaxial cabling is a single pin connector with a shield. Further specification of the mechanical interface is beyond the scope of this standard."

Response Response Status C

ACCEPT IN PRINCIPLE.

(Editor's note: Added instruction to delete Editor's Note. This section is for V1 media, coaxial cabling is always used.)

Delete Editor's Note and insert the following text into 202.10.1,

"The mechanical interface to the coaxial cabling is a single pin connector with a shield. Further specification of the mechanical interface is beyond the scope of this standard."

CI 202 SC 202.10.2.1 P232 L23 # 314  
Gorshe, Steve Microchip  
Comment Type T Comment Status A EZ

Both -T1 and -V1 would have the same return loss parameters.

**SuggestedRemedy**

Remove the Editor's Note and insert the sentence "MDI return loss shall comply with 202.9.2.1."

Response Response Status C

ACCEPT.

CI 202 SC 202.10.3 P232 L29 # 325  
Gorshe, Steve Microchip  
Comment Type T Comment Status A TDD MDI

Replace the Editor's Note box and TBD with the proposed text and table.

**SuggestedRemedy**

See attached file.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement solution in  
<https://www.ieee802.org/3/dm/public/0126/clause%20202.10.3%20proposal.pdf> in  
202.10.3, 201.14.3 and 200.14.3, with the change below.

Change: The wire pair of the MDI  
to: The single conductor of the MDI