

IEEE P802.3dm D2.0 Asymmetrical Electrical Automotive Ethernet Initial Working Group ballot comments

CI **FM** SC **FM** P **3** L **4** # **257**

Steve, Gorshe Microchip Technology

Comment Type **E** Comment Status **D** EZ - pull

Add MultiG PHYs to the list

SuggestedRemedy

Add 100M+MultiGBASE-T1, 100M+MultiGBASE-V1, MultiG+100MBASE-T1 and MultiG+100MBASE-V1 to the list

Proposed Response Response Status **W**

PROPOSED ACCEPT.

CI **1** SC **1.3** P **27** L **9** # **326**

Simms, William NVIDIA

Comment Type **E** Comment Status **D** EZ - pull

use of british/canadian spelling for 'analogue' is inconsistent with other instances in the document

SuggestedRemedy

change analogue to analog

Proposed Response Response Status **W**

PROPOSED ACCEPT.

CI **1** SC **1.5** P **29** L **6** # **92**

Kim, Yong General Motors

Comment Type **ER** Comment Status **D** EZ - pull

"TDD". Time Division Duplex is unclear. I heard and referred to "TDD" so long that I did not question it until reviewing the draft. "Duplex" is misnomer and sounds more marketing. Time Division Multiplex, or Time Division Simplex would be more correct and be more aligned with common reference to this type of technique. Why create confusion by creating a new term when perfectly well-understood term is available.

SuggestedRemedy

Consider TDM, which is more well-understood term for this operation.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

See #144 which deletes this text.

CI **191** SC **191.1.2** P **59** L **15** # **78**

Ran, Adeo Cisco Systems

Comment Type **T** Comment Status **D** EZ - pull

The right side of Figure 191-2 shows the -V1 stack with an AN block, referred to as optional, and the text above the figure points to clause 98 for the whole family (including -V1). Also in 191.1.3 AN is mentioned for both T1 and V1, and there are numerous other mentions of AN in the clause.

However, in 191.8.1 it is stated that -V1 PHYs do not support AN.

SuggestedRemedy

Delete the AN block from the right-hand stack and delete the -V1 family from references to AN.

Consider how to clarify that AN is not supported (even as an option) in -V1, in the other mentions of AN.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

See #158 which deletes the text in question.

CI **191** SC **191.2.2.9.1** P **74** L **4** # **455**

Law, David HPE

Comment Type **T** Comment Status **D** EZ - pull

The semantics of the PMA_PCSDATAMODE.indication primitive are missing a definition of the pcs_data_mode parameter.

SuggestedRemedy

Add the text:

The pcs_data_mode parameter can take on one of two values of the form:

TRUE The PCS is transmitting and receiving data from the XGMII.

FALSE The PCS is in a training or test mode.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

IEEE P802.3dm D2.0 Asymmetrical Electrical Automotive Ethernet Initial Working Group ballot comments

CI 191 SC 191.3.2.2 P 77 L 17 # 289

van Dyck, Peter Infineon

Comment Type E Comment Status D EZ - pull

Missing distinction between 2.5/5G and 10G regarding PAM2/PAM4 usage during data mode.

SuggestedRemedy

Replace:

The bits of the RS-FEC superframe are then scrambled by the PCS using an additive PCS scrambler, encoded in PAM4 symbols, and transferred to the PMA.

With:

The bits of the RS-FEC superframe are then scrambled by the PCS using an additive PCS scrambler, encoded in PAM4 symbols in 10G and PAM2 symbols in 2.5G/5G, and transferred to the PMA.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Accommodated by #42.

CI 191 SC 191.3.2.2 P 79 L 31 # 285

van Dyck, Peter Infineon

Comment Type E Comment Status D EZ - pull

Figure 191-11: For 10G, a RS-FEC superframe always has L x 1800 PAM4 symbols. A Training frame always has 7200 PAM2 symbols. The training frame symbols match the data path symbols for a case with L=4

SuggestedRemedy

Replace:

RS-FEC superframe ($L \times 1800 \times u$ symbols)

With:

RS-FEC superframe ($L \times 1800$ symbols) / Training Frame ($u \times 1800$ symbols)

Replace:

For PAM2 path, V=2 and u=2

With:

For PAM2 path, V=2 and u=4

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 191 SC 191.3.2.2 P 80 L 29 # 286

van Dyck, Peter Infineon

Comment Type E Comment Status D EZ - pull

Figure 191-12: For 2.5G and 5G, a RS-FEC superframe always has L x 3600 PAM2 symbols. A Training frame always has 7200 PAM2 symbols. The training frame symbols match the data path symbols for a case with L=2

SuggestedRemedy

Replace:

RS-FEC superframe ($L \times 1800 \times u$ symbols)

With:

RS-FEC superframe ($L \times 3600$ symbols) / Training Frame (7200 symbols)

Replace:

For PAM2 path, V=2 and u=2

With:

For RS-FEC Frame u=1. For Training Frame u=2.

Replace:

PAMVu x 1800-1

With:

PAM2u x 3600-1

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 191 SC 191.3.2.2 P 81 L 43 # 287

van Dyck, Peter Infineon

Comment Type E Comment Status D EZ - pull

Figure 191-13: Same as comment for Figure 191-11

SuggestedRemedy

Replace:

For PAM2 path, V=2 and u=2

With:

For PAM2 path, V=2 and u=4

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3dm D2.0 Asymmetrical Electrical Automotive Ethernet Initial Working Group ballot comments

CI 191 SC 191.3.2.2 P 82 L 43 # 288

van Dyck, Peter Infineon

Comment Type E Comment Status D EZ - pull

Figure 191-14: Same as comment for Figure 191-12

SuggestedRemedy

Replace:
For PAM2 path, V=2 and u=2. For PAM4 path, V=4 and u=1.
With:
For RS-FEC Frame u=1. For Training Frame u=2.

Replace:
rx_PAMVn+(u x 1800-1)
With:
rx_PAM2n+(u x 3600-1)

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 191 SC 191.3.2.3.3 P 86 L 16 # 276

Jonsson, Ragnar Infineon

Comment Type E Comment Status D EZ - pull

There should be a SHALL statement in "The R_BLOCK_TYPE of an invalid block is set to E."

SuggestedRemedy

Change to "The R_BLOCK_TYPE of an invalid block shall be set to E."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Also update proposed PICS as appropriate.

CI 191 SC 191.3.7 P 95 L 38 # 421

Zimmerman, George CME Consulting/ADI,Cisco,Eliyan,Infineon,OnSemi,

Comment Type T Comment Status D EZ - pull

The OAM behavior in 149.3.9 (including state diagrams Figure 149-24 and Figure 149-25) are not pulled in as requirements. They should be.

SuggestedRemedy

Change P95 L38 from "behavior is defined in 149.3.9" to "behavior shall be as defined in 149.3.9" add PICS as appropriate (see PICS comment)

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 191 SC 191.3.7.2 P 96 L 1 # 420

Zimmerman, George CME Consulting/ADI,Cisco,Eliyan,Infineon,OnSemi,

Comment Type T Comment Status D EZ - pull

The OAM functions in 149.3.9.2 are not pulled in with requirement language. Further, the exceptions, are not only in 191.3.7.2.1, but are also in .2 (PHY Health) and .3 (PHY health indicator).

After requiring 191.3.7.2.1, there will be duplicate shalls...

SuggestedRemedy

Change 191.3.7.2 to from : "MultiG+100MBASE-T1/V1 OAM functions are the same as those defined for a MultiGBASE-T1 PHY in 149.3.9.2 with the exception that the MultiG+100MBASE-T1/V1 OAM frame structure, PHY health, and PHY health indicator are defined in 191.3.7.2.1."

to: "MultiG+100MBASE-T1/V1 OAM functions shall be as defined for a MultiGBASE-T1 PHY in 149.3.9.2 with the exception that the MultiG+100MBASE-T1/V1 OAM frame structure, PHY health, and PHY health indicator are defined in 191.3.7.2.1, 191.3.7.2.2, and 191.3.7.2.3, respectively."

Add pics reflecting sections of 149 and 191.3.7.2.2

Change "the first symbol (OAM<0>) shall be" to "the first symbol (OAM<0>) is" at P96 L21 (4th para 191.3.7.2.1)

Change "10-bit OAM field shall be set to all 0's" to "10-bit OAM field is set to all 0's." at P96 L31 (last para 191.3.7.2.1)

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 191 SC 191.4.1 P 97 L 15 # 8

Ran, Adeo Cisco Systems

Comment Type T Comment Status D EZ - pull

"The XGMII is running at 1/100th the rate of 10 Gb/s, 1/50th the rate of 5 Gb/s, and 1/25th the rate of 2.5 Gb/s"

This is a convoluted way of stating a simple thing.

Also possibly in clause 192.

SuggestedRemedy

Change to "The XGMII runs at 100 Mb/s".

Implement in clause 192 if appropriate.

Proposed Response Response Status W

PROPOSED ACCEPT.

This does not apply to Clause 191.3.1 or Clause 192.

IEEE P802.3dm D2.0 Asymmetrical Electrical Automotive Ethernet Initial Working Group ballot comments

CI 191 SC 191.4.2.3 P 105 L 18 # 498

Razavi, Alireza

Eliyan

Comment Type E Comment Status D late - EZ - pull

"employs the generator polynomial per Equation (149–5)" should be replaced by "employs the generator polynomial per Equation (191-8)"

SuggestedRemedy

see comment

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 191 SC 191.4.2.3 P 105 L 18 # 46

Muma, Scott

Microchip

Comment Type E Comment Status D EZ - pull

The sentence "The PCS descrambler employs the generator polynomial per Equation (149–5)." seems to be redundant, out of place, and slightly incorrect at this point

SuggestedRemedy

Delete the sentence: The PCS descrambler employs the generator polynomial per Equation (149–5).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

This text is correct by #498.

CI 191 SC 191.5.2.4.7 P 113 L 28 # 292

van Dyck, Peter

Infineon

Comment Type E Comment Status D EZ - pull

"149.4.2.4.7 Reserved fields" section is missing in Clause 191.

SuggestedRemedy

Move 191.5.2.4.8 to 191.5.2.4.9, move 191.5.2.4.7 to 191.5.2.4.8, add new section 191.5.2.4.7 with the text from 149.4.2.4.7

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

This is already defined in 191.5.2.5.1.

CI 191 SC 191.5.2.5.4 P 115 L 52 # 113

Lo, William

Axonne Inc.

Comment Type TR Comment Status D EZ - pull

Various capabilities are defined but not mapped to a register.

SuggestedRemedy

The InterleaverDepth request is set in bits 1.2311.12:11.

The received InterleaverDepth request is reported in bit 1.2312.12:11 of the link partner.

When bit 1.2311.5 is set to 1, the PrecodeSel request is set in bits 1.2311.3:2, otherwise the PHY determines the precoder setting. The actual setting transmitted is reflected in bit 1.2310.4:3.

The received PrecodeSel request is reported in bit 1.2312.3:2 of the link partner

The OAMen is advertised in bit 1.2311.1.

The advertised status is reported in bit 1.2312.1 of the link partner.

The VendorSpecificData to send is set via bits 1.2316:15:0 and received on the link partner bits 1.2317:15:0.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Add new paragraph on P115L47

The InterleaverDepth request the PHY sends to its link partner is bits 1.2311:12:11 (see 45.2.1.244.1). The InterleaverDepth request reported by the link partner is bits 1.2312:12:11 (see 45.2.1.245.1).

When bit 1.2311.5 (see 45.2.1.244.2) is set to one, the PrecodeSel request is set in bits 1.2311.3:2 (see 45.2.1.244.4); otherwise, the PHY determines the precoder setting. The actual setting transmitted is reflected in bit 1.2310.4:3 (see 45.2.1.243.5).

The received PrecodeSel request is reported in bit 1.2312.3:2 (see 45.2.1.245.3) by the link partner.

In 45.2.1.244.3 Change: specified in 149.4.2.4.5.

To: specified in 149.4.2.4.5 and 191.5.2.5.4.

In 45.2.1.244.4 Change: (see 149.4.2.4.5)

To: (see 149.4.2.4.5 and 191.5.2.5.4)

IEEE P802.3dm D2.0 Asymmetrical Electrical Automotive Ethernet Initial Working Group ballot comments

CI 191	SC 191.5.2.6	P 116	L 38	# 47
Muma, Scott		Microchip		
Comment Type	E	Comment Status	D	EZ - pull
The literal number would be more clear than an equation in this table				
SuggestedRemedy				
Change 20 - 0.384 to 19.616				
Proposed Response	Response Status		W	
PROPOSED ACCEPT.				

CI 191	SC 191.5.2.6	P 117	L 6	# 48
Muma, Scott		Microchip		
Comment Type	E	Comment Status	D	EZ - pull
The literal number would be more clear than an equation in this table				
SuggestedRemedy				
Change 20 - 0.384 to 19.616				
Proposed Response	Response Status		W	
PROPOSED ACCEPT.				

CI 192	SC 192.1	P 158	L 22	# 165
Wienckowski, Natalie		IVN Solutions LLC; Ethernovia & Bosch		
Comment Type	E	Comment Status	D	EZ - pull
typo				
SuggestedRemedy				
Change: 64/65B To: 64B/65B				
Proposed Response	Response Status		W	
PROPOSED ACCEPT IN PRINCIPLE.				
Also correct on P188L43.				