

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st T2

CI Intro SC Intro P9 L4 # 5
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 Duplicate of Amendment:
 SuggestedRemedy
 Remove second Amendment:
 Response Response Status C
 ACCEPT.
 Change: Amendment: Amendment: Physical Layer Specifications
 To: Amendment: Physical Layer Specifications

CI 44 SC 44.3 P32 L8 # 43
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 broken link
 SuggestedRemedy
 Change: text 150.1
 To: Link to 150.10
 Response Response Status C
 ACCEPT.

CI Intro SC Intro P12 L # 2
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 SuggestedRemedy
 Remove all empty pages throughout document
 Response Response Status C
 ACCEPT.

CI 45 SC 45.2.1.185 P34 L17 # 6
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 Missing space
 SuggestedRemedy
 Change: 0 1 0 0
 To: 0 1 0 0
 Response Response Status C
 ACCEPT.

CI 125 SC 125.1.4 P45 L53 # 48
 WU, Peter Marvell
 Comment Type T Comment Status A EZ
 EEE is optinal for 5GBASE-T1
 SuggestedRemedy
 Marked as "O"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Add "O" with underlining in cell (EEE, 5GBASE-T1)

CI 45 SC 45.2.1.185.2 P34 L28 # 1
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 Modify Editor Instruction based on 802.3cg change
 SuggestedRemedy
 Change Editor Instruction to: Insert the following text after the fifth sentence of 45.2.1.185.2 (as modified by 802.3cg) as follows:
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Editor to update Editor Instruction based on P802.3cg D2p1.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st Table

CI 78 SC 78 P37 L # 8
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 Page forced to 21
 SuggestedRemedy
 Change to use next available page number.
 Response Response Status C
 ACCEPT.

CI 125 SC 125.1.3 P44 L48 # 7
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 Missing space
 SuggestedRemedy
 Change: PAM4for
 To: PAM4 for
 Response Response Status C
 ACCEPT.

CI 125 SC 1.4 P45 L15 # 45
 Wu, Mau-Lin MediaTek
 Comment Type T Comment Status A EZ
 In Table 125-1, the "Description" of 2.5GBASE-T1 is "TBD modulation". It's not correct!
 SuggestedRemedy
 The team had adopted PAM4 as the modulation of 2.5GBASE-T1 and 5GBASE-T1. Shall
 modify "TBD modulation" into "PAM4 modulation".
 Response Response Status C
 ACCEPT.

CI 125 SC 1.4 P45 L22 # 46
 Wu, Mau-Lin MediaTek
 Comment Type T Comment Status A EZ
 In Table 125-1, the "Description" of 5GBASE-T1 is "TBD modulation". It's not correct!
 SuggestedRemedy
 The team had adopted PAM4 as the modulation of 2.5GBASE-T1 and 5GBASE-T1. Shall
 modify "TBD modulation" into "PAM4 modulation".
 Response Response Status C
 ACCEPT.

CI 125 SC 125.1.4 P45 L48 # 47
 WU, Peter Marvell
 Comment Type T Comment Status A EZ
 EEE is optimal for 2.5GBASE-T1
 SuggestedRemedy
 Marked as "O"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Add "O" with underlining in cell (EEE, 2.5GBASE-T1)

CI 149 SC 149.1.2 P50 L2 # 9
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 Missing period at end of sentence.
 SuggestedRemedy
 Add missing period.
 Response Response Status C
 ACCEPT.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st Test

CI 149 SC 149.1.2 P50 L20 # 3
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A EZ
 The MDI is not part of the PHY and should not be shaded in Figure 149-1.
 SuggestedRemedy
 Remove shading on MDI "box" in Figure 149-1.
 Response Response Status C
 ACCEPT.

CI 149 SC 149.4.2.1 P54 L10 # 57
 Feyh, German Broadcom
 Comment Type E Comment Status A Late
 PAM4 has four levels
 SuggestedRemedy
 change "three level" to "four level"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Change "three level" to "four-level".

CI 149 SC 149.2.2.1 P58 L25 # 13
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 missing periods
 SuggestedRemedy
 Add periods at end of OK and NOT_OK statements
 Response Response Status C
 ACCEPT.

CI 149 SC 149.4.2.1 P70 L1 # 16
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 typo
 SuggestedRemedy
 Change: stat). To state.
 Response Response Status C
 ACCEPT.

CI 149 SC 149.4.2.2 P70 L15 # 18
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 broken link
 SuggestedRemedy
 Change: text 149.1
 To: Link to 149.5
 Response Response Status C
 ACCEPT.

CI 149 SC 149.4.2.6 P75 L27 # 55
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 SEND_S signaling modification - 703.125MHz
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 In section 149.4.2.6, insert a paragraph between the 2nd and 3rd paragraphs with the text:
 The frequency of the SEND_S signal shall be 703.125MHz.

CI 149 SC 149.4.2.6 P76 L2 # 49
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 SEND_S signaling modification
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Make change as defined in Wu_3ch_01a_0918.pdf, Slide 4, bullet 2.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st Test

Cl 149 SC 149.4.2.6.2 P77 L40 # 51
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 send_s_timer expiration changed to "1.25us±0.05us"
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Make change as defined in Wu_3ch_01a_0918.pdf, Slide 4, bullet 4, subbullet 1.

Cl 149 SC 149.4.2.6.2 P77 L44 # 52
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 sigdet_wait_timerexpiration changed to " 5.0us±0.15us"
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Make change as defined in Wu_3ch_01a_0918.pdf, Slide 4, bullet 4, subbullet 2.

Cl 149 SC 149.4.4.1 P81 L25 # 20
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 missing periods
 SuggestedRemedy
 Add periods at end of SEND_N, SEND_I, SEND_T, SEND_Z statements
 Response Response Status C
 ACCEPT.

Cl 149 SC 149.5.1 P84 L37 # 22
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A PMA
 The PMA electrical specification tests for Multi-Gig are the same as they are for slower speeds as specific frequencies are not specified.
 SuggestedRemedy
 Accept the text in clause 149.5.1 and its subclauses, e.g. remove yellow highlighting.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Remove Section 149.5.1.

Cl 149 SC 149.5.2.2 P87 L15 # 24
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A Editorial
 Figure 149-13 was not drawn in Frame
 SuggestedRemedy
 Redraw Figure 149-13 in Frame.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 TX_TCLK is In yellow highlight.
 Replace TX_TCLK with TX_TCLK_DIV.
 Add editor's note, by the Test Mode 1 text that we need to define TX_TCLK_DIV.
 Page 85 line 27 - change TX_TCLK125 to TX_TCLK_DIV with no yellow highlighting.

Cl 149 SC 149.5.3.5 P88 L21 # 26
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status R PMA
 Set peak differential output tolerance to 30%.
 SuggestedRemedy
 Change: transmit differential signal at MDI shall be less than 1 +TBD V peak-to-peak
 To: transmit differential signal at MDI shall be less than 1.3 V peak-to-peak
 Response Response Status C
 REJECT.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st T

Cl 149 SC 149.5.3.6 P88 L27 # 29
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A PMA
 Set the symbol transmission rate tolerance to 50 ppm.
 SuggestedRemedy
 Remove yellow highlighting on 50 ppm.
 Response Response Status C
 ACCEPT.

Cl 149 SC 149.5.3.6 P88 L30 # 31
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A PMA
 Set the short-term rate of frequency variation to 0.1 ppm/second.
 SuggestedRemedy
 Remove yellow highlighting on 0.1 ppm/second.
 Response Response Status C
 ACCEPT.

Cl 149 SC 149.7.1.1 P90 L34 # 33
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A EZ
 IL frequency axis should start at 0
 SuggestedRemedy
 Change Frequency axis to be 0 to 3000.
 Response Response Status C
 ACCEPT.

Cl 149 SC 149.7.1.5 P92 L31 # 35
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A Link Segment
 Set maximum link segment propagation delay to 94 ns as the maximum segment length is the same as bp. This is a propagation delay of 6.27 ns/m. Most cable used for this purpose is about 5.5 ns/m.
 SuggestedRemedy
 Remove yellow highlighting on 94 ns.
 Response Response Status C
 ACCEPT.

Cl 149 SC 149.7.1.5 P92 L32 # 37
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A Link Segment
 Set maximum frequency for link segment propagation delay to 3000 MHz.
 SuggestedRemedy
 Remove yellow highlighting on 3000 MHz.
 Response Response Status C
 ACCEPT IN PRINCIPLE.

Keep yellow highlighting and make the value TBD.
 Add Editor's note at start of 149.7 that we need to come to align the maximum frequencies for all link segment parameters.

Cl 149 SC 149.8.1 P92 L39 # 39
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A MDI
 This spec should not define a specific MDI connector.
 SuggestedRemedy
 Remove yellow highlighting on: Further specification of the mechanical interface is beyond the scope of this standard.
 Response Response Status C
 ACCEPT.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st T

Cl 149 SC 149.8.3 P92 L53 # 41
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A Fault Tolerance
 The automotive fault tolerance is the same for all communication speeds..
 SuggestedRemedy
 Remove yellow highlighting on: See 96.8.3.
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.1.3 P98 L1 # 10
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 noun/verb agreement
 SuggestedRemedy
 Change: The 5GBASE-T1 and 10GBASE-T1 PHYs utilizes four level
 To: The 5GBASE-T1 and 10GBASE-T1 PHYs utilize four level
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.1.2 P98 L25 # 4
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A EZ
 The MDI is not part of the PHY and should not be shaded in Figure 150-1.
 SuggestedRemedy
 Remove shading on MDI "box" in Figure 150-1.
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.1.3 P99 L14 # 11
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 broken link
 SuggestedRemedy
 Change: text 150.1
 To: Link to 150.4
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.2 P100 L2 # 12
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 broken link
 SuggestedRemedy
 Change: text 150.1
 To: Link to 150.2.2
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.4.2.2 P102 L10 # 58
 Feyh, German Broadcom
 Comment Type E Comment Status A Late
 PAM4 has four levels
 SuggestedRemedy
 change "three level" to "four level"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Change "three level" to "four-level".

Cl 150 SC 150.2.2.1 P106 L25 # 14
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 missing periods
 SuggestedRemedy
 Add periods at end of OK and NOT_OK statements
 Response Response Status C
 ACCEPT.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st Test

Cl 150 SC 150.4.1 P116 L27 # 15
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 broken link
 SuggestedRemedy
 Change: text 150.1
 To: Link to 150.2.2
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.4.2.1 P118 L1 # 17
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 typo
 SuggestedRemedy
 Change: stat). To state.
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.4.2.2 P118 L15 # 19
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 broken link
 SuggestedRemedy
 Change: text 150.1
 To: Link to 150.5
 Response Response Status C
 ACCEPT.

Cl 150 SC 150.4.2.6 P123 L27 # 56
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 SEND_S signaling modification - - 703.125MHz
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 In section 150.4.2.6, insert a paragraph between the 2nd and 3rd paragraphs with the text:
 The frequency of the SEND_S signal shall be 703.125MHz.

Cl 150 SC 150.4.2.6 P124 L2 # 50
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 SEND_S signaling modification
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Make change as defined in Wu_3ch_01a_0918.pdf, Slide 4, bullet 3.

Cl 150 SC 150.4.2.6.2 P125 L40 # 53
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 send_s_timer expiration changed to "1.25us±0.05us"
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Make change as defined in Wu_3ch_01a_0918.pdf, Slide 4, bullet 4, subbullet 1.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st Test

CI 150 SC 150.4.2.6.2 P125 L44 # 54
 WU, Peter Marvell
 Comment Type T Comment Status A Link Sync
 sigdet_wait_timerexpiration changed to " 5.0us±0.15us"
 SuggestedRemedy
 see attached contribution "Wu_3ch_01a_0918.pdf"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Make change as defined in Wu_3ch_01a_0918.pdf, Slide 4, bullet 4, subbullet 2.

CI 150 SC 150.4.4.1 P129 L25 # 21
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 missing periods
 SuggestedRemedy
 Add periods at end of SEND_N, SEND_I, SEND_T, SEND_Z statements
 Response Response Status C
 ACCEPT.

CI 150 SC 150.5.1 P132 L37 # 23
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status A PMA
 The PMA electrical specification tests for Multi-Gig are the same as they are for slower speeds as specific frequencies are not specified.
 SuggestedRemedy
 Accept the text in clause 150.5.1 and its subclauses, e.g. remove yellow highlighting.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Remove section 150.5.1.

CI 150 SC 150.5.2.2 P135 L15 # 25
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A Editorial
 Figure 150-13 was not drawn in Frame
 SuggestedRemedy
 Redraw Figure 150-13 in Frame.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 TX_TCLK is In yellow highlight.
 Replace TX_TCLK with TX_TCLK_DIV.
 Add editor's note, by the Test Mode 1 text that we need to define TX_TCLK_DIV.
 Page 133 line 27 - change TX_TCLK125 to TX_TCLK_DIV with no yellow highlighting.

CI 150 SC 150.5.3 P135 L51 # 28
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status A EZ
 Duplicate clause heading: Test Modes
 SuggestedRemedy
 Remove duplicate clause heading 150.5.3 Test Modes
 Response Response Status C
 ACCEPT.

CI 150 SC 150.5.4.5 P136 L21 # 27
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status R PMA
 Set peak differential output tolerance to 30%.
 SuggestedRemedy
 Change: transmit differential signal at MDI shall be less than 1 +TBD V peak-to-peak
 To: transmit differential signal at MDI shall be less than 1.3 V peak-to-peak
 Response Response Status C
 REJECT.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st Test

Cl 150 SC 150.5.4.6 P136 L27 # 30
 Wienckowski, Natalie General Motors

Comment Type T Comment Status A PMA

Set the short-term rate of frequency variation to 0.1 ppm/second.

SuggestedRemedy

Remove yellow highlighting on 50 ppm.

Response Response Status C

ACCEPT IN PRINCIPLE.

This is actually the symbol transmission rate tolerance.

Remove yellow highlighting on 50 ppm in lines 28 and 31.

Cl 150 SC 150.5.4.6 P136 L30 # 32
 Wienckowski, Natalie General Motors

Comment Type T Comment Status A PMA

Set the short-term rate of frequency variation to 0.1 ppm/second.

SuggestedRemedy

Remove yellow highlighting on 0.1 ppm/second.

Response Response Status C

ACCEPT IN PRINCIPLE.

This actually Line 34.

Cl 150 SC 150.7.1.1 P138 L33 # 34
 Wienckowski, Natalie General Motors

Comment Type T Comment Status A EZ

IL frequency axis should start at 0

SuggestedRemedy

Change Frequency axis to be 0 to 3000.

Response Response Status C

ACCEPT.

Cl 150 SC 150.7.1.5 P140 L27 # 36
 Wienckowski, Natalie General Motors

Comment Type T Comment Status A Link Segment

Set maximum link segment propagation delay to 94 ns as the maximum segment length is the same as bp. This is a propagation delay of 6.27 ns/m. Most cable used for this purpose is about 5.5 ns/m.

SuggestedRemedy

Remove yellow highlighting on 94 ns.

Response Response Status C

ACCEPT.

Cl 150 SC 150.7.1.5 P140 L28 # 38
 Wienckowski, Natalie General Motors

Comment Type T Comment Status A Link Segment

Set maximum frequency for link segment propagation delay to 3000 MHz.

SuggestedRemedy

Remove yellow highlighting on 3000 MHz.

Response Response Status C

ACCEPT IN PRINCIPLE.

Keep yellow highlighting and make the value TBD.

Add Editor's note at start of 150.7 that we need to come to align the maximum frequencies for all link segment parameters.

Cl 150 SC 150.8.1 P140 L35 # 40
 Wienckowski, Natalie General Motors

Comment Type T Comment Status A MDI

This spec should not define a specific MDI connector.

SuggestedRemedy

Remove yellow highlighting on: Further specification of the mechanical interface is beyond the scope of this standard.

Response Response Status C

ACCEPT.

Physical Layer Specifications and Management Parameters for Greater Than 1 Gb/s Automotive Ethernet 1st T

Cl **150** SC **150.8.3** P**140** L**49** #

Wienckowski, Natalie General Motors

Comment Type **T** Comment Status **A** Fault Tolerance

The automotive fault tolerance is the same for all communication speeds..

SuggestedRemedy

Remove yellow highlighting on: See 96.8.3.

Response Response Status **C**

ACCEPT.

Cl **98B** SC **98B** P**145** L**16** #

Wienckowski, Natalie General Motors

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

Change bit assignments in ch and cg to remove interleaved reserved bits and plan for future PHYs.

SuggestedRemedy

- Change 2.5GBASE-T1 ability to A3 from A7
- Change 5GBASE-T1 ability to A4 from A8
- Change 10GBASE-T1 ability to A5 from A9

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Perform Suggested Remedy with editorial license to change bit assignments depending upon the outcome of cg's comment resolution to avoid conflicts.