Comment Summaries: Clause 162

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Summary

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Comment 120 – Medium Delay

Cl **162** *SC* **162.5** *P* **137** *L* **19** # **120**

Kocsis, Sam Amphenol

Comment Type **TR** *Comment Status* **D** *medium delay*

one-way delay no more than "14ns"

SuggestedRemedy

one-way delay no more than "16ns", for consistency with ERL parameter values

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The relationship with the ERL parameters is irrelevant.
The comment does not provide sufficient justification for the proposed changes.

Note: Commenter noted linkage between comment #113 (proposed N=5100) & the medium delay proposal in this comment.

Comment #47

Cl **162** *SC* **162.9.3** *P* **146** *L* **42** # **47**

Ran, Adee — Intel

Comment Type **T** *Comment Status* **D** *PMD control*

(CC)
for c(0), PRESET 2 in Table 162-11 has a value of 0.5 (+/-half of a step). To enable this value, the maximum value at minimum state should be no higher than 0.5.

Change should also be applied in 162.9.3.1.5.

Also applies to KR, Table 163-5 (163.9.2) and to AUI-C2C, Table 120F–1 (120F.3.1.1) which should work over lower-loss channels.

SuggestedRemedy

Change 0.54 to 0.5, in all places listed in the comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

[Editor's note: CC: 162, 163, 120F]

Referenced Preset

Table 162–11—Coefficient initial conditions

Coefficient update state	ic_req	c(–3)	c(–2)	c(–1)	c(0)	c(1)
OUT_OF_SYNC[a]	N/A	0	0	0	1	0
NEW_IC	preset 1[a]	0	0	0	1	0
	preset 2	0 ± 0.0125	0 ± 0.0125	0 ± 0.0125	0.5 ± 0.0125	0 ± 0.0125
	preset 3	0 ± 0.0125	0 ± 0.0125	–0.075 ± 0.0125	0.75 ± 0.0125	0 ± 0.0125
	preset 4	0 ± 0.0125	0.05 ± 0.0125	–0.2 ± 0.0125	0.75 ± 0.0125	0 ± 0.0125
	preset 5	–0.025 ± 0.0125	0.075 ± 0.0125	–0.25 ± 0.0125	0.65 ± 0.0125	0 ± 0.0125

Proposed implementation:

Table 162-10

Transmitter output waveform[b]			
abs step size for all taps (min)	162.9.3.1.4	0.005	—
abs step size for all taps (max)	162.9.3.1.4	0.025	—
value at minimum state for $c(-3)$ (max)	162.9.3.1.5	−0.06	—
value at maximum state for $c(-2)$ (min)	162.9.3.1.5	0.12	—
value at minimum state for $c(-1)$ (max)	162.9.3.1.5	−0.34	—
value at minimum state for $c(0)$ (max)	162.9.3.1.5	~~0.54~~	—
value at minimum state for $c(1)$ (max)	162.9.3.1.5	−0.2	—

Table 163-5

Transmitter waveform[b]			
abs step size for $c(-3)$, $c(-2)$, $c(-1)$, $c(0)$, and $c(1)$ (min)	162.9.3.1.4	0.005	—
abs step size for $c(-3)$, $c(-2)$, $c(-1)$, $c(0)$, and c(1) (max)	162.9.3.1.4	0.025	—
value at minimum state for $c(-3)$ (max)	162.9.3.1.5	−0.06	—
value at maximum state for $c(-2)$ (min)	162.9.3.1.5	0.12	—
value at minimum state for $c(-1)$ (max)	162.9.3.1.5	−0.34	—
value at minimum state for $c(0)$ (max)	162.9.3.1.5	~~0.54~~	—
value at minimum state for $c(1)$ (max)	162.9.3.1.5	−0.2	—

0.5

Table 120F-1

Output waveform[b]			
abs. step size for all taps (min)	162.9.3.1.4	0.005	—
abs. step size for all taps (max)	162.9.3.1.4	0.025	—
value at min state for c(–3) (max)	162.9.3.1.5	–0.05	—
value at max state for c(–3) (min)	162.9.3.1.5	0	—
value at min state for c(–2) (max)	162.9.3.1.5	0	—
value at max state for c(–2) (min)	162.9.3.1.5	0.1	—
value at min state for c(–1) (max)	162.9.3.1.5	–0.3	—
value at max state for c(–1) (min)	162.9.3.1.5	0	—
value at min state for c(0) (max)	162.9.3.1.5	~~0.54~~	—
value at min state for c(1) (max)	162.9.3.1.5	–0.1	—
value at max state for c(1) (min)	162.9.3.1.5	0	—

Comment #131: RIT

Cl **162** *SC* **162.9.4.3** *P* **152** *L* **32** # **131**

Ghiasi, Ali — Ghiasi Quantum/Inphi

Comment Type **TR** *Comment Status* **D** *RITT*

Given that for low loss cable the loss is controlled to 1 dB, we should do the same for high loss cable

SuggestedRemedy

Increase the cable assembly test case min loss from 17.75 to 18.75 dB

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Proposed implementation:

Table 162–14—Interference tolerance test parameters

Parameter	Test 1 (low loss)		Test 2 (high loss)		Units
	Min	Max	Min	Max	
Test pattern	Scrambled idle encoded by FEC				
FEC symbol error ratio required[a]	$< 10^{-3}$				
Test channel insertion loss at 26.56 GHz[b]	10.5	11.5	23.625	24.625	dB
Cable assembly insertion loss at 26.56 GHz	10.5	11.5	~~17.75~~	19.75	dB
COM[c]	3		3		dB

[a]See 162.9.4.3.5 for definition of FEC symbol error ratio.
[b]Insertion loss between the two test references (see Figure 110–3b).
[c]The COM value is the target value for the SNR_{TX} calibration defined in 162.9.4.3.3 item f. The SNR_{TX} value measured at the Tx test reference should be as close as practical to the value needed to produce the target COM. If lower SNR_{TX} values are used, this would demonstrate margin to the specification but this is not required for compliance.

18.75

Comment #50: Tx Coefficients

Cl **162** *SC* **162.9.3.1.4** *P* **149** *L* **43** # **50**

Ran, Adee Intel

Comment Type **E** *Comment Status* **D** *TX coefficients*

"When coef_sel is –3, –2, -1, 0, or 1," - the list includes all possible values, so there is no need for this phrase.

SuggestedRemedy

Delete the quoted phrase.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Implement with editorial license.

Proposed implementation:

162.9.3.1.4 Coefficient step size

The

~~When coef_sel is –3, –2, -1, 0, or 1, the~~ change in the normalized transmit equalizer coefficient *c*(coef_sel) corresponding to a request to "increment" shall be between 0.005 and 0.02, and the change in the normalized transmit equalizer coefficient *c*(coef_sel) corresponding to a request to "decrement" shall be between –0.02 and -0.005.

Comment #124: Tx Vf

Cl **162** *SC* **162.9.3.1.2** *P* **149** *L* **6** # **124**

Hidaka, Yasuo — Credo Semiconductor

Comment Type **T** *Comment Status* **D** *vf*

The definition of steady-state voltgage vf in clause 136.9.3.1.2 uses the linear fit pulse p(k). The linear fit pulse p(k) is calculated with Dp=3 in clause 136, whereas it is calculated with Dp=4 in clause 162. It is not clear which procedure is used to calculate the linear fit pulse p(k).

SuggestedRemedy

Change "The steady-state voltage vf is defined in 136.9.3.1.2, and is determined using Nv=200."

to

"The steady-state voltage vf is defined in 136.9.3.1.2, and is determined using Nv=200 and linear fitted pulse p(k) calculated by the procedure in 162.9.3.1.1."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.