CL#235 CA COM

Cl **162** *SC* **162.11.7** *P* **171** *L* **31** # **235**

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D** *CA COM DFE*

The spec allows a channel to have its COM calculated with 9 taps in the range 13 to 24 clipped at +/-0.05 - which means that the channel's pulse response could be a little worse than +/-0.05 for all these 9 taps. That's a very bad cable! and not likely to get made. We don't need to provide all the receiver power and complexity to cope with it.

SuggestedRemedy

Use another DFE root-sum-of-squares limit for positions 13-24. Similarly in 163, but as 163 specifies the complete channel while 162 uses clean synthetic host traces, the limit might differ.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The suggested remedy does not provide sufficient evidence that this is an issue and that the proposed change would not cause new issues.

DFE floating tap tail root-sum-of-squares limit	σ_{tmax}	0.02	

Existing specification was established based upon analysis of the reference channels with application of the floating tap “tail” weights. The proposed change would need to provide equivalent analysis demonstrating the performance of the CR channels with tighter constraints on sigma_max.

Refer to kasapi_3ck_01_1119.pdf, kasapi_3ck_02_1119.pdf.

C#203 CA COM

Cl **162** *SC* **162.11.7.1** *P* **171** *L* **42** # **203**

Dudek, Mike Marvell

Comment Type **T** *Comment Status* **D** *CA COM PCB (CC)*

There is ambiuity as to whether the transmitter and receiver PCB signal paths include the capacitors or not. Here the description implies that they don't but on page 172 (e.g. equation 162-14) they do.

SuggestedRemedy

Change "The transmitter and receiver PCB signal paths are calculated using the method defined in 93A.1.2.3. The scattering parameters for a PCB transmission line are defined by Equation (93A–13), Equation (93A–14)and the parameter values given in Table 162–19."to " The scattering parameters for a PCB transmission line are calculated using the method defined in 93A.1.2.3 using Equation (93A–13), Equation (93A–14) and the parameter values given in Table 162–19."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement the suggested remedy with editorial license.
[Editor's note: CC: 162, 163]

New text:
The scattering parameters for a PCB transmission line are calculated using the method defined in 93A.1.2.3 **using** Equation (93A–13), Equation (93A–14) and the parameter values given in Table 162–19.

C#150

Cl 162 SC 162.11.7 P 169 L 44 # 150

Kochuparambil, Beth Cisco

Comment Type **E** *Comment Status* **D** *CA COM tests (CC)*

We've lost a bit of the description of doing COM with 2 package test cases. Someone reading this section in isolation may be confused.

93.9.1 States "The Channel Operating Margin (COM) is computed using the procedure in 93A.1 with the Test 1 and Test 2 values in Table 93–8. Test 1 and Test 2 differ in the value of the device package model transmission line length zp.

SuggestedRemedy

Use editorial licence to modify paragraph to say something like,
"COM shall be computed twice, Test 1 and Test 2, which differ in the value of the device package model transmission line length zp."
Similarly, modify the COM table from "Rx Test 2" and "TX Test 2" to "Test 2, RX" and "Test 2, TX"

Replicate in COM description and tables for 163 & 120F

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement the suggested remedy with editorial license.
[Editor's note: CC: 120F, 162, 163]

D2.0

Test 1 and Test 2 differ in the value of the device package model transmission line length z_p. COM for any channel within the cable assembly shall be greater than or equal to 3 dB for both Test 1 and Test 2.

44
45
46

SR

COM shall be computed twice, Test 1 and Test 2, which differ in the value of the device package model transmission line length, zp. COM for any channel within the cable assembly shall be greater than or equal to 3 dB for both Test 1 and Test 2.

C#204

Cl **162** *SC* **162.11.7.2** *P* **174** *L* **1** # **204**

Dudek, Mike — Marvell

Comment Type **E** *Comment Status* **D** *CA COM XTALK*

It is confusing to state the aggressors are in column two through four because there are separate columns for next and fext.

SuggestedRemedy

Change to "the crosstalk paths are from the aggressors listed horizontally to the victims listed vertically.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Add victim label to first column to support existing text. "the crosstalk paths are from the aggressors given in columns two through four to the victim given in the first column."

Existing text:

The number of crosstalk paths of each MDI type are given in Table 162–20; the crosstalk paths are from the aggressors given in columns two through four to the victim given in the first column.

1
2
3

Victim	SFP+		SFP-DD or DSFP		QSFP+		QSFP-DD800 or OSFP	
	NEXT	FEXT	NEXT	FEXT	NEXT	FEXT	NEXT	FEXT
SFP+	1	0	1	1	1	3	1	7
SFP-DD or DSFP	2	1	2	1	2	3	2	7
QSFP+	4	3	4	3	4	3	4	7
QSFP-DD800 or OSFP	8	7	8	7	8	7	8	7