C/FM SC FM	P1	L 33	# 332	C/ FM	SC FM	P13	L1	# 333
Zimmerman, George	ADI,APLgp,Cis	sco,Marvell,OnSe	emi,Sony	Zimmerman	, George	ADI,APLgp	,Cisco,Marvell,Or	nSemi,Sony
Comment Type E Col	omment Status X			Comment Ty	/pe E	Comment Status X		
Likely that this draft will need are ahead of it in the process noted some overlaps with this	s. Commenter's review			Likely th be inclue		nd 802.3dk will publish befor	e this amendmen	t their abstracts should
•	s amenument.			SuggestedR	-			
SuggestedRemedy Add 802.3da and 802.3dk to t review the draft for consistence			ors are encouraged to	802.3dk	from the lates	adership on likely amendme st drafts of those.	nt order, insert ab	stracts for 802.3da and
	sponse Status O			Proposed Re	esponse	Response Status O		
				C/ FM	SC FM	P13	L1	# 722
C/FM SC FM	P 12	L 54	# 284	Dawe, Piers		Nvidia		
Maguire, Valerie	Copperopolis;	aff'l w/ CME Con	nsulting and Cisco	Comment Ty	/pe TR	Comment Status X		
Comment Type E Co. Missing information on the P8	omment Status X			802.3dk	is ahead of th	nis project		
SuggestedRemedy				SuggestedR	-	3dk-202v		
Insert, "IEEE Std 802.3da™-20xx Amendment 1X—This amend appropriate modifications to e 10BASE-T1S Physical Layer	enhance the 10 Mb/s sh	ared-medium (m y physical layer s	ultidrop) mode of the specification (including	Insert: IE This am amendm Ethernet fiber. Make ot	EEE Std 802.3 endment inclu- nent adds Phy t optical interfa her changes a	Ides changes to IEEE Std 8 rsical Layer specifications and aces for bidirectional operates as appropriate	nd management p	parameters for 100 Gb
Insert, "IEEE Std 802.3da™-20xx Amendment 1X—This amend appropriate modifications to e	enhance the 10 Mb/s sh in a new, multidrop-only nagement parameters, E nd optional power delive	ared-medium (m y physical layer s Ethernet support f	ultidrop) mode of the specification (including for time	Insert: If This am amendm Ethernet fiber.	EEE Std 802.3 endment inclu- nent adds Phy t optical interfa her changes a	udes changes to IEEE Std 8 vsical Layer specifications and aces for bidirectional operational operati	nd management p	parameters for 100 Gb
"IEEE Std 802.3da™-20xx Amendment 1X—This amend appropriate modifications to e 10BASE-T1S Physical Layer reconciliation sublayers, man synchronization protocols, an on the 10 Mb/s mixing segme	enhance the 10 Mb/s sh in a new, multidrop-only nagement parameters, E nd optional power delive	ared-medium (m y physical layer s Ethernet support f	ultidrop) mode of the specification (including for time	Insert: IE This am amendm Ethernet fiber. Make ot	EEE Std 802.3 endment inclu- nent adds Phy t optical interfa her changes a	Ides changes to IEEE Std 8 rsical Layer specifications and aces for bidirectional operates as appropriate	nd management p	parameters for 100 Gb/
Insert, "IEEE Std 802.3da™-20xx Amendment 1X—This amend appropriate modifications to e 10BASE-T1S Physical Layer reconciliation sublayers, man synchronization protocols, an on the 10 Mb/s mixing segme	enhance the 10 Mb/s sh in a new, multidrop-only nagement parameters, E nd optional power deliver ent)."	ared-medium (m y physical layer s Ethernet support f	ultidrop) mode of the specification (including for time	Insert: IE This am amendri Ethernet fiber. Make ot Proposed Re	EEE Std 802.3 endment inclu ent adds Phy t optical interf her changes a esponse	udes changes to IEEE Std 8 vsical Layer specifications and aces for bidirectional operat as appropriate <i>Response Status</i> O	nd management p ion over a single s <i>L</i> 0	parameters for 100 Gb, strand of single-mode
Insert, "IEEE Std 802.3da™-20xx Amendment 1X—This amend appropriate modifications to e 10BASE-T1S Physical Layer reconciliation sublayers, man- synchronization protocols, an on the 10 Mb/s mixing segme Proposed Response Res	enhance the 10 Mb/s sh in a new, multidrop-only nagement parameters, E nd optional power deliver ent)."	ared-medium (m y physical layer s Ethernet support f	ultidrop) mode of the specification (including for time	Insert: IE This am amendrr Etherned fiber. Make otl Proposed Re	EEE Std 802.3 endment inclu- nent adds Phy t optical interfi- her changes a esponse SC 0	udes changes to IEEE Std 8 visical Layer specifications and aces for bidirectional operations as appropriate <i>Response Status</i> O <i>P</i> 0	nd management p ion over a single s <i>L</i> 0	parameters for 100 Gb, strand of single-mode
Insert, "IEEE Std 802.3da™-20xx Amendment 1X—This amend appropriate modifications to e 10BASE-T1S Physical Layer reconciliation sublayers, man synchronization protocols, an on the 10 Mb/s mixing segme Proposed Response Res C/ FM SC FM	enhance the 10 Mb/s sh in a new, multidrop-only nagement parameters, E nd optional power deliver ent)." sponse Status O	ared-medium (m y physical layer s thernet support f ry to support mul	ultidrop) mode of the specification (including for time Itiple Powered Devices	Insert: IE This am amendm Ethernet fiber. Make ot Proposed Re C/ 00 Brown, Matt Comment Ty	EEE Std 802.3 endment inclu- nent adds Phy t optical interfi- her changes a esponse SC 0	udes changes to IEEE Std 8 visical Layer specifications and aces for bidirectional operat as appropriate <i>Response Status</i> O <i>P</i> 0 Alphawave	nd management p ion over a single s <i>L</i> 0 Semi	parameters for 100 Gb strand of single-mode
Insert, "IEEE Std 802.3da™-20xx Amendment 1X—This amend appropriate modifications to e 10BASE-T1S Physical Layer reconciliation sublayers, man- synchronization protocols, an on the 10 Mb/s mixing segme Proposed Response Res C/ FM SC FM Slavick, Jeff	enhance the 10 Mb/s sh in a new, multidrop-only hagement parameters, E nd optional power deliver ent)." sponse Status O P13 Broadcom omment Status X	hared-medium (m y physical layer s thernet support f ry to support mul	ultidrop) mode of the specification (including for time Itiple Powered Devices # 468	Insert: IE This am amendrr Ethernel fiber. Make otl Proposed Re C/ 00 Brown, Matt Comment Ty The PIC SuggestedR	EEE Std 802.3 endment inclu- nent adds Phy t optical interf her changes a esponse SC 0 ype T S subclause i remedy	udes changes to IEEE Std 8 visical Layer specifications and aces for bidirectional operat as appropriate <i>Response Status</i> O <i>P</i> 0 Alphawave <i>Comment Status</i> X	nd management p ion over a single s <i>L</i> 0 Semi es is incomplete.	parameters for 100 Gb strand of single-mode
Insert, "IEEE Std 802.3da [™] -20xx Amendment 1X—This amend appropriate modifications to e 10BASE-T1S Physical Layer reconciliation sublayers, man- synchronization protocols, an on the 10 Mb/s mixing segme Proposed Response Res C/ FM SC FM Slavick, Jeff Comment Type ER Con	enhance the 10 Mb/s sh in a new, multidrop-only hagement parameters, E nd optional power deliver ent)." sponse Status O P13 Broadcom omment Status X ibtion of 802.3dj does no	hared-medium (m y physical layer s thernet support f ry to support mul <i>L</i> 0 ot list out the ann	ultidrop) mode of the specification (including for time Itiple Powered Devices # 468	Insert: IE This am amendrr Ethernel fiber. Make otl Proposed Re C/ 00 Brown, Matt Comment Ty The PIC SuggestedR	EEE Std 802.3 endment inclu- nent adds Phy t optical interfi- her changes a esponse SC 0 ype T S subclause in remedy PICS subclau	ades changes to IEEE Std 8 visical Layer specifications and aces for bidirectional operations as appropriate <i>Response Status</i> O <i>P</i> O Alphawave <i>Comment Status</i> X n many clauses and annexe	nd management p ion over a single s <i>L</i> 0 Semi es is incomplete.	parameters for 100 Gb strand of single-mode

CI 00 SC 0

100 SC 0	P 373	L 43	# 615	C/ 1 SC 1.3	P 53	L 49	# 434	
alkert, Thomas	Samtec, Maco	om		Ran, Adee	Cisco Syster	ns		
omment Type TR	Comment Status X			Comment Type T	Comment Status X			
uggestedRemedy	should use 92.5 ohm impedan -14 to specify 92.5 ohm impeda		easurements	these drafts are no longe match the date indicated	mative references list includer available, and in some can d (which suggests that a ne	ases the version wer draft was inte	number does not ended).	
roposed Response	Response Status O			For SFF documents, onl available; older drafts ar	y the most recent draft (typ e removed.	vically with versio	n number x.y.z) is	
/ 1 SC 1.1.3.2 lavick, Jeff omment Type E	P52 Broadcom Comment Status X	L 21	# [<u>469</u>	used as normative refere Retrievable; A copy of A archive."	hanual (12.3.1 item c): "Dra ences as long as they are: .LL drafts shall be submitte d draft, it should be archived	(-) Dated (-) Read d to IEEE SA to I	dily available (-)	
	lly list the number of widths? It	s a launury list		•				
uggestedRemedy	" to "The following widths" on p	a52 line 21 and	line 40	This comment pertains t	to the following references:			
Change "Two widths Change "four widths" Change "four widths"	' to "The following widths" on per to "the following widths" on pg to "the following widths" on pg	53 line 6 55 line 31 56 line 19	iiiie 40	The current draft is 1.9.8	April 1, 2022" (QSFP+) - 1.9 3. The published version, 1. April 19, 2024" (SFF cross	.9, is from 2015,	apparently too old.	
Change "two widths" to "the following widths" on pg57 line 43 roposed Response Response Status O			is from 2019-10-01 and is					
	posed nesponse status U		number does not match	April 16, 2024" - (QSFP2 of the date; Rev 1.0 is from 2 or this project. The current of	023-05-30 and d			
				"QSFP-DD/QSFP-DD800/QSFP-DD1600 Hardware Specification for QSFP Double 8x Pluggable Transceivers, Rev 7.1, June 25, 2024.7" - this is indeed the current v but it is a not a draft; there is no reason to refer to a specific version rather than the one.				
				"SFF-TA-1031, Rev 1.0, June 11, 2023, SFP2 Cage, Connector, & Module Specificatior this is indeed the current version (which does not include SFF224, subject of another comment) but it is not a draft; there is no reason to refer to a specific version rather than the latest one.				
				they should refer to docu use undated references	ve references that apply to uments that are available to where possible. Per the sty afts "shall be numbered an	o readers in the fu /le manual (12.3.	ture. Thus, we should	
				An editor's note may be shall be submitted to IEE	used to indicate the curren	t draft and as a r	eminder that "drafts	

COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	SC 1.3	6/16/2025 2:13:37 PM
SORT ORDER: Clause, Subclause, page, line			

SuggestedRemedy

For each of the indicated references that is a draft, add an editor's note (to be removed before publication) indicating the revision number and date as of D2.1, and a reminder to update to the latest draft revision and date and provide a copy for the archive prior to publication.

Make similar changes as appropriate in the text that refers to these form factors in Annex 179C.

Proposed Response Response Status 0

C/ 1	SC 1.3	P 53	L 53	# 435
Ran, Adee		Cisco Sy	ystems	

Comment Type TR Comment Status X

Footnote 6 refers to OSFP1600, but OSFP is a normative reference not just for OSFP1600 but also for the original OSFP, which is used in the base standard (e.g. clause 136).

Similarly, Footnote 7 refers to QSFP-DD1600, but QSFP-DD is a normative reference for the base standard.

SuggestedRemedy

Delete "1600" in both footnotes.

Proposed Response Response Status 0

C/ 1	SC 1.3	P53	L 54	# 436
Ran, Adee		Cisco Sy	vstems	
Comment	Type TR	Comment Status X		
		ecification is not the reference ch is an SFF specification).	ce for SFP-DD22	4 (which does not exist yet)

SugaestedRemedv

Delete "SFP-DD224, QSFP224, and"

Proposed Response Response Status 0

C/ 1	SC 1.3	P53	L 54	# 145
Huber, Thon	nas	Nokia		

Comment Type E Comment Status X

This footnote indicates where to find SFP-DD224, QSFP224, and QSFP-DD1600 specifications, but the normative reference associated with this footnote is "QSFP-DD/QSFPDD-800/QSFP-DD1600 Hardware Specification for QSFP Double Density 8x Pluggable Transceivers", which makes no mention of SFP224 or QSFP224, and following the URL in the footnote does not take the reader to a site with documents that have information about SFP-DD224 or QSFP224 formats (nor does the normatively referenced document have that information).

SuggestedRemedy

Align the footnote with the referenced document by replacing "SFP-DD224, QSP224" with "QSFP-DD, QSFP-DD800"

Proposed Response Response Status **O**

C/ 1	SC 1.4.92g	P 54	L 40	# 581
Nicholl, Sha	wn	AMD		

Comment Type Comment Status X ER

Currently, the definitions of 1.6TBASE-DR8-2, 200GBASE-DR1-2, 400GBASE-DR2-2, 800GBASE-DR4-2 incorrectly point to Clause 181. They should point to Clause 182.

SuggestedRemedy

1.4.92g 1.6TBASE-DR8-2: IEEE 802.3 Physical Layer ... least 2 km. (See IEEE Std 802.3, Clause 182.)

1.4.104a 200GBASE-DR1-2: IEEE 802.3 Physical Layer ... least 2 km. (See IEEE Std 802.3, Clause 182.)

1.4.134c 400GBASE-DR2-2: IEEE 802.3 Physical Layer ... least 2 km. (See IEEE Std 802.3, Clause 182.)

1.4.184ca 800GBASE-DR4-2; IEEE 802.3 Physical Laver ... least 2 km, (See IEEE Std 802.3, Clause 182.)

Proposed Response Response Status **O**

C/ 1 SC 1.4.92g

C/ 1	SC 1.4.92i	P54	L 46	# 580	C/ 30	SC 30.3.2.1.2	P 61	L16	# 470
Nicholl, Sha	awn	AMD			Slavick, J	eff	Broadcom		
Comment T	ype ER	Comment Status X			Comment	Type TR	Comment Status X		
		the physical coding sublayer Std 802.3, Clause 174.)"	defined in Clause	e 175 for 1.6 Tb/s	Claus S <i>uggeste</i>		S anymore. So it's just a	800GBASE-R PH	Y now.
Propose	e pointing to the	e correct Clause number.			Remo	ove the text associ	ated with 800GBASE-ER1	from 30.3.2.1.2 a	ind 30.3.2.1.3
SuggestedF	Remedy				Proposed	Response	Response Status 0		
		ng the physical coding sublaye Std 802.3, Clause 175.)"	er defined in Clau	use 175 for 1.6 Tb/s					
Proposed R	esponse	Response Status 0			CI 30	SC 30.3.2.1.3	P 61	L 31	# 147
					Huber, Th	iomas	Nokia		
2/1	SC 1.5	P 58	L 28	# 545			Comment Status X 00GBASE-ER1 PCS; ER1	and ER1-20 PHY	s use the 800GBASE-R
Schreiner, S	Stephan	•	Hochfrequenzte	chnik GmbH & Co. KG	PCS.				
Comment T	ype T	Comment Status X			Suggeste	dRemedy			
						•			
		entioned in the abbreviations.			Delete	e the instruction a	nd text to insert 800GBAS	E-ER1 after 400G	BASE-R
	ned. TCL / LCL	entioned in the abbreviations. and TCTL / LCTL would be a				e the instruction an Response	nd text to insert 800GBAS Response Status O	E-ER1 after 400G	BASE-R
mentior parame	ned. TCL / LCL ters							E-ER1 after 400G	BASE-R
mentior parame SuggestedF Add ILd	hed. TCL / LCL ters Remedy Ic and ILcd into		lso a typical nam	ne for the conversion	Proposed	Response SC 30.5.1.1.2	Response Status 0 P 62	E-ER1 after 400G	BASE-R # 1 <u>48</u>
mentior parame SuggestedF Add ILd LCL, TC	hed. TCL / LCL ters Remedy Ic and ILcd into CTL, and LCTL	and TCTL / LCTL would be a the abbreviations or change " within the document	lso a typical nam	ne for the conversion	Proposed Cl 30 Huber, Th	Response SC 30.5.1.1.2 nomas	Response Status O P 62 Nokia		
mentior parame SuggestedF Add ILd LCL, TC	hed. TCL / LCL ters Remedy Ic and ILcd into CTL, and LCTL	and TCTL / LCTL would be a the abbreviations or change	lso a typical nam	ne for the conversion	Proposed Cl 30 Huber, Th Comment	Response SC 30.5.1.1.2 nomas Type E	Response Status O P62 Nokia Comment Status X	L 27	# 148
mentior parame SuggestedF Add ILd LCL, TC Proposed R	hed. TCL / LCL ters Remedy Ic and ILcd into CTL, and LCTL	and TCTL / LCTL would be a the abbreviations or change " within the document <i>Response Status</i> O	lso a typical nam	ne for the conversion	Proposed Cl 30 Huber, Th Comment 200G	Response SC 30.5.1.1.2 nomas Type E	Response Status O P62 Nokia Comment Status X uld be inserted before 200	L 27	# <u>148</u>
mentior parame SuggestedF Add ILd LCL, TC Proposed R	ed. TCL / LCL ters Remedy ic and ILcd into CTL, and LCTL Response SC 30.3.2.1.	and TCTL / LCTL would be a o the abbreviations or change " within the document <i>Response Status</i> O 2 <i>P</i> 61	lso a typical nam	ne for the conversion	Proposed Cl 30 Huber, Th Comment 200G	Response SC 30.5.1.1.2 nomas Type E BASE-DR1-2 show than after 200GB	Response Status O P62 Nokia Comment Status X uld be inserted before 200	L 27	# 148
mentior parame SuggestedF Add ILd LCL, TC Proposed R C/ 30 Huber, Tho	ed. TCL / LCL ters Remedy Ic and ILcd into CTL, and LCTL response SC 30.3.2.1. mas	and TCTL / LCTL would be a the abbreviations or change within the document <i>Response Status</i> O 2 P61 Nokia	lso a typical nam	ne for the conversion	Proposed Cl 30 Huber, Th Comment 200G rather Suggester Delete	Response SC 30.5.1.1.2 nomas Type E BASE-DR1-2 shore than after 200GB dRemedy e the editing istruct	Response Status 0 P62 Nokia Comment Status X uld be inserted before 200 ASE-ER4 tion that is related to the in	L 27 GBASE-DR4 and Insertion of 200GB.	# 148 after 200GBASE-DR1 ASE-DR1-2. Modify the
mentior parame GuggestedF Add ILd LCL, TC Proposed R C/ 30 Huber, Tho Comment T	ed. TCL / LCL ters Remedy Ic and ILcd into CTL, and LCTL response SC 30.3.2.1. mas type TR	and TCTL / LCTL would be a o the abbreviations or change " within the document <i>Response Status</i> O 2 <i>P</i> 61	Iso a typical nam "RLdc, RLcd, ILc <i>L</i> 11	the for the conversion dc, and ILcd" into "TCL, # 146	Proposed Cl 30 Huber, Th Comment 200G rather Suggester Delete previc 200G	Response SC 30.5.1.1.2 nomas Type E BASE-DR1-2 shore than after 200GB dRemedy the editing istruct bus editing instruct	Response Status O P62 Nokia Comment Status X JId be inserted before 200 ASE-ER4 tion that is related to the in tion to say "Insert the follow emove the space so 200G	L 27 GBASE-DR4 and Insertion of 200GB. wing new entries	# 148 after 200GBASE-DR1 ASE-DR1-2. Modify the . before the esntry for
mentior parame Add ILd LCL, TC Proposed R U 30 Huber, Tho Comment T There is PCS. SuggestedF	Remedy Remedy Ic and ILcd into CTL, and LCTL Response SC 30.3.2.1. mas type TR is no longer an a Remedy	and TCTL / LCTL would be a the abbreviations or change within the document <i>Response Status</i> O 2 <i>P</i> 61 Nokia <i>Comment Status</i> X	Iso a typical nam "RLdc, RLcd, ILc <i>L</i> 11 nd ER1-20 PHYs	the for the conversion dc, and ILcd" into "TCL, # 146 s use the 800GBASE-R	Proposed Cl 30 Huber, Th Comment 200Gi rather Suggester Delete previc 200Gi both i	Response SC 30.5.1.1.2 nomas Type BASE-DR1-2 show than after 200GB dRemedy e the editing istruct buse editing instruct BASE-DR4, and m	Response Status O P62 Nokia Comment Status X JId be inserted before 200 ASE-ER4 tion that is related to the in tion to say "Insert the follow emove the space so 200G	L 27 GBASE-DR4 and Insertion of 200GB. wing new entries	# 148 after 200GBASE-DR1 ASE-DR1-2. Modify the . before the esntry for

C/ 30 SC 30.5.1.1.2

		-						- .			
C/ 30	SC 30.5.1.1.2	P62	L 30	# 3	CI 30	SC	C 30.13.1.1	P65	L16	# 151	
Marris, A	rthur	Cadence Des	sign Systems		Hube	r, Thomas	6	Nokia			
Commen	t Type T	Comment Status X			Comi	nent Type	т	Comment Status X			
		BASE-DR1-2 should include 200GBASE-DR1 descriptio		ner FEC requireme		he same n le text here	ngmt regist e doesn't m	ers/attributes are used for E nention ER1 FEC.	R1 FEC as are u	sed for Inner FEC,	but
Suggeste	edRemedy				Sugg	estedRem	edy				
		PCS/PMA over single-mode OGBASE-R Inner FEC"	e fiber PMD" to "2	00GBASE-R	te)		5 MDIO Interface to PMA/PN			
Make	e similar changes t	o 400GBASE-DR2-2, 800GE	BASE-DR4-2,and	1.6TBASE-DR8-2)						, ,	
Chan	000 "800GBASE-R	PCS/PMA over single-mode	fiber PMD" to "8		C	hange the	e second bu	Illet from "For Inner FEC:"	to "For Inner FEC	C or ER1 FEC:"	
		DGBASE-LR1 Inner FEC over			Ν	lake the sa	ame chang	es to 30.13.1.2 through 30.1	3.1.12		
Proposed	l Response	Response Status O	-		Prope	osed Resp	onse	Response Status 0			
C/ 30	SC 30.5.1.1.2	2 P63	L36	# 149	C/ 45	S	C 45.2.1	P71	L 48	# 152	
Huber, Ti		Nokia				r, Thomas		Nokia	•		
Commen		Comment Status X				nent Type		Comment Status X			
		00GBASE-ER1 PCS; the EF	R1 and FR-20 PH	Ys use the				EC transmit and receive reg	isters are also us	ed for FR1 FFC.	
		wever they do have a unique			/s	estedRem					
Suggeste	dRemedy						•	ner FEC" to "TimeSync ir	nor EEC or EB1		
		of 800GBASE-ER1 and 800 d 800GBASE-ER1 PMA ove			-	sed Resp		Response Status O		120	
Proposed	l Response	Response Status 0									
					CI 45	SC	C 45.2.1	P 72	L 27	# 153	
CI 30	SC 30.5.1.1.2	P63	L 47	# 150	Hube	r, Thomas	3	Nokia			
Huber, T	homas	Nokia			Com	nent Type	т	Comment Status X			
Commen		Comment Status X			F	egisters 1	.2412 throu	igh 1.2423 are used for ER1	FEC as well as I	nner FEC.	
An in after	struction to insert 800GBASE-DR8-2	before 800GBASE-KR8 is th 2, since they are currently ad HYs). This instruction can be	ljacent to each otl	ner (and no other ta	isk C	es <i>tedRem</i> hange the ange.	-	C" to "Inner FEC or ER1 F	EC" for each	set of registers in th	ıe
Suggeste	dRemedy					sed Resp	onse	Response Status O			
Delet SYN ⁻ 802.3	te the editing instru TAX" section of 30	uction "Insert the following ne .5.1.1.2 before the entry for a nove the space so that the te	800GBASE-KR8	(inserted by IEEE \$	ftd						
Proposed	l Response	Response Status O									

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line
 C/
 45
 Page 5 of 149

 SC
 45.2.1
 6/16/2025 2:13:37 PM

C/ 45	SC 45.2.1.6	P 74	L 20	# 725	C/ 45	SC 45.2.1.23	P 79	L 24	# 155
Dawe, Pi	ers	Nvidia			Huber, Th	nomas	Nokia		
Commen	t Type TR	Comment Status X			Comment	Туре Т	Comment Status X		
as an	mended by IEEE S	td 802.3df-2024			The d	lescription for bit	1.25.1 should also identify the	abilities in regis	ster 1.74.
Suggeste	edRemedy				Suggeste	dRemedy			
Show	v the changes to th	td 802.3df-2024 and IEEE St nese bits made by P802.3dj	d 802.3dk-202x			ge " and has th ers 1.73 and 1.74	ne abilities listed in register 1. "	73" to "… and h	as the abilities listed in
	arly in other tables				Proposed	Response	Response Status 0		
Proposed	d Response	Response Status O							
					C/ 45	SC 45.2.1.23	P 79	L 35	# 156
CI 45	SC 45.2.1.6	P 74	L 41	# 726	Huber, Th	nomas	Nokia		
Dawe, Pi	ers	Nvidia			Comment	Type E	Comment Status X		
Commen	t Type ER	Comment Status X			The e	diting instruction	to insert 45.2.1.23.aa should	note that 45.2.1	.23.a was inserted by
		an confirm that the new mate		the correct place, in	802.3	df-2024			
		ithout using a bit that's alread	iy laken		Suggeste	dRemedy			
00	edRemedy se show the sub-ro	ows below and above, each ti	me.			ge to say "Insert - as follows:"	45.2.1.23.aa before 45.2.1.23	.a (as inserted b	oy IEEE Std 802.3df-
Proposed	d Response	Response Status O			Proposed	Response	Response Status O		
C/ 45	SC 45.2.1.10	P 77	L 32	# 154	C/ 45	SC 45.2.1.26	<i>P</i> 111	L 49	# 723
Huber, Ti	homas	Nokia			Dawe, Pie	ers	Nvidia		
Commen	t Type T	Comment Status X			Comment	Type E	Comment Status X		
to the	e newly added add	(not currently included in the itional extended ability registe			addeo	d to the abbreviat	nd somehow unmemorable. If ions list, but PMA lane / PMAI it worth coining an abbreviatio	L is used so mu	
00	edRemedy				Suggeste				
) in clause 45.2.1.1 13 from:	10 and Table 45-14. Update c	escription for a c	one value for bit	00	2	lane, throughout the draft		
		G/400G extended abilities lis	ted in register 1	.23 or register 1.24"		Response	Response Status 0		
	PMA/PMD has 20(and 1.75 (400G)"	0G/400G extended abilities lis	ted in register 1	.23 (200G) or registers	Toposed	nesponse	Response Status U		
Proposed	d Response	Response Status O							
	-	•							

C/ **45** SC **45.2.1.26**

	P 82	L 4	# 5	C/ 45	SC 45.2.1.6	De.3	P84	L16	# 157
/arris, Arthur	Cadence Desi	ign Systems		Huber, The	omas		Nokia		
Comment Type E	Comment Status X			Comment	51		t Status X		
Typo, missing "2"				This s	ubclauses conc	erns 1.6TBAS	E-DR8, but the	text refers to 1.6T	BASE-DR2.
SuggestedRemedy				Suggested	•				
	G PMA/PMD extended abilit PMD extended ability 2 regis			•				ext to "1.6TBASE	-DR8".
Proposed Response	Response Status O		-,	Proposed	Response	Response	Status O		
					00 15 0 1 1		Der		
X 45 SC 45.2.1.60c.	1 P82	L 21	# 582	C/ 45	SC 45.2.1.1	58a	P 95	L6	# 4
licholl, Shawn	AMD			Marris, Art Comment		Common	t Status X	sign Systems	
comment Type ER	Comment Status X				PRBS" should I				
	ontains the information for 1	1.74.0 register wh	ile 45.2.1.60c.2	Suggested					
contains the information	for 1.74.1 register.			••	•	ent of bits in t	he PRBS seed	value lane 0 regis	ter" to "The
The MDIO register defini	tions sections are typically of	ordered from bit <	n> to bit 0.	assign	ment of bits in t	he PMA/PMD	PRBS31 seed	value lane 0 regis	ter"
uggestedRemedy									n lanes 1 through 7 value lanes 1 throug
Propose the following tex	d:				sters" on lines 6				5
45.2.1.60c.1 should cont the information for 1.74.0	ain the information for 1.74.) register.	.1 register. 45.2.1	1.60c.2 should contain	Proposed	Response	Response	Status O		
In other words, it should	read as follows:			CI 45	SC 45.2.1.1	68b	P 96	L 3	# 6
45.2.1.60c.1 800GBASE	-ER1 ability (1.74.1)			Marris, Art	hur		Cadence De	sign Systems	
When read as a one bit	1.74.1 indicates as a 800		A /DMD tupe \A/ben	Comment	51		t Status X		
	indicates as a 800GBAS				missing word "ii	iterface"			
				Suggested Chang	•	ent of bits in t	he PMA/PMD t	raining status regi	stor" to "Tho
45.2.1.60c.2 800GBASE	-ER1-20 ability (1.74.0)			onung				raining otatao rogi	
				assign	ment of bits in t	he PMA/PMD	interface trainir	ng status register"	
When read as a one, bit	-ER1-20 ability (1.74.0) 1.74.0 indicates as a 800 1.74.0 as a 800GBASE-			assign Proposed			interface trainir Status O	ng status register"	

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 45 SC 45.2.1.168b

C/ 45 SC 45.2.1.168c P96 L46 # 554	Cl 45 SC 45.2.1.177a P99 L5 # 159
licholl, Shawn AMD	Huber, Thomas Nokia
Comment Type ER Comment Status X	Comment Type T Comment Status X
In the first row of Table 45-133c the Bit(s) column contains 1.1476.15:9 text.	The 'inner FEC' TimeSync registers are also used for ER1 FEC
uggestedRemedy	SuggestedRemedy
Propose 1.1477.15:9 in the first row of Table 45-133c in the Bit(s) column.	Change the title to "TimeSync FEC sublayer transmit path delay (Registers 1.1813 through
Proposed Response Response Status O	1.1818)"
	Add a new first sentence to the first paragraph: "The TimeSync FEC sublayer transmit path data delay registers are used with Inner FEC sublayers and the ER1 FEC sublayer."
# 45 SC 45.2.1.168d P 97 L 13 # 555 licholl, Shawn AMD	Change the rest of the existing text and table to replace 'inner FEC' with 'FEC sublayer'.
omment Type ER Comment Status X	Make similar changes to 45.2.1.177b.
Currently, in the 1.1478.13 row, the Description column contains some incorrect text that is carried over from another table.	Proposed Response Response Status O
1 = PCS lane synchronization is complete. This bit indicates that all_locked_mux is true	C/ 45 SC 45.2.1.216 P101 L24 # 557
and deskewed 0 = local_rx_ready or remote_rx_ready is false on any lane of the interface	Nicholl, Shawn AMD
uggestedRemedy	Comment Type ER Comment Status X
Propose the following text:	Missing a note that this Table 45-180 was amended in 802.3ck-2022.
 1 = PCS lane synchronization is complete. This bit indicates that all_locked_mux is true and deskew is complete. 0 = PCS lane synchronization is not complete. 	Missing a new section after the table that describes the new field that is added to the table in P802.3dj. SuagestedRemedy
roposed Response Response Status O	Proposed text: "Change Table 45-180 (as amended by IEEE Std 802.3ck-2022) as follows
2/ 45 SC 45.2.1.175 P 97 L 44 # 158	 Also propose to add new section:
Auber, Thomas Nokia	Insert 45.2.1.216aa before 45.2.1.216.a as follows:
omment Type E Comment Status X The 'inner FEC' TimeSync registers are also used for ER1 FEC	45.2.1.216.aa IFEC degraded SER enable (1.2200.4)
uggestedRemedy Change " PMA/PMD and inner FEC" to "PMA/PMD, inner FEC, and ER1 FEC" In table 45-139, change "inner FEC" to "inner FEC or ER1 FEC" in the Name and	Bit 1.2200.4 enables the IFEC decoder to indicate the presence of a degraded SER when the ability is supported. When set to a one, this variable enables degraded SER detection. When set to a zero, degraded SER detection is disabled. Writes to this bit are ignored and reads return a zero if the IFEC does not have the ability to signal the presence of a degraded SER.
Description columns of rows 1.1800.7 through 1.1800.4	Proposed Response Response Status O
Proposed Response Response Status O	

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 45 SC 45.2.1.216 Page 8 of 149 6/16/2025 2:13:37 PM

C/ 45	SC 45.2.1.216	5	P 101	L 33	# 556	C/ 45	SC	45.2.1.222		P 104	L 8	# 559
Nicholl,	Shawn		AMD			Nicholl, S	hawn			AMD		
Commer	nt Type E	Comment S	tatus X			Comment	Туре	ER	Comment St	tatus X		
Miss	sing a space in Tabl	e 45-180, row	1.2200.4 des	cription column.			the inclu .3dj drat		es up to lane 3	1, the legacy	text no longer re	eads smoothly in the
Curr	ent text: "1 =IFEC c	lecoder"				_						
00	edRemedy posed text: "1 = IFE	C decoder"				bits a	re show	n in registe		lane 2, lower	16 bits are show	t; FEC lane 1, upper 10 wn in register 1.2214;
ropose	d Response	Response St	tatus O			Suggeste	dReme	dv				
CI 45	SC 45.2.1.217	7.6a	P103	L3	# 558	bits a	re show	n in registe		lane 2, lower	16 bits are show	t; FEC lane 1, upper 1 wn in register 1.2214;
Nicholl, S	Shawn		AMD			Proposed	Respo	nse	Response St	atus O		
Commer	nt Type TR	Comment S	tatus X									
1000 func FEC P802 "Tab	3-2022 Clause 152 GBASE-P, and 1000 tion mapping" conta status variable ma 2.3dj Sub-Clause "1 ole 186-8 800GBA rences to 1.2201 re	GBASE-Z PHY ains many refer pping" contains 86.7 Managen SE-ER1 FEC	's. Sub-Clau rences to IFE s references t nent variables	se "152.6 Inverse C. "Table 152-2 to 1.2201 register s" also contains re	RS-FEC MDIO MDIO/Inverse RS- eferences to IFEC.	Suggeste	rthur <i>Type</i> ct table dRemee	dy	Comment St	tatus X	L 3 sign Systems ter bit definitions	# <u>7</u>
one foun perta	that is describe in C d in "45.2.1.217.6a	Clause 186), it v IFEC received use 186 IFEC.	would help th I local degrad	e reader to enhar ed (1.2201.5)" to	ed in Clause 152 and ice the description clarify that this field 7.6b IFEC received		12g—In	ner FEC sta	itus 1 register Response St	bit definitions		
Suggest	edRemedy											
Pron	osed text (for 45.2	1 217 6a) [.] "Bit	1 2201 5 is s	et to one when th	e 800GBASE-ER1							

Proposed text (for 45.2.1.217.6a): "Bit 1.2201.5 is set to one when the 800GBASE-ER1 IFEC receiver detects the value ... consecutive 800GBASE-ER1 FEC frames. Bit 1.2201.5 is set to zero ..."

Note that in the above text, besides adding "800GBASE-ER1", it is also necessary to correct the typo 1.2201.4 (current text) to 1.2201.5 (proposed text).

Proposed text (for 45.2.1.217.6b): "Bit 1.2201.4 is set to one when the 800GBASE-ER1 IFEC receiver detects the value ... consecutive 800GBASE-ER1 FEC frames. Bit 1.2201.4 is set to zero ..."

Proposed Response Response Status 0

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 45 SC 45.2.1.258

CI 45	SC 45.2.1.258	P109	L 22	# 560	CI 45	SC 45.2.1.2	62 P111	L 12	# 561
Nicholl, S	hawn	AMD			Nicholl, S	hawn	AMD		
Comment	Type ER Com	nment Status X			Comment	Туре Т	Comment Status X		
Inner Inner	Clause "177.5.5 Inner FEC _FEC_uncorrected_cw_cc _FEC_corrected_bits_cou ing" also uses these term	ounter, Inner_FEC_te unter. "Table 177-8 -	otal_bits_counte	er, and			ayers contains FEC_correcte _counter, FEC_cw_counter,		error_bin_i (1 <= i <=
Curre count	ntly, the description colun er bit definitions" contains ins "FEC corrected codew	nn of "Table 45-212h s FEC_corrected_cw	_counter. And t	he Name column	FEC o	codeword receiv	FEC_cw_counter defines a ded is mapped to registers	defined in 45.2.3.	48a (3.300 to 3.302).
	ng the word "Inner" in both						apped to registers defined in	_	/
defini	ame issue exists in "Tabl tions", "Table 45-212j Ir Inner FEC corrected bit	nner FEC total bits re	gister bit definiti			codeword receiv	PAT FEC_cw_counter defines a ed is mapped to the regist		
00	dRemedy ose updating the description	on column of "Table	45-212h Inner	FEC corrected			7 FEC_codeword_error_bin_ apped to the registers defined		

Propose updating the description column of "Table 45-212h -- Inner FEC corrected codewords counter bit definitions" to Inner_FEC_corrected_cw_counter and the Name column to "Inner FEC corrected codewords".

Propose similar updates in "Table 45-212i -- Inner FEC uncorrected codewords counter bit definitions", "Table 45-212j -- Inner FEC total bits register bit definitions", and "Table 45-212k -- Inner FEC corrected bits register bit definitions".

Proposed Response Response Status **O**

P802.3dj draft contains "Table 45-212I -- Inner FEC codeword error bin register definitions" which includes inner_FEC_codeword_error_bin_0 (i.e. codewords with no bit errors). At the same time, there is no FEC_cw_counter that count once for each Inner FEC codeword received.

It would be better to be consistent with the definition of FEC statistics found in other 802.3 Clauses

SuggestedRemedy

Propose adding a new 48-bit register FEC_cw_counter that counts once for each Inner FEC codeword received.

Propose deleting the inner_FEC_codeword_error_bin_0 register, since it becomes redundant if FEC_cw_counter is defined.

Proposed Response Response Status **O**

C/ 45 SC 45.2.1.262

C/ 45 SC 45.2.1.2	52 <i>P</i> 111	L12	# 562	C/ 45 S	C 45.2.3.1	P116	L37	# 724
Nicholl, Shawn	AMD	- • -		Dawe. Piers		Nvidia	-01	" [24
Comment Type ER	Comment Status X			Comment Type	e ER	Comment Status X		
51	ion column of "Table 45-212l -	Inner FEC cod	eword error bin register	51		noved after first working group	ballot): doesn't	respect SA balloters
	ner_FEC_codeword_error_bi				`	loved aller mot working group		
	_error_bin_4, while "Table 177			SuggestedRen	-	ha (ha ha nama ay ad after first CA	h ellet).	
	ins Inner_FEC_codeword_errors, but not in the other case.	or_din_k. In othe	er words, the first letter	11 times	. Editor's noi	te (to be removed after first SA	v ballot).	
SuggestedRemedy				Proposed Res	ponse	Response Status O		
	description column of "Table 4	45-212l Inner F	EC codeword error bin					
register definitions" to	contain Inner_FEC_codeword	l_error_bin_0 thre	ough					
	_error_bin_4 to enhance sear	chability of the do	ocument.	C/ 45 S	SC 45.2.3.2	P 117	L 43	# 445
roposed Response	Response Status O			Ran, Adee		Cisco Systems	6	
				Comment Type		Comment Status X		
45 SC 45.2.1.2	64 P112	L 5	# 295		ut for link_fai ime to retry i	il_inhibit_timer, minimum 60 se AN	econds, creates	an unacceptably lor
rown, Matt	Alphawave Se	əmi			into to rotry i			
comment Type E	Comment Status X					aster restart of AN was present		
51	nmar is inconsistent with simil	ar phrases used	through this draft and	nttps://ww	w.ieee802.or	g/3/dj/public/25_05/ran_3dj_02	2a_2505.pdf.	
is unecessary here.			5	The chang	es proposec	to clause 45 appear on slide	7 of ran_3dj_02	2a_2505.
SuggestedRemedy				SuggestedRen	nedy			
Change "Lane 0's" to Change "Lane 1's" to				Implement	the change	s to clause 45 per slide 7 of ra	n_3dj_02a_250	5, with editorial licens
8				Proposed Res	ponse	Response Status 0		
Proposed Response	Response Status O							
/ 45 SC 45.2.1.2	69 <i>P</i> 115	L 45	# 40	C/ 45 S	SC 45.2.3.8	P119	L 23	# 160
		-	# 10	Huber, Thoma	S	Nokia		
/larris, Arthur	Cadence Des	ign Systems		Comment Type	e E	Comment Status X		
	Comment Status X			Per the sty	/le guide, wh	en inserting new subclauses b	efore the first e	existing subclause, the
51		omenclature		nomenclat	ure is 'X.Y.Z	.a' rather than 'X.Y.Za"		
51	ttom" to match Annex 178B no							
Change "lower" to "bo	tom" to match Annex 178B n			SuggestedRen	nedy			
Change "lower" to "bo SuggestedRemedy	ttom" to match Annex 178B nd "bottom AUI" in two places			00	,	truction to say "Insert 45.2.3.8	a and 45.2.3.8.	b before 45.2.3.8.1"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 45 SC 45.2.3.8

C/ 69 SC 69.1.	2 P128	L 50	# 471	C/ 69	SC 69.2.3	P128	L 50	# 473
Slavick, Jeff	Broadcom			Slavick, J	Jeff	Broadcom		
Comment Type TR	Comment Status X			Comment	t Type TR	Comment Status X		
Changes to 69.1.2	are missing.			Chan	ges to 69.2.3 are	e missing.		
SuggestedRemedy				Suggeste	dRemedy			
Amend Figure 69-	5 from 802.3df to add on 1.6T the	same stack as	800G.			alking about the new PHYs. A nended by 802.3df.	Add this paragra	ph after the one 11th
Proposed Response	Response Status 0			and 1 Claus	.6TBASE-KR8. se 119, the PMA	also specifies 200GBASE-KR1 The 200GBASE-KR1 embodin defined in Clause 176, and the	ment employs th e PMD defined ir	e PCS defined in n Clause 178, and
C/ 69 SC 69.2.	1 P128	L 50	# 472			eration using 4-level PAM ove ASE-KR2 embodiment employ		
Slavick, Jeff	Broadcom					e 176, and the PMD defined in		
Comment Type TR Changes to 69.2.1				opera KR4 (ation using 4-leve embodiment emp	I PAM over two differential par bloys the PCS defined in Claus	ths in each direc se 172, the PMA	tion. The 800GBASE- defined in Clause 176,
SuggestedRemedy						in Clause 178, and specifies 8 aths in each direction. The 1.0		
Amend 69.2.1 to a amended in 802.3.	dd in the Clause 170 RS and 1.61 df.	MII to the list of	MIIs. This clause was	PCS Claus	defined in Clause se 178, and speci	e 175, the PMA defined in Clar ifies 1.6 Tb/s operation using 4	use 176, and the	PMD defined in
Proposed Response	Response Status O				ch direction." I Response	Response Status O		
				C/ 69	SC 69.2.3	P128	L 50	# 474
				Slavick, J	Jeff	Broadcom		
				Comment	t Type TR	Comment Status X		

Changes to 69.2.3 are missing.

SuggestedRemedy

Add reference to Table 174-3 to the last paragraph of 69.2.3 as ameded by 802.3df.

Proposed Response Response Status **0**

C/ 69 SC 69	.4 P128	L 50	# 475	CI 73	SC 73.4.1	P12	9 L	31	# 439
Slavick, Jeff	Broadcom			Ran, Adee	e	Cisco	Systems		
Comment Type	TR Comment Status X			Comment	Туре Т	Comment Status	х		
The delay const	rain references are missing.			"but w	ill not transmit a	n ability it does not pos	ssess"		
SuggestedRemedy	g 69.3 in the appropriate locations:			"will" is	s not suitable - i	t is a requirement, not	a statement of	fact.	
Add the followin				"adver	tise" is typically	used for abilities, and	is preferable ov	ver "send" he	re.
	-KR1, normative delay specifications 6, and also referenced in 80.4.	s may be found	in 117.1.4, 119.5,	Suggested					
	-KR2, normative delay specification	s may be found	in 117.1.4, 119.5,	-	ge to "but it shal <i>Response</i>	not advertise an ability Response Status	•	SSESS".	
176.8, and 178.	6, and also referenced in 80.4.								
	-KR4, normative delay specifications 6, and also referenced in 169.4.	s may be found	in 170.1.4, 172.5,	CI 73	SC 73.4.2	P13	0 L	13	# 161
For 1 6TBASE	KR4, normative delay specifications	may be found i	170 1 / 175 5 176 8	Huber, Th	omas	Nokia			
	also referenced in 174.4.	may be found i	1170.1.4, 175.5, 176.6,	Comment	Туре Е	Comment Status	Х		
Proposed Response	Response Status O			"An Ai	uto-Negotiation	able device shall recog	nize" is awk	ward wording	
				Suggested	Remedy				
	F D 400	1.50	# 470	Chang	ge to "A device o	apable of Auto-Negotia	ation shall reco	gnize"	
C/ 69 SC 69		L 50	# 476	Proposed	Response	Response Status	0		
Slavick, Jeff	Broadcom								
	TR Comment Status X			CI 73	SC 73.4.2	P13	• /	15	# 296
and "PMD" Clau	to the list of clauses the PICS cover uses in this list.	It appears we	Insert only the "FEC"	-	-	-	-	15	# 296
SuggestedRemedy				Brown, Ma Comment		Comment Status	wave Semi		
	of Clauses in the first paragraph of (3,"	69.5 as amende	d by 802.3df: "Clause	Use of		nmar is inconsistent wi		ses used thro	ough this draft and
Proposed Response	e Response Status O			Suggested					
				Chang	-	" to "link partner" 51			
C/ 73 SC 73		L 26	# 56	Proposed	1 0	Response Status	0		
Jones, Chad	Cisco System	ns, Inc.		- 1			•		
Comment Type I Use of "may".	E Comment Status X								
SuggestedRemedy replace "may be	e" with "are".								
Proposed Response									
,									
			,,						_
	required ER/editorial required GR/						C/ 73		Page 13 of 149

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

CI 73 SC 73.4.2 Page 13 of 149 6/16/2025 2:13:37 PM

E P802.3dj D2.0 200 Gb/s, 400 Gb/s	, 800 Gb/s, and 1.6 Tb/s Ethernet	Initial Working Group ballot comme

CI 73 SC 73.4.3	P130	L 27	# 538	CI 73	SC 73.6.2.	6 P1	33	L 50	# 440
Levin, Itamar	Altera corp.			Ran, Adee	e	Cisco	Systems		
Comment Type TR	Comment Status X			Comment	Туре Т	Comment Status	Х		
when the PHY is co	ed for the signals at the MDI to on nnected to the MDI through the e event that starts this time perion	"Transmit Switc		three c	of these bits en	F2, F3, F0, F1) is enco code requests, rather t			
SuggestedRemedy				Suggested					
00 ,	en a PHY is connected to the M	1DI through the 1	Transmit Switch	D43:D		ability and request bits	(F4, F2, F3,	F0, F1) are	encoded in bits
function, the signals		-		Proposed	Response	Response Status	0		
Proposed Response	Response Status 0								
				CI 73	SC 73.8	P1	40	L 6	# 727
C/73 SC 73.5.1	P131	L9	# 455	Dawe, Pie	rs	Nvidia	a		
He, Xiang	Huawei	-•		Comment	Туре Е	Comment Status	Х		
Comment Type TR	Comment Status X			Cramp	bed table title				
Max transmit differe rates for compatibility	ntial peak-to-peak output voltag ty reasons.	e for DME shou	ld be the same for all	S <i>uggested</i> Make i	<i>Remedy</i> its box full widt	ı			
rates for compatibilit		e for DME shou	ld be the same for all	00	its box full widt	n Response Status	0		
rates for compatibili SuggestedRemedy Remove case 2.		e for DME shoul	ld be the same for all	Make i	its box full widt			L13	# 444
rates for compatibili SuggestedRemedy Remove case 2.	ty reasons.	e for DME shou	ld be the same for all	Make i Proposed I	its box full widt Response SC 73.10.2	Response Status P1		L13	# 444
rates for compatibili SuggestedRemedy Remove case 2. Proposed Response	ty reasons.	e for DME shoul	ld be the same for all # 477	Make i Proposed i Cl 73	its box full widt Response SC 73.10.2	Response Status P1	12 Systems	L13	# [444
rates for compatibili SuggestedRemedy Remove case 2. Proposed Response	ty reasons. Response Status O			Make i Proposed i Cl 73 Ran, Adee Comment The tin	its box full widt Response SC 73.10.2 Type TR neout for link_1	Response Status P1. Cisco Comment Status ail_inhibit_timer, minim	12 Systems X	-	
rates for compatibili SuggestedRemedy Remove case 2. Proposed Response	ty reasons. Response Status O 4 P134			Make i Proposed i Cl 73 Ran, Adee Comment The tin	its box full widt Response SC 73.10.2 Type TR	Response Status P1. Cisco Comment Status ail_inhibit_timer, minim	12 Systems X	-	
rates for compatibili SuggestedRemedy Remove case 2. Proposed Response Cl 73 SC 73.6.2 Slavick, Jeff Comment Type E	ty reasons. Response Status O .4 P134 Broadcom Comment Status X g up on the next page which is f	L1	# [477]	Make i Proposed i Cl 73 Ran, Adee Comment The tin minimu A prop	its box full widt Response SC 73.10.2 Type TR meout for link_1 um time to retr posal to enable	Response Status P1. Cisco Comment Status ail_inhibit_timer, minim	42 Systems X num 60 seco s presented	onds, create	
rates for compatibili SuggestedRemedy Remove case 2. Proposed Response Cl 73 SC 73.6.2 Slavick, Jeff Comment Type E The table is showing table inserts itself in	ty reasons. Response Status O .4 P134 Broadcom Comment Status X g up on the next page which is f	L1	# [477]	Make i Proposed I CI 73 Ran, Adee Comment The tin minimu A prop https://	its box full widt Response SC 73.10.2 Type TR meout for link_1 um time to retr posal to enable /www.ieee802.	Response Status P1. Cisco Comment Status ail_inhibit_timer, minim / AN. faster restart of AN wa org/3/dj/public/25_05/ra	42 Systems X num 60 seco s presented an_3dj_02a_	in 2505.pdf.	s an unacceptably long
rates for compatibilit SuggestedRemedy Remove case 2. Proposed Response Cl 73 SC 73.6.2 Slavick, Jeff Comment Type E The table is showing table inserts itself in SuggestedRemedy	ty reasons. Response Status O .4 P134 Broadcom Comment Status X g up on the next page which is f	L1 ine, but the next	# [477]	Make i Proposed I Cl 73 Ran, Adee Comment The tin minimu A prop https://	its box full widt Response SC 73.10.2 Type TR meout for link_1 um time to retr posal to enable /www.ieee802. manges propose	Response Status P1. Cisco Comment Status ail_inhibit_timer, minim / AN. faster restart of AN wa	42 Systems X num 60 seco s presented an_3dj_02a_	in 2505.pdf.	s an unacceptably lon
rates for compatibilit SuggestedRemedy Remove case 2. Proposed Response Cl 73 SC 73.6.2 Slavick, Jeff Comment Type E The table is showing table inserts itself in SuggestedRemedy	ty reasons. Response Status O A P134 Broadcom Comment Status X g up on the next page which is f the middle of list.	L1 ine, but the next	# [477]	Make i Proposed I Cl 73 Ran, Adee Comment The tin minimu A prop https:// The ch Suggested	its box full widt Response SC 73.10.2 Type TR meout for link_1 um time to retr posal to enable /www.ieee802. nanges propose IRemedy	Response Status P1. Cisco Comment Status ail_inhibit_timer, minim / AN. faster restart of AN wa org/3/dj/public/25_05/ra ed to clause 73 appear	42 Systems X num 60 seco s presented an_3dj_02a_ on slide 7 of	in 2505.pdf. f ran_3dj_0;	s an unacceptably long
rates for compatibilit SuggestedRemedy Remove case 2. Proposed Response Cl 73 SC 73.6.2 Slavick, Jeff Comment Type E The table is showing table inserts itself in SuggestedRemedy Can you force the ta	ty reasons. Response Status O .4 P134 Broadcom Comment Status X g up on the next page which is f the middle of list. able to occur before the next sul	L1 ine, but the next	# [477]	Make i Proposed I Cl 73 Ran, Adee Comment The tin minimu A prop https:// The ch Suggested Bring i 73 per	its box full widt Response SC 73.10.2 Type TR meout for link_1 um time to retr posal to enable /www.ieee802. nanges propose IRemedy in subclause 7: slide 7 of ran_	Response Status P1. Cisco Comment Status ail_inhibit_timer, minim / AN. faster restart of AN wa org/3/dj/public/25_05/ra	42 Systems X aum 60 seco s presented an_3dj_02a_ on slide 7 of tandard and itorial license	in _2505.pdf. f ran_3dj_02 implement e.	s an unacceptably lon 2a_2505.

Page 14 of 149 6/16/2025 2:13:37 PM

CI 73

SC 73.10.2

CI 73A	SC 73A.1a	P 657	L 6	# 42	Cl
Lusted, Ke	nt	Synopsys			Ηι

Comment Type TR Comment Status X

There are now three CR host loss classes for 200 Gb/s per lane PHYs: HL, HN, HH. For interoperability, a host needs to know the host loss class of the partner to determine if the two host end points can support the inserted cable assemble. The local CR host knows apriori of its host class. The local host also can access the cable assemble class via management means such as CMIS contents inside the plug end. However, the partner's host class remains elusive.

Contribution planned for July session.

SuggestedRemedy

Define two new bits in the Extended FEC and Technology Ability Message code link codeword in location D42:43 as "CR Host Class for 200 Gb/s per lane PHYs". Abbreviated EH0:1

D42 D43 Class

- 0 0 Host Nominal HN
- 0 1 Host Loss HL
- 1 0 Host High HH
- 1 1 Reserved

change the second paragraphs as follows:

"Extended Technology Ability bits EA0:EA27 map to bits D16:D41 (U0:U25), CR Host Class for 200 Gb/s per lane PHYS D42:D43 (U26:U27) and Extended FEC capability bits EF0:EF3 map to bits D44:D47 (U28:31). Reserved fields are sent as zero and ignored on receive."

Update Table 73A-1a appropriately.

Proposed Response Response Status O

C/ 116	SC 116.1.4		P148	L1	# 232
Huber, Th	omas		Nokia		
-		-			

Comment Type T Comment Status X

ILT is mandatory for 200G/lane PHYs and AUIs. 178B appears in the tables in the 200G/lane PMD clauses as Required. As such, it should appear in the tables in the introduction as well.

SuggestedRemedy

Update Table 116-3 to show that 178B is conditionally required (based on whether 200G AUIs are used), 116-3aa so show that 178B is mandatory, 116-3a o show it as conditional, 116-3b to show it as mandatory, 116-4 to show it as conditional, 116-4a to show it as mandatory, 116-5 to show it as conditional, and 116-5a to show it as mandatory. There may be older 200G and 400G PMD clauses that also need to be updated to indicate the optional use of the 200G/lane AUIs and conditional use of ILT

Proposed Response Response Status **O**

C/ 116	SC 116.1.4	P148	L 6	# <u>7</u> 28
Dawe, Pie	rs	Nvidia		
Comment 2 or 4	<i>Type</i> E -> two or four	Comment Status X		
to PHY t	ge ype and clause co	orrelation (200GBASE coppe 200GBASE copper with two ables		ines)

Proposed Response Response Status **0**

C/ 116	SC 116.1.4	P148	L10	# 729
Dawe, Pie	ers	Nvidia		
Comment	Туре Т	Comment Status X		
There	must be a BM PM	/A below any SM PMA		
Suggested	dRemedy			
Move	176 and 176C to	between 119 and 120. Also	in 116-3a 4 and	5.

Proposed Response Response Status **O**

C/ 116 SC 116.1.4

C/ 116 SC 116.1.4	P148	L26	# 730	C/ 116 SC 116.2	9 P155	L37	# 732
Dawe, Piers	Nvidia			Dawe, Piers	Nvidia		
Comment Type T	Comment Status X			Comment Type TR	Comment Status X		
	PMA is shown as conditional at's not to do with the PMD.	I. It might be nee	eded if one wants a		efined jargon: inter-sublayer link smitter states, receiver states" m		
SuggestedRemedy				SuggestedRemedy			
Change C to O and/or re	evise the footnote. Also in 1	16-3a 4 and 5.			opropraite references, or remove	e 178B. Similarly	/ in e.g. 169.2.10,
Proposed Response	Response Status 0			174.2.12			
				Proposed Response	Response Status O		
C/ 116 SC 116.1.4	P149	L 34	# 162		0 D / 55	1.40	# [100
luber, Thomas	Nokia			C/ 116 SC 116.2		L 42	# 163
Comment Type TR	Comment Status X			Huber, Thomas	Nokia		
The clause numbers in	T			Comment Type T	Comment Status X		
order. Auto-Negotiation	I able 116-3a are incorrect a is clause 73 rather than 116 the table inserted by 802.3ck	, and should be	the left-most column.	term has specific m (see 1.4.278) Anne	at "DATA mode" is intended to n eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co	hat differs from v ntext of ILT, "dat	what is intended here a mode" means the
order. Auto-Negotiation (the text was correct in t 802.3dj) SuggestedRemedy	is clause 73 rather than 116	, and should be a, so the errors w	the left-most column. vere introduced here in	term has specific m (see 1.4.278) Anne variable tx_mode ha	eaning for 1000BASE-T PHYs t	hat differs from v ntext of ILT, "dat ociated with being	what is intended here a mode" means the g in the PATH_UP
order. Auto-Negotiation (the text was correct in t 802.3dj) SuggestedRemedy	is clause 73 rather than 116 the table inserted by 802.3ck	, and should be a, so the errors w	the left-most column. vere introduced here in	term has specific m (see 1.4.278) Anne variable tx_mode ha state per figure 178	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso	hat differs from v ntext of ILT, "dat ociated with being	what is intended here a mode" means the g in the PATH_UP
order. Auto-Negotiation (the text was correct in t 802.3dj) SuggestedRemedy Change 116 to 73, and	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw	, and should be a, so the errors w	the left-most column. vere introduced here in	term has specific m (see 1.4.278) Anne variable tx_mode h state per figure 178 PATH_UP state. SuggestedRemedy	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode."	hat differs from v ontext of ILT, "dat ociated with being clear if the text in	vhat is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th
order. Auto-Negotiation (the text was correct in t 802.3dj) SuggestedRemedy Change 116 to 73, and Proposed Response	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw	, and should be a, so the errors w	the left-most column. vere introduced here in	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode."	hat differs from v ontext of ILT, "dat ociated with being clear if the text in	vhat is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th
order. Auto-Negotiation (the text was correct in 1 802.3dj) SuggestedRemedy Change 116 to 73, and Proposed Response	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw <i>Response Status</i> O <i>P</i> 155 Nvidia	, and should be a, so the errors w to columns so 73	the left-most column. vere introduced here in 3 comes first.	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate PATH_UP state (see	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode." the Figure 178B-8)."	hat differs from v ontext of ILT, "dat ociated with being clear if the text in	vhat is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th
order. Auto-Negotiation (the text was correct in t 802.3dj) uggestedRemedy Change 116 to 73, and roposed Response // 116 SC 116.2.9 hawe, Piers comment Type TR	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw <i>Response Status</i> O <i>P</i> 155 Nvidia <i>Comment Status</i> X	, and should be a, so the errors w to columns so 73 <i>L</i> 35	the left-most column. vere introduced here in 3 comes first. # 731	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate PATH_UP state (see	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode." the transition to DATA mode." <i>Response Status</i> O	hat differs from v ontext of ILT, "dat ociated with being clear if the text in	vhat is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th
order. Auto-Negotiation (the text was correct in the 802.3dj) uggestedRemedy Change 116 to 73, and troposed Response 1116 SC 116.2.9 Dawe, Piers comment Type TR If IS stands for inter-sub	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw <i>Response Status</i> O <i>P</i> 155 Nvidia	, and should be a, so the errors w to columns so 73 <i>L</i> 35 or inter-sublayer I	the left-most column. vere introduced here in 3 comes first. # 731	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate PATH_UP state (see Proposed Response	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode." the Figure 178B-8)." Response Status O	that differs from wintext of ILT, "dat ociated with being clear if the text in to "coordinate the	what is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th e transition to the
order. Auto-Negotiation (the text was correct in the 802.3dj) SuggestedRemedy Change 116 to 73, and Proposed Response Correct Type TR If IS stands for inter-sub be ISLT. However, the removed, and optical Ph	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw <i>Response Status</i> O <i>P</i> 155 <i>Nvidia</i> <i>Comment Status</i> X blayer (116.3) and and ISL fo "IS_" in the primitives has ou HYs do not have what one w	, and should be a, so the errors w to columns so 73 <i>L</i> 35 or inter-sublayer l utlived its usefulr	the left-most column. vere introduced here in 3 comes first. # 731 link (178B), this would hess and should be	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate PATH_UP state (see Proposed Response C/ 116 SC 116.2 Dawe, Piers	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode." the Figure 178B-8)." Response Status 0 9 P155	that differs from wintext of ILT, "dat ociated with being clear if the text in to "coordinate the	what is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th e transition to the
order. Auto-Negotiation (the text was correct in t 802.3dj) uggestedRemedy Change 116 to 73, and troposed Response 7 116 SC 116.2.9 Dawe, Piers comment Type TR If IS stands for inter-sub be ISLT. However, the removed, and optical PH is a start-up protocol that	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw <i>Response Status</i> O <i>P</i> 155 <i>Nvidia</i> <i>Comment Status</i> X blayer (116.3) and and ISL fo "IS_" in the primitives has ou HYs do not have what one w	, and should be a, so the errors w to columns so 73 <i>L</i> 35 or inter-sublayer l utlived its usefulr	the left-most column. vere introduced here in 3 comes first. # 731 link (178B), this would hess and should be	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate PATH_UP state (see Proposed Response Cl 116 SC 116.2 Dawe, Piers	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode." the Figure 178B-8)." Response Status O 9 P155 Nvidia Comment Status X	that differs from wintext of ILT, "dat ociated with being clear if the text in to "coordinate the	vhat is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th e transition to the
order. Auto-Negotiation (the text was correct in the 802.3dj) uggestedRemedy Change 116 to 73, and roposed Response 1116 SC 116.2.9 Pawe, Piers formment Type TR If IS stands for inter-sub be ISLT. However, the removed, and optical Ph is a start-up protocol that uggestedRemedy	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw <i>Response Status</i> O <i>P</i> 155 Nvidia <i>Comment Status</i> X blayer (116.3) and and ISL fo "IS_" in the primitives has ou HYs do not have what one w at uses training frames.	, and should be a, so the errors w to columns so 73 <i>L</i> 35 or inter-sublayer l utlived its usefulr ould recognise a	the left-most column. were introduced here in 3 comes first. # [731] link (178B), this would hess and should be as training, even if there	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate PATH_UP state (see Proposed Response C/ 116 SC 116.2 Dawe, Piers Comment Type TR is supported by - yu	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode." the Figure 178B-8)." Response Status O 9 P155 Nvidia Comment Status X	that differs from wintext of ILT, "dat ociated with being clear if the text in to "coordinate the	what is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th e transition to the
order. Auto-Negotiation (the text was correct in t 802.3dj) SuggestedRemedy Change 116 to 73, and Proposed Response Cl 116 SC 116.2.9 Dawe, Piers Comment Type TR If IS stands for inter-sub be ISLT. However, the removed, and optical Ph is a start-up protocol tha SuggestedRemedy	is clause 73 rather than 116 the table inserted by 802.3ck swap the order of the first tw <i>Response Status</i> O <i>P</i> 155 <i>Nvidia</i> <i>Comment Status</i> X blayer (116.3) and and ISL fo "IS_" in the primitives has ou HYs do not have what one w	, and should be a, so the errors w to columns so 73 <i>L</i> 35 or inter-sublayer l utlived its usefulr ould recognise a	the left-most column. were introduced here in 3 comes first. # [731] link (178B), this would hess and should be as training, even if there	term has specific m (see 1.4.278) Anne variable tx_mode has state per figure 178 PATH_UP state. SuggestedRemedy Change "coordinate PATH_UP state (see Proposed Response Cl 116 SC 116.2 Dawe, Piers Comment Type TR is supported by - yu SuggestedRemedy	eaning for 1000BASE-T PHYs t x 178B.5 indicates that in the co as the value 'data', which is asso B-8. As such, it would be more of the transition to DATA mode." the Figure 178B-8)." Response Status 0 9 P155 Nvidia Comment Status X k holude an ILT sublayer:	that differs from wintext of ILT, "dat ociated with being clear if the text in to "coordinate the	what is intended here a mode" means the g in the PATH_UP 116.2.9 referred to th e transition to the

C/ 116 SC 116.2.9

C/ 116	SC 116.2.9	P 155	L 45	# 164	C/ 116	SC 116.3.2		P156	L 48	# 8
Huber, Tho	omas	Nokia			Marris, Arth	nur	Ca	adence Desig	gn Systems	
Comment	Туре Т	Comment Status X			Comment 7	ype E	Comment Stat	us X		
		y PHY that uses a 200GAUI-1	1 or 400GAUI-2.	What's listed here are	Striketh	rough and und	erlining not correct	on line 48		
	that support ILT				Suggestedl	Remedy				
to indic with "IL	ntent is to list the cate PHYs that o _T is supported l	e PMDs that support ILT, chai can support ILT, replace the s by any 200GBASE-R PHY tha 0GAUI-2, or any PHY that use	entence that intr at uses a 200GA	oduces the dashed list UI-1. any 400GBASE-	Figure	116–3," to "in F 116–3" and und	d strike throughs to igure 116–2 throug lerline "through Fig <i>Response Stat</i>	gh Figure 11 jure 116–3a'	6–3a". That is	Figure 116–2 and strikethrough "and
Proposed I	Response	Response Status 0								
					C/ 116	SC 116.3.2		P157	L 6	# 672
C/ 116	SC 116.2.9	P155	L155	# 53	Dawe, Pier	S	N	vidia		
D'Ambrosia	a. John	Futurewei, U.	S. Subsidiary of		Comment 7	ype E	Comment Stat	us X		
Comment	,	Comment Status X			Primitiv	es for other ins	tances, of inter-su	blayer interfa	aces, are	
		enly notes ILT for PHY types ort ILT if using 200Gb/s based			Suggested	2				
				sical layer can support	100 ma	iny commas				
ILT if a	in extender base	ed on a 200 Gb/s AUI is used.			Proposed F	•	Response Stat	us O		
ILT if a	n extender base me is also true					•	Response Stat	us O		
ILT if a The sa <i>Suggested</i> Implen https://	an extender base ame is also true f <i>Remedy</i> nent language o /www.ieee802.or	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12	/25_0605/dambro			•	Response Stat	us O		
ILT if a The sa Suggested Implen https:// 05.pdf	an extender base ime is also true <i>Remedy</i> nent language o /www.ieee802.or with editorial lice	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12 n Page 6 of rg/3/dj/public/adhoc/electrical/	/25_0605/dambro			•	Response Stat	us O		
ILT if a The sa <i>Suggested</i> Implen https://	an extender base ime is also true <i>Remedy</i> nent language o /www.ieee802.or with editorial lice	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12 In Page 6 of rg/3/dj/public/adhoc/electrical/ ense for each of the subclaus	/25_0605/dambro			•	Response Stat	us O		
ILT if a The sa Suggested Implem https:// 05.pdf Proposed I	an extender base ime is also true f Remedy ment language o (www.ieee802.or with editorial lice Response SC 116.3.2	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12 n Page 6 of rg/3/dj/public/adhoc/electrical/ ense for each of the subclaus <i>Response Status</i> O	25_0605/dambro	osia_3dj_elec_02_2506		•	Response Stat	us O		
ILT if a The sa Suggested Implen https:// 05.pdf Proposed I C/ 116 Dawe, Piel	an extender base ime is also true (Remedy nent language o /www.ieee802.or with editorial lice Response SC 116.3.2 rs	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12 In Page 6 of rg/3/dj/public/adhoc/electrical/ ense for each of the subclaus <i>Response Status</i> 0 <i>P</i> 156	25_0605/dambro	osia_3dj_elec_02_2506		•	Response Stat	JS O		
ILT if a The sa Suggested Implem https:// 05.pdf Proposed I C/ 116 Dawe, Pier Comment	in extender base ime is also true <i>Remedy</i> nent language o /www.ieee802.or with editorial lice <i>Response</i> SC 116.3.2 rs <i>Type</i> T	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12 In Page 6 of rg/3/dj/public/adhoc/electrical/ ense for each of the subclaus <i>Response Status</i> O <i>P</i> 156 Nvidia	/25_0605/dambro es noted. 	osia_3dj_elec_02_2506 # 671		•	Response Stat	us O		
ILT if a The sa Suggested Implem https:// 05.pdf Proposed I C/ 116 Dawe, Pier Comment	an extender base ime is also true in Remedy ment language of www.ieee802.or with editorial lice Response SC 116.3.2 rs Type T nat we are used in	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12 In Page 6 of rg/3/dj/public/adhoc/electrical/ ense for each of the subclaus <i>Response Status</i> O <i>P</i> 156 Nvidia <i>Comment Status</i> X	/25_0605/dambro es noted. 	osia_3dj_elec_02_2506 # 671		•	Response Stat	us O		
ILT if a The sa Suggested Implen https:// 05.pdf Proposed I C/ 116 Dawe, Pier Comment Now th Suggested	an extender base ime is also true i Remedy ment language o /www.ieee802.or with editorial lice Response SC 116.3.2 rs Type T hat we are used Remedy ve it, so that we	ed on a 200 Gb/s AUI is used. for 169.2.10, and 174.2.12 In Page 6 of rg/3/dj/public/adhoc/electrical/ ense for each of the subclaus <i>Response Status</i> O <i>P</i> 156 Nvidia <i>Comment Status</i> X	/25_0605/dambro es noted. <i>L</i> 14 e IS_ is redunda	bosia_3dj_elec_02_2506 # 671		•	Response Stat	JS O		

C/ 116 SC 116.3.2

C/ 116	SC 116.3.3.3.1	P161	L 4	# 165
Huber, Tho	mas	Nokia		

Comment Type ER Comment Status X

The text regarding the values of the SIGNAL_OK parameter is not sufficiently clear in a number of aspects. As the first paragraph states, IN_PROGRESS and READY are only supported if ILT is supported. The paragraphs about the OK and FAIL values refer to "if the service interface supports the values IN_PROGRESS and READY", which is needlessly complex wording; the condition is more succinctly expresed as "if ILT is supported", rather than if the states that ILT uses are supported. Further, since the meanings of OK and FAIL are different depending on whether ILT is used, instead of saying 'here are four values of SIGNAL_OK', and embedding in those definitions the details of whether ILT is used, and these values if ILT is not used'.

SuggestedRemedy

Replace the second through fifth paragraphs with this text (text spills beyond the bottom of the cell):

If ILT is not used:

A value of OK indicates that communication with the next lower sublayer is established (but does not guarantee that valid data is being presented to the next higher sublayer).

A value of FAIL indicates that the sublayer has not established commuication to the next lower sublayer, and data is not being presented to the next higher sublayer (the rx_symbol parameters are undefined).

If ILT is used:

A value of OK indicates that valid data is being presented by the sublayer to the next higher sublayer in the rx_symbol parameters.

A value of READY indicates that commuication is established with the next lower sublayer, but communication with the peer interface is not fully established yet. The rx_symbol parameters presented to the next higher sublayer do not respresent traffic data and might be invalid. Management intervention is not required.

A value of IN_PROGRESS indicates that the sublayer is establishing communication with the next lower subalyer. Data is not being presented by the sublayer to the next higher sublayer (the rx_symbol parameters are unspecified). Management intervention is not required.

A value of FAIL indicates that an attempt to communicate with the next lower sublayer has failed. Data is not being presented to the next higher sublayer (rx_symbol parameters are unspecified)

Proposed Response Response Status O

C/ 116	SC 1	16.3.3.3.1	F	°161	L16	# 673
Dawe, Pie	rs		Nvi	dia		
Comment comm		TR h *with* lo	Comment Statu	ıs X		
Suggested						
I think	this mea	ans from, no	ot with. Needs of	clarification		
Proposed	Respons	se l	Response Statu	s O		
C/ 116	SC 1	16.5	F	°167	L 32	# 457
Slavick, Je	eff		Bro	adcom		
Comment	Туре	E	Comment Statu	ıs X		
			pes that do odd sing multiple "or		is more clear if	it's a comma
oopuit	ated list I	instead of u	sing multiple of	options.		
Suggested	Remedy	/	5		GBASE-R 2:16	or 16:2 PMA if the
Suggested Chang PHY ir To: "by 400GE	<i>Remedy</i> ge "by the ncludes a y the 200 BASE-R	/ e 200GBAS any of these 0GBASE-R 16:2 PMA it	E-R 1:8 or 8:1 F PMA types."	PMA or 400 BASE-R 8: les any of th	1 PMA, 400GB	or 16:2 PMA if the ASE-R 2:16 PMA and s. "
Suggested Chang PHY ir To: "by 400GE Proposed	<i>Remedy</i> ge "by the ncludes a y the 200 BASE-R	/ e 200GBAS any of these 0GBASE-R 16:2 PMA it se /	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G i the PHY includ Response Statu	PMA or 400 BASE-R 8: les any of th	1 PMA, 400GB	ASE-R 2:16 PMA and
Suggested Chang PHY ir To: "by 400GE Proposed Cl 116	IRemedy ye "by the ncludes a y the 200 BASE-R Respons SC 1	/ e 200GBAS any of these 0GBASE-R 16:2 PMA it se /	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G f the PHY includ Response Statu	PMA or 400 BASE-R 8: les any of ti	1 PMA, 400GB hese PMA types	ASE-R 2:16 PMA and s. "
Suggested Chang PHY ir To: "by 400GE Proposed C/ 116 Slavick, Je	IRemedy pe "by the ncludes a y the 200 BASE-R Respons SC 1 eff	/ e 200GBAS any of these 0GBASE-R 16:2 PMA it se /	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G f the PHY includ Response Statu	PMA or 400 BASE-R 8: les any of the s O P 167 badcom	1 PMA, 400GB hese PMA types	ASE-R 2:16 PMA and s. "
Suggested Chang PHY ir To: "by 400GE Proposed Cl 116 Slavick, Je Comment Footno	IRemedy ye "by the ncludes a y the 200 BASE-R Respons SC 1 eff Type ote D is r	200GBAS any of these OGBASE-R 16:2 PMA it se / 16.5 ER	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G t the PHY includ Response Statu F Bro Comment Statu	PMA or 400 BASE-R 8: les any of the s O P167 padcom <i>I</i> s X	1 PMA, 400GB hese PMA types <i>L</i> 32	ASE-R 2:16 PMA and s. "
Suggested Chang PHY ir To: "by 400GE Proposed Cl 116 Slavick, Je Comment Footno	IRemedy ge "by the ncludes a y the 200 BASE-R Respons SC 1 eff Type ote D is n priately u	200GBAS any of these OGBASE-R 16:2 PMA it se // 16.5 ER new but not underlined.	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G t the PHY includ Response Statu F Bro Comment Statu	PMA or 400 BASE-R 8: les any of the s O P167 padcom <i>I</i> s X	1 PMA, 400GB hese PMA types <i>L</i> 32	ASE-R 2:16 PMA and s. " # <u>456</u>
Suggested Chang PHY ir To: "by 400GE Proposed Cl 116 Slavick, Je Comment Footno approp Suggested	IRemedy ge "by the ncludes a y the 200 BASE-R Respons SC 1 SC 1 eff Type ote D is r priately u IRemedy	200GBAS any of these OGBASE-R 16:2 PMA it ase // 16.5 ER new but not inderlined.	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G t the PHY includ Response Statu F Bro Comment Statu	PMA or 400 BASE-R 8: les any of the s O P167 badcom <i>us</i> X e new refer	1 PMA, 400GB hese PMA types <i>L</i> 32 ences in the No	ASE-R 2:16 PMA and s. " # <u>456</u>
Suggested Chang PHY ir To: "by 400GE Proposed Cl 116 Slavick, Je Comment Footno approp Suggested	IRemedy ye "by the holudes a y the 200 BASE-R Respons SC 1 eff Type bte D is n briately u IRemedy line foote	200GBAS any of these OGBASE-R 16:2 PMA it se // 16.5 ER new but not inderlined.	E-R 1:8 or 8:1 F e PMA types." 1:8 PMA, 200G f the PHY includ Response Statu F Bro Comment Statu underlined. Th	PMA or 400 BASE-R 8: les any of the s O P167 badcom <i>us</i> X e new refer n Table 116	1 PMA, 400GB hese PMA types <i>L</i> 32 ences in the No	ASE-R 2:16 PMA and s. " # <u>456</u>
Suggested Chang PHY ir To: "by 400GE Proposed Cl 116 Slavick, Je Comment Footno approp Suggested Under	IRemedy ye "by the holudes a y the 200 BASE-R Respons SC 1 eff Type bte D is n briately u IRemedy line foote	200GBAS any of these OGBASE-R 16:2 PMA it se // 16.5 ER new but not inderlined.	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G the PHY includ Response Statu F Bro Comment Statu underlined. The	PMA or 400 BASE-R 8: les any of the s O P167 badcom <i>us</i> X e new refer n Table 116	1 PMA, 400GB hese PMA types <i>L</i> 32 ences in the No	ASE-R 2:16 PMA and s. " # <u>456</u>
Suggested Chang PHY ir To: "by 400GE Proposed Cl 116 Slavick, Je Comment Footno approp Suggested Under	IRemedy ye "by the holudes a y the 200 BASE-R Respons SC 1 eff Type bte D is n briately u IRemedy line foote	200GBAS any of these OGBASE-R 16:2 PMA it se // 16.5 ER new but not inderlined.	E-R 1:8 or 8:1 F PMA types." 1:8 PMA, 200G the PHY includ Response Statu F Bro Comment Statu underlined. The	PMA or 400 BASE-R 8: les any of the s O P167 badcom <i>us</i> X e new refer n Table 116	1 PMA, 400GB hese PMA types <i>L</i> 32 ences in the No	ASE-R 2:16 PMA and s. " # <u>456</u>

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 116 SC 116.5 Page 18 of 149 6/16/2025 2:13:37 PM

C/ 116 SC 116.5	P168	L 9	# 674	C/ 119 SC	C 119.2.4.1	P 174	L 27	# 339	
Dawe, Piers	Nvidia			Zimmerman, G	eorge	ADI,APLgp,C	isco,Marvell,OnS	emi,Sony	
Comment Type E	Comment Status X			Comment Type	TR Comn	nent Status X			
106.25 GBd PMD lan In footnotes: at PMD				It seems that	comment also appli at the existing text, w	hich correctly descri	bes the behavior	being in the state	
SuggestedRemedy					s been replaced by ir specified in 802.3 is			tate diagram	
106.25 GBd lane a Also in Table 169-6.	at lane signaling rate (3 times,	presumably not	for 113.4375 GBd).	"using the s	specified in 602.3 is state-diagram encode mplementation, not a	r" and "using the alt	ernative stateless		
Proposed Response	Response Status O			this is a des "alternative	tion (including magic scriptive statement, n stateless encoder" s	ot a shall. If you fix tuff, which I presum	the language, yo e produces the sa	u don ['] t need all that ame output. (see ne	t ext
X 119 SC 119.2.1	P 174	L 9	# 675		n that). I can unders encoding, but that be				S
Dawe, Piers	Nvidia			The "shall"	- the requirement that	t this describes, app	pears to be in 119	0.2.6.3 (in the base	
Comment Type E	Comment Status X				ot modified), where it , PCS synchronizatio				
data-units					ms." (Figures 119-14				ns
SuggestedRemedy				The original	text simply needs to				
data units					do this, the alternativ agram and there is no				of
Proposed Response	oosed Response Response Status O			that the two are cons					
				same result	e suggested remedy . If they don't then th in the output of "state ecified.	ere is an interopera	bility issue and th	ne option and	ed
					hat hte same defect e here, it will need to be			When this is prope	rly
				SuggestedRem	edy				
				Replace line "The same 119.2.4.1.2 Delete 119.	e strikeout of P174 L2 es 31 through 50 ("Th encoding is describe but will be 119.2.4.1 2.4.1.1 heading and e of 119.2.4.1.2 (now	ne transmit PCS" t d as a stateless end 1 after these edits) contents	coder in 119.2.4.1	1.1." (note this is no)W
				Move P176 Delete head Replace P1 "The same	eout of P175 L36. L13&14 (body text o der 119.2.5.8.1. 75 L37 ("The receive decoding is describe but after these edits	PCS") through F d as a stateless de	9176 L6 (end of e		N
	red ER/editorial required GR dispatched A/accepted R/reje				nsatisfied Z/withdrav	C/ 11 vn SC 11	9 9.2.4.1	Page 19 of 1 6/16/2025 2	

Change title of 119.	2.5.8.2 (now 119.2.5.8.1) to Stat	eless decoder d	escription.	C/ 119	SC 119.2.4	4.1	P174	L 33	# 431
	0) Delete option "*SE" Uses state			Ran, Adee			Cisco System	IS	
	nsmit 64B/65B complies with Fig δ.3, change Status to M	gure 119-14", ch	ange subclause	Comment	Гуре Т	Commer	nt Status X		
Delete TF3 row. 119.7.4.2 (page 18 Change row RF7 Fe 119.2.6.3, change s	Delete TF3 row. 119.7.4.2 (page 181) Delete option "*SD" Uses stateless decoder row Change row RF7 Feature to Complies with Figure 119-14, subclause reference to 119.2.6.3, change status to M Delete RF8 row					perable with th	e previously defir	ned state-diagrai	ired for interoperability, m functions. more cumbersome.
Delete RF8 row Proposed Response							expected new proj		ready-defined PHYs point these non-
					Remedy				
C/ 119 SC 119.2. Dawe, Piers	re, Piers Nvidia					t use the Claus		, to enable the s	tateless functions to be
Comment Type E	Comment Status X			Proposed I			e Status O		
	encoder - there is only one kinc I "stateless encoder"	l of stateless end	coder, per speed, I			Reepone			
SuggestedRemedy				C/ 119	SC 119.2.4	4.1	P174	L 52	# 67
Delete "alternative,	here and in 119.2.5.8			Bruckman,	Leon		Nvidia		
Proposed Response	Response Status O			Comment Missing		Commer	nt Status X		
C/ 119 SC 119.2.	4.1 <i>P</i> 174	L 32	# 584	Suggested	Remedy				
Nicholl, Gary	Cisco System			Add a	dot at the end	of the phrase	(after "payload")		
Comment Type T	Comment Status X			Proposed I	Response	Response	e Status O		
with the legacy state types being defined	less encoder is optional and fully e-diagram encoder there is no ne in 802.3dj. The stateless encode 100GBASE-R PHY types.	eed to restrict it's	use to the new PHY						
Same comment for	the stateless decoder in 119.2.5	.8.							
SuggestedRemedy									
• •	ion in 119.2.4.1 and 119.2.5.8 to respecively, to be used for all 20								
Proposed Response	Response Status O								

C/ 119 SC 119.2.4.1

/ 119	SC 119.2.4.1	.2 P174	L17	# 331	C/ 119	SC 11	9.3.1	P 177	L 20	# 68
immermar	n, George	ADI,APLgp,	Cisco,Marvell,On	Semi,Sony	Bruckman	, Leon		Nvidia		
mment T	ype ER	Comment Status X			Comment	Туре -	TR	Comment Status X		
state dia	agram - leads t	or the stateless decoder - pr he reader on a wandering tr	ip through several	places in IÉEE Std				d for 1 to 15 errors, no bin f are defined for 0 to 15.	or 0 errors. In 45	2.1.264 the PMA test
		confusion than clarity. It is r ent, so it should be written for			Suggested	Remedy				
		scription - much longer that			Define	the FEC	codewo	ord error bin counters to be	0 to 15 errors	
could ha	ave been stated	9.2.6.2.2 seemingly for a ve directly. Then it sends yo	u to Table 172-1 fo	or the mapping itself	Proposed	Response	9	Response Status O		
function	"ENCODE" in	f, not 802.3-2022), which h 172.2.6.2.3, which itself po	ints to 119.2.6.2.3	, which then says "the	C/ 119	SC 11	9.6	P 178	L19	# 441
		Il encode the block as spec 3 encoding, and itself most			Ran, Adee	•		Cisco Syste	ns	
		you're done, it is difficult to			Comment	Туре -	TR	Comment Status X		
on me.	It appears to b	p ends up. If the stateless e largely teh mapping in 82 ribed directly				neout for um time to		_inhibit_timer, minimum 60 \N.	seconds, creates	s an unacceptably lor
and any changes described directly. ggestedRemedy								ster restart of AN was pres g/3/dj/public/25_05/ran_3dj		
The sta		.2.4.1.2 to read: generates 66-bit blocks bas	sed only on the cu	rrent and preceding	The ch	anges pr	oposed	to clause 119 appear on sl	des 5-6 of ran_3	dj_02a_2505.
		III/400GMII transfer is map	oed into a 72-bit ve	ector tx_raw<71:0>, by	Suggestea	Remedy				
placing TXD<0>	TXC<0> thorou > thorugh TXD<	igh TXC<7> in tx_raw<0> ti 63> in tx_raw<8> through t	nrough tx_raw<7>, x_raw<71>, respe	respectively, and ctively. The encoder	Implen license		changes	to clause 119 per slides 5-	6 of ran_3dj_02a	_2505, with editorial
tx_code LBLOC	ed defined in 1 ² K_T, and when	LOCK_T and EBLOCK_T a 19.2.6.2.1. When reset is o an invalid block type is spe	ne, the encoder ou cified (see Table 1	utputs the value of 172-1) it outputs	Proposed	Response	9	Response Status O		
	gs specified in	e the encoding follows 119. Table 82-1.	2.3, which uses th	e control codes and	C/ 120	SC 12	20.1.4	P 184	L11	# 677
Similar	v change text o	f 119.2.8.2 as above for the	docodor		Dawe, Pie	rs		Nvidia		
	, ,		e decoder.		Comment	Туре -	TR	Comment Status X		
posea R	Response	Response Status O			Confus	sion betw	een outp	out and transmit side (poss	bly also in items	5 and 6)
					Suggested	Remedy				
						e " the signit direction		rate range for a PMA out PMA"	put" to " the signa	aling rate range in the
					Proposed	Response	2	Response Status O		

C/ 120 SC 120.1.4

C/ 120F SC 120)F.1	P662	L 1	# 539	C/ 169	SC 169.1.3	P186	L 10	# 678
evin, Itamar		Altera corp.			Dawe, Pie	rs	Nvidia		
Comment Type T	R Commen	t Status X			Comment	Туре Е	Comment Status X		
optional TXEQ.	proved channel rea There are different cations (see 176C.	TX tuning mecha	inisms in C2C a	nt to content with nd C2M and also in the	table i		they all are, it's in the text that ordy; it uses sentence constr		
SuggestedRemedy					Suggested	Remedy			
Align this sub-cla	use with annex 17	6C.3 functional s	pecification		Chang	ge "800 Gb/s PH	Y using" to "Uses"		
Proposed Response	Response	e Status O			Proposed	Response	Response Status 0		
/ 120F SC 120)F.1	P663	L 38	# 573	C/ 169	SC 169.1.4	P187	L 1	# 233
licholl, Shawn		AMD			Huber, Th	omas	Nokia		
omment Type E	Commen	t Status X			Comment	Туре Т	Comment Status X		
8, and 1.6TAUI-1		o to the ISO/IEC	Open System In	400GAUI-4, 800GAUI- terconnection (OSI) (cluttered).	200G/	,	00G/lane PHYs and AUIs. 17 es as Required. As such, it sl		
Readability could	l be enhanced with	a more concise	approach.		Suggested	,			
uggestedRemedy							show 178B as mandatory for 8/CR8. Update table 169-3 to		
INTERFACE" wit	olumn of the legen h "AUI", replacing ICAL MEDIUM AT	"MEDIA INDEPE	NDENT INTER	IENT UNIT FACE" with "MII", and	(incluc condit update	ling FR4-500) ar ional for all PHY	id conditional for xR8. Updat s. It may be necessary to als the 800GBASE-xR8 PHYs)	te table 169-3a to so update the PM	o include 178B as ID clauses that were
INTERFACE", ad	column of the lege dding "MII = MEDIA IUM ATTACHMEN	A INDEPENDEN			Proposed	Response	Response Status 0		

There are other Figures throughout P802.3dj (especially in the Annexes) whose legend could be improved in a similar manner.

Proposed Response Response Status **0**

C/ 169 SC 169.1.4

C/ 169	SC 169.2.4a	P 189	L 47	# 679	C/ 169	SC 169.2.10	P190	L 35	# 681
Dawe, Pie	rs	Nvidia			Dawe, Pie	ers	Nvidia		
Comment	Туре Е	Comment Status X			Comment	Type TR	Comment Status X		
		ment Unit Interface (800GAU		00GAUI-n is defined fo	r ILT ja	rgon again.			
		chip-to-module (C2M) impler *is* specified in Annex 120F		2	Suggestee	dRemedy			
		is specified in Annex 120G			See a	n earlier commer	ıt		
Suggested	lRemedy				Proposed	Response	Response Status O		
		nent Unit Interface (800GAUI-		-n is defined for chip-t	D-				
		-module (C2M) implementation -n C2C are specified, in Ann		nex 176C.	C/ 169	SC 169.2.10	P 190	L 41	# 166
	pes of 800GAUI				Huber, Th		Nokia	241	# 100
Proposed	Response	Response Status 0			Comment		Comment Status X		
						51	DATA mode" is intended to r	nean here in the	context of ILT. that
7 169	SC 169.2.4b	P190	L3	# 680	term h	nas specific mear	ing for 1000BASE-T PHYs	that differs from	what is intended here
Dawe, Pie		Nvidia	23	# 000			'8B.5 indicates that in the co he value 'data', which is ass		
Jawe, Tie					state	per figure 178B-8	. As such, it would be more		
Commont									
		Comment Status X			the PA	ATH_UP state.			
In the	title: FEC sublay	er -> plural, or spell them out			the PA Suggestee	=			
In the Suggested	title: FEC sublay			E-ER1 FEC sublayer	Suggested Chang	_ dRemedy	e transition to DATA mode." igure 178B-8)."	to "coordinate th	e transition to the
In the Suggested 800GE	title: FEC sublay IRemedy BASE-R Inner FE	er -> plural, or spell them out		E-ER1 FEC sublayer	Suggestee Chang S PATH	<i></i>		to "coordinate th	e transition to the
In the Suggested 800GE Proposed	title: FEC sublay IRemedy BASE-R Inner FE	er -> plural, or spell them out C, 800GBASE-LR1 Inner FE		SE-ER1 FEC sublayer # <u>57</u>	Suggestee Chang S PATH	dRemedy ge "coordinate the _UP state (see F	igure 178B-8)."	to "coordinate th	e transition to the # 297
In the Suggested 800GE Proposed	Kitle: FEC sublay Remedy BASE-R Inner FE Response SC 169.2.9	er -> plural, or spell them out C, 800GBASE-LR1 Inner FE <i>Response Status</i> O	C and 800GBAS		Suggested Chang S PATH Proposed	dRemedy ge "coordinate the _UP state (see F Response SC 169.2.10	igure 178B-8)." Response Status O	L 42	
In the Suggested 800GE Proposed Cl 169 Jones, Ch	Kitle: FEC sublay IRemedy BASE-R Inner FE Response SC 169.2.9 ad	er -> plural, or spell them out C, 800GBASE-LR1 Inner FE <i>Response Status</i> O <i>P</i> 190	C and 800GBAS		Suggestee Chang PATH Proposed Cl 169	dRemedy ge "coordinate the _UP state (see F Response SC 169.2.10	igure 178B-8)." Response Status O P190	L 42	
In the Suggested 800GE Proposed Cl 169 Jones, Ch Comment	Kitle: FEC sublay IRemedy BASE-R Inner FE Response SC 169.2.9 ad	er -> plural, or spell them out EC, 800GBASE-LR1 Inner FE <i>Response Status</i> O <i>P</i> 190 Cisco System	C and 800GBAS		Suggestee Chang PATH Proposed C/ 169 Brown, Ma Comment ILT is	dRemedy dRemedy _UP state (see F Response SC 169.2.10 att Type T supported not jus	igure 178B-8)." <i>Response Status</i> O <i>P</i> 190 Alphawave S	L 42 Semi	# 297
In the Suggested 800GE Proposed Cl 169 Jones, Ch Comment Use of	IRemedy IRemedy BASE-R Inner FE Response SC 169.2.9 ad Type E "may".	er -> plural, or spell them out EC, 800GBASE-LR1 Inner FE <i>Response Status</i> O <i>P</i> 190 Cisco System	C and 800GBAS		Suggestee Chang PATH Proposed Cl 169 Brown, Ma Comment ILT is PHY t	dRemedy ge "coordinate the _UP state (see F Response SC 169.2.10 att Type T supported not jus ypes listed here.	igure 178B-8)." <i>Response Status</i> O <i>P</i> 190 Alphawave S <i>Comment Status</i> X	L 42 Semi	# 297
In the Suggested 800GE Proposed Cl 169 Jones, Ch Comment Use of Suggested	In the second se	er -> plural, or spell them out EC, 800GBASE-LR1 Inner FE <i>Response Status</i> O <i>P</i> 190 Cisco System	C and 800GBAS <i>L</i> 25 s, Inc.		Suggestee Chang PATH Proposed C/ 169 Brown, Ma Comment ILT is PHY t Suggestee	dRemedy dRemedy ge "coordinate the _UP state (see F <i>Response</i> SC 169.2.10 att <i>Type</i> T supported not jus ypes listed here. dRemedy	igure 178B-8)." <i>Response Status</i> O <i>P</i> 190 Alphawave S <i>Comment Status</i> X	L 42 Semi	# 297
Suggested 800GE Proposed Cl 169 Jones, Ch Comment Use of Suggested	IRemedy SASE-R Inner FE Response SC 169.2.9 ad Type E "may". IRemedy e "may optionally	er -> plural, or spell them out EC, 800GBASE-LR1 Inner FE <i>Response Status</i> O <i>P</i> 190 Cisco System <i>Comment Status</i> X	C and 800GBAS <i>L</i> 25 s, Inc.		Suggestee Chang PATH Proposed Cl 169 Brown, Ma Comment ILT is PHY t Suggestee Chang A phy 800Gi DR4-2 Updat	dRemedy ge "coordinate the _UP state (see F Response SC 169.2.10 att Type T supported not jus ypes listed here. dRemedy ge to: sical layer implen BASE-KR4, 800G	igure 178B-8)." <i>Response Status</i> O <i>P</i> 190 Alphawave S <i>Comment Status</i> X st in the PHYs, but also in the nentation supports ILT if any BASE-CR4, 800GBASE-DF 4, 800GBASE-LR4, 800GAI 4.2.12 similarly.	L 42 Semi e xMII extenders r of the following R4, 800GBASE-F	# 297 and not limited to the are implemented: R4-500, 800GBASE

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C/ 169	SC 169.2.10	P 190	L 43	# 167	C/ 169	SC 169.3.2	P 191	L17	# 563
Huber, Tho	mas	Nokia			Nicholl, Sh	awn	AMD		
Comment T	ype T	Comment Status X			Comment	Type TR	Comment Status X		
		orted by any 800GBASE-R PI PMDs that can support ILT.	HY that uses a 2	200G/lane AUI. The			een the Inner FEC or Segment		
SuggestedF	Remedy				This is	the first (and o	only) mention of "Segmented F	EC" in P802.3dj	document.
to indica with "IL	ate PHYs that ca	PMDs that support ILT, char an support ILT, replace the s y any 800GBASE-R PHY tha	entence that intr	oduces the dashed list	Suggested Propos Proposed I	sed text: " be	tween the Inner FEC or 800GE Response Status 0	ASE-ER1 FEC	and the PMA, PCS'
Proposed R	Response	Response Status 0							
					C/ 169	SC 169.3.2	P 191	L17	# 682
2/ 169	SC 169.2.10	P 190	L 52	# 546	Dawe, Pie	rs	Nvidia		
Maki, Jeffer		Juniper Netwo	-	" 040	Comment	Туре Е	Comment Status X		
Comment T		Comment Status X	1113		missin	g commas: the	PHY 800GXS above isn't calle	ed the PMA serv	vice interface
no reas receiver	on to exclude co r adaption and th	BASE-ER1-20, and 800GBA oherent PHY types from using hus ability to receive Ready 1 he case for IMDD PHY types	g ILT. They will I o Send signalin	penefit from optical	Insert Proposed	comma Response	Response Status O		
SuggestedF	Remedy								
		00GBASE-ER1-20, and 800 Indatory ILT support for these		ee additional comments	C/ 169	SC 169.3.2		L 38	# 564
Proposed R	Response	Response Status 0			Nicholl, Sh		AMD		
					Comment		Comment Status X		
C/ 169	SC 169.3.2	P191	L17	# 168		BASE-ER1 FE	owing 800GBASE-R inter-subla	ayer service inte	fraces including
luber, Tho	mas	Nokia			Suggested	Remedy			
Comment T		Comment Status X					800GBASE-R inter-sublayer se		
While th	ne ER1 FEC is a	an example of a segmented F o probably better to call it the			800GE	BASE-ER1 FEG		sublayer service	e interfaces including
SuggestedF					Proposed I	Response	Response Status O		
	•	EC" to "ER1 FEC":							
Proposed R	0	Response Status O							

C/ 169 SC 169.3.2

	0.4 P19	96 L12	# 341	C/ 169	SC 169.5	P 199	L1	# 565
e Koos, Andras	Microe	chip Technology		Nicholl, Sha	wn	AMD		
omment Type T	Comment Status	Х		Comment T	ype ER	Comment Status X		
reach - given the depth on the nea guaranteeing no What are the ma clear. Would the near-e physical layer's c There is never ar	for specifying the max dela delays in the near-end and r-end, there is a maximum buffer overflow when using x delays through the near-end buffer device be design composition? Maybe, mayb ny awareness of the far-end ay not have an MII extende	far-end physical laye length of medium that link PAUSE. and and far-end physic ed with some awarene e not. I physical layer's comp	rs, and given the buffer can be supported while cal layers? It is not at all ess of the near-end ponsition. Crucially, the	contains Current SuggestedF	s a typo. text: "Replac <i>Remedy</i> ed text: "Repla	69-5 800GBASE-R Skev e Figure 169-4 with the foll ace Figure 169-5 with the foll <i>Response Status</i> O	owing figure:"	vith two 800GAUI-n"
As written, the sta through the entire To be fair, this de 400G PHYs. Bef	through the extra PMA layer andard is not very helpful in ety of the physical layer give eficiency has existed since I fore MII extenders, the rang r-bars due to an extra AUI+	I figuring out the maxing on the range of possib MII-Extenders were in le of physical layer sta	ble physical layer stacks. troduced for 200G and acks were quite limited,	Cl 169 Brown, Matt Comment T	vpe E	P201 Alphaway <i>Comment Status</i> X otes a and b are identical.	L 36 ve Semi	# 327
Same comment or ggestedRemedy Consider adding	SuggestedF Merge f Proposed R	ootnote a and	d b into a single footnote. Response Status O					
ALL possible phy	vsical layer stacks) through	1,5,5,5						
ALL possible phy				C/ 169	SC 169.8	P 201	L 48	# 170
ALL possible phy Proposed Response	Response Status	0		Cl 169 Huber, Tho		Р 201 Nokia	L 48	# 170
ALL possible phy Proposed Response 7 169 SC 169 Huber, Thomas Comment Type T In Figures 169-4 FEC. PuggestedRemedy	Response Status 0.5 P19 Nokia	O L 14 X hore clear that "Inner F	# 169	Huber, Tho Comment T Subclau by 802. SuggestedF Bring in Add this	nas ype T ise 169.8 (Plo 3dj. <i>Remedy</i> clause 169.8 editing instru	Nokia Comment Status X CS summary) needs to be uction:	updated to refer to r	new PMD clauses adde
ALL possible phy roposed Response / 169 SC 169 uber, Thomas omment Type T In Figures 169-4 FEC. uggestedRemedy Replace "Inner F	Response Status 0.5 P19 Nokia <i>Comment Status</i> and 169-5, it needs to be m EC" in both figures with "Inr	O B L14 X more clear that "Inner F mer FEC or ER1 FEC"	# 169	Huber, Tho Comment T Subclau by 802.3 SuggestedF Bring in Add this Change follows	mas ype T ise 169.8 (Plo 3dj. <i>Remedy</i> clause 169.8 editing instru- the first para	Nokia Comment Status X CS summary) needs to be uction: Igraph of subclause 169.8 (updated to refer to r	new PMD clauses adde Std 802.3df-2024) as
ALL possible phy Proposed Response 2/ 169 SC 169 Huber, Thomas Comment Type T In Figures 169-4 FEC. SuggestedRemedy	Response Status 0.5 P19 Nokia <i>Comment Status</i> and 169-5, it needs to be m EC" in both figures with "Inr	O B L14 X more clear that "Inner F mer FEC or ER1 FEC"	# 169	Huber, Tho Comment T Subclau by 802.3 SuggestedF Bring in Add this Change follows Copy in	mas ype T ise 169.8 (Plo 3dj. clause 169.8 clause 169.8 clause 169.8 the first para	Nokia Comment Status X CS summary) needs to be uction:	updated to refer to r (as added by IEEE s	new PMD clauses adde Std 802.3df-2024) as se 170 through Clause

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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Р 202 Nvidia	L 12	# 683	C/ 171 SC 1	11.1	P211	L 24	
			Nicholl, Shawn		AMD		# 566
Comment Status X			Comment Type	E	Comment Status X		
aracteristics of the Recon	ciliation Sublayer	r (RS) *The* RS,	In the legend f System Interce	or Figure 17	1-1 "800GXS and 1.6TX SI) reference model and onto a second line. It dec	the IEEE 802.3 E	Ethernet model"
o/s Reconciliation Sublaye	er (RS) for		Currently "1.6 Currently "800	ΓAUI-n = 1.6 GAUI-n = 80	Tb/s n-LANE ATTACHM 0 Gb/s n-LANE ATTACH	ENT UNIT INTEI MENT UNIT INT	RFACE" is wrapping. ERFACE" is wrapping.
Response Status O			SuggestedRemedy Propose the fo				
P 207 Nvidia Comment Status X tions for MAC rate, as in 8 Response Status O	L 7 31.5.2.3 and 171.9	# <u>684</u> 9.3	etc.) further to 3a Example Option2) Prop defined in Sub words, for Figu "800GAUI-n = deemed neces UNIT INTERF	the right. The 1.6TBASE-F -Clause 1.4. ure 171-1, pr 800 Gb/s n- ssary by the ACE" to the	opose the legend say "1.6 LANE ATTACHMENT UN editors), add a new entry legend.	avoid the text wr XS" for an examp of the figure. The erface (AUI)" of 8 6TAUI-n = 1.6 Tb JIT INTERFACE"	rap. See "Figure 171- ole of this solution. e term AUI is already 302.3-2022. In other b/s n-LANE AUI" and ". Optionally (if
			Dawe, Piers Comment Type An 800GMII/1. 174A.4": is pa SuggestedRemedy A 800GMII Ex	TR 6 6TMII Exten rtly out of sco / tender using	der is expected to meet th ope SM-PMAs or a 1.6TMII E		
				defined in Sub words, for Figu "800GAUI-n = deemed neces UNIT INTERF. Proposed Respons Cl 171 SC 1 Dawe, Piers Comment Type An 800GMII/1. 174A.4": is pal SuggestedRemedy A 800GMII Ex	defined in Sub-Clause 1.4. words, for Figure 171-1, pr "800GAUI-n = 800 Gb/s n- deemed necessary by the UNIT INTERFACE" to the <i>Proposed Response</i> <i>C</i> / 171 SC 171.1a Dawe, Piers <i>Comment Type</i> TR An 800GMII/1.6TMII Exten 174A.4": is partly out of sco <i>SuggestedRemedy</i> A 800GMII Extender using	defined in Sub-Clause 1.4.198 "Attachment Unit Inte words, for Figure 171-1, propose the legend say "1.4 "800GAUI-n = 800 Gb/s n-LANE ATTACHMENT UN deemed necessary by the editors), add a new entry UNIT INTERFACE" to the legend. Proposed Response Response Status O C/ 171 SC 171.1a P212 Dawe, Piers Nvidia Comment Type TR Comment Status X An 800GMII/1.6TMII Extender is expected to meet the 174A.4": is partly out of scope SuggestedRemedy	defined in Sub-Clause 1.4.198 "Attachment Unit Interface (AUI)" of E words, for Figure 171-1, propose the legend say "1.6TAUI-n = 1.6 Tt "800GAUI-n = 800 Gb/s n-LANE ATTACHMENT UNIT INTERFACE deemed necessary by the editors), add a new entry (above DTE) "AU UNIT INTERFACE" to the legend. <i>Proposed Response</i> Response Status O <i>Cl</i> 171 <i>SC</i> 171.1a <i>P</i> 212 <i>L</i> 14 Dawe, Piers Nvidia <i>Comment Type</i> TR <i>Comment Status</i> X An 800GMII/1.6TMII Extender is expected to meet the frame loss rat 174A.4": is partly out of scope <i>SuggestedRemedy</i> A 800GMII Extender using SM-PMAs or a 1.6TMII Extender is expect

C/ 171 SC 171.1a

C/ 171 SC 171.3.3 P216	L 2	# 686	Cl 172 SC 172.2.5.2 P242 L9 # 171
Dawe, Piers Nvidia			Huber, Thomas Nokia
Comment Type T Comment Status X			Comment Type T Comment Status X
average data rate on the 800GMII - there are two 80	OGMIIs. Simila	arly in 171.3.3a	The text here was modified from "PMA service interface lanes" to "service interface lanes
SuggestedRemedy			since the sublayer below the PCS may be a FEC or a PMA. But just saying "service interface lanes" is not sufficiently clear that it is the service interface from the next lower
the average data rate across the 800GMII in the PHY Similarly in 171.3.3	800GXS		layer.
Proposed Response Response Status O			SuggestedRemedy Change the first sentence to read:
			"The PCS lanes might be received in any order from the service interface below the PCS
C/ 171 SC 171.3.3a P216	L 25	# 687	Proposed Response Response Status O
Dawe, Piers Nvidia			
Comment Type E Comment Status X			Cl 172 SC 172.2.5.2 P242 L18 # 432
will is deprecated			Ran, Adee Cisco Systems
SuggestedRemedy			Comment Type TR Comment Status X
Change will be to is - several places			As shown in https://www.ieee802.org/3/dj/public/25_05/ran_3dj_03a_2505.pdf, there is a
Proposed Response Response Status O			potential for corrupted data reaching the PCS client after uncorrectable codeword is processed, due to error multiplication due to scrambler error multiplication that occurs separately in flow 0 and flow 1.
	L 47	# 688	For the 800GBASE-R PCS, this can be addressed by adding a requirement that the Ree
Dawe, Piers Nvidia			Solomon decoder applies error extension, as described on slides 23 and 24 of
Comment Type TR Comment Status X			ran_3dj_03a_2505.
For the PHY XS, this may be a misuse of "Transmit"			Since this PCS is already defined, this comment may raise questions of scope. It is
SuggestedRemedy			provided to facilitate discussion of the technical change separately from the scope of the project. If necessary, a maintenance request will be submitted in the future.
Use separate items for PHY XS and DTE XS			SuggestedRemedy
Proposed Response Response Status O			Bring 172.2.5.3 from 802.3df-2024 into this amendment, and add an exception to the list.
			that if an uncorrectable codeword is detected in any of the two flows, the 257b block following the uncorrectable codeword is replaced, after processing by the descrambler of
CI 172 SC 172 P236	L 0	# 240	that flow, by a block corresponding to 4 EBLOCK_R blocks (or 16 error characters). Implement with editorial license.
Cox, Ian Broadcom			Proposed Response Response Status O
Comment Type E Comment Status X			
The header on pages 236-243 reads P802.3df and no	ot dj.		
SuggestedRemedy			
Change the header from 802.3df to 802.3dj			
Proposed Response Response Status O			

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 172 SC 172.2.5.2 Page 27 of 149 6/16/2025 2:13:37 PM

C/ 172 SC 172.6	P 242	L35	# 442	C/ 173 SC 173.1.1	P 244	L18	# 689
Ran, Adee	Cisco System	s		Dawe, Piers	Nvidia		
Comment Type TR	Comment Status X			Comment Type E	Comment Status X		
	_fail_inhibit_timer, minimum 60 s	econds, create	s an unacceptably long	forms			
minimum time to ret	IY AN.			SuggestedRemedy			
	e faster restart of AN was preser			types			
https://www.ieee802	2.org/3/dj/public/25_05/ran_3dj_0	02a_2505.pdf.		Proposed Response	Response Status O		
The changes propos	sed to clause 172 appear on slid	es 5-6 of ran_3	dj_02a_2505.				
SuggestedRemedy				C/ 173 SC 173.1.1	a P 244	L35	# 690
Implement the chan license.	ges to clause 172 per slides 5-6	of ran_3dj_02a	_2505, with editorial	Dawe, Piers	Nvidia		
Proposed Response	Deserves Status			Comment Type T	Comment Status X		
Toposed Response	Response Status O			supports			
				SuggestedRemedy			
/ 172 SC 172.6	P 242	L 36	# 172	connects to			
luber, Thomas	Nokia			Proposed Response	Response Status 0		
Comment Type E	Comment Status X						
	AN is mandatory are already exercise and the same of the same and the same and the same are as a same and the sa			C/ 173 SC 173.1.1	a P 244	/ 25	# 004
	ements apply to CRn and KRn Pl		aybe useful to at least			L35	# 691
SuggestedRemedy				Dawe, Piers	Nvidia		
	E-CR8, 800GBASE-CR4, 800GE Rn or 800GBASE-KRn PMD"	BASE-KR8, or 8	00GBASE-KR4 PMD"	Comment Type T any in Table 169-2	Comment Status X *and* Table 169-3.		
Proposed Response	Response Status 0			SuggestedRemedy			
				any in Table 169-2	*or* Table 169-3.		
172 SC 172.7.4	4.7 P243	L17	# 173	Proposed Response	Response Status O		
luber, Thomas	Nokia						
comment Type E	Comment Status X						
	Rn rather than enumerate all the	e CRn and KRn	PMDs in the PICS				
SuggestedRemedy							
Replace "800GBAS	E-CR8, 800GBASE-CR4, 800GE Rn or 800GBASE-KRn PMD"	BASE-KR8, or 8	00GBASE-KR4 PMD"				
Proposed Response	Response Status 0						
-	· ·						

C/ 173 SC 173.1.1a

CI 173 SC 173.4	.2 P244	L 46	# 174	C/ 174 SC ·	174.1.4	P 248	L 30	# 176
Huber, Thomas	Nokia			Huber, Thomas		Nokia		
Comment Type T	Comment Status X			Comment Type	т	Comment Status X		
	BM to SM PMA is needed, the			Table 174-3 is	s missing	clause 73 Auto-Negotiation		
	BASE-LR4 module that has an the optical interface requires			SuggestedRemed	ly			
	E-R PCS, 32:8 PMA, [800GAU					se 73 Auto-Negotiation and inc 6TBASE-CR8.	dicate it as Mai	ndatory for both
SuggestedRemedy				Proposed Respon	ise	Response Status 0		
Add "32:4 SM-PMA	, " after PHY 800GXS.							
Proposed Response	Response Status O			C/ 174 SC	174.1.4	P 248	L 32	# 528
				Dudek, Mike		Marvell		
173 SC 173.4	.2 P245	L 36	# 175	Comment Type	т	Comment Status X		
luber, Thomas	Nokia					tion is missing from the electr 116-3 amd 116-3a.	ical Phys in tal	ble 174-3. (Compare
omment Type T	Comment Status X							
	Common Claudo A			Currence to dDemocrat				
Figure 173-3 is mis	sing the possibility that a 32:4 F			SuggestedRemed	ly			
Figure 173-3 is mis explanatory notes b	sing the possibility that a 32:4 F and c seem unnecessary. It s	hould be quite ob	vious to any reader that	SuggestedRemed Add it.	ly			
Figure 173-3 is mis explanatory notes t 'inst' is PHY_XS wh	sing the possibility that a 32:4 F	hould be quite ob	vious to any reader that		-	Response Status O		
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P SuggestedRemedy	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA).	hould be quite ob \ is a PHY 800GX	ovious to any reader that (S and FEC when it is a	Add it. Proposed Respon	nse			
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P uggestedRemedy At the bottom of the	sing the possibility that a 32:4 F o and c seem unnecessary. It s ien the sublayer below the PMA MA when it is a PMA).	hould be quite ob \ is a PHY 800GX t lanes and 32 inp	vious to any reader that (S and FEC when it is a put lanes, add "or 32:4	Add it. Proposed Respon	-	Response Status 0 P248	L 48	# 423
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P uggestedRemedy At the bottom of the PMA" after PHY 80	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA).	hould be quite ob h is a PHY 800GX t lanes and 32 ing f "inst", add "or P	vious to any reader that (S and FEC when it is a put lanes, add "or 32:4 'MA" after PHY_XS.	Add it. Proposed Respon	nse			# 423
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in	hould be quite ob h is a PHY 800GX t lanes and 32 ing f "inst", add "or P	vious to any reader that (S and FEC when it is a put lanes, add "or 32:4 'MA" after PHY_XS.	Add it. Proposed Respon Cl 174 SC - Ran, Adee Comment Type	nse 174.2.1 TR	P 248 Cisco Systems Comment Status X	3	
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and	sing the possibility that a 32:4 F o and c seem unnecessary. It s ien the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o	hould be quite ob h is a PHY 800GX t lanes and 32 ing f "inst", add "or P	vious to any reader that (S and FEC when it is a put lanes, add "or 32:4 'MA" after PHY_XS.	Add it. Proposed Respon Cl 174 SC Ran, Adee Comment Type "MII" is define	174.2.1 TR ed in 1.4.3	P248 Cisco Systems <i>Comment Status</i> X 93 with reference to Clause 2	s 2, which is 100) Mb/s. It is irrelevant t
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P <i>tuggestedRemedy</i> At the bottom of the PMA" after PHY 80 Delete notes b and	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in	hould be quite ob h is a PHY 800GX t lanes and 32 ing f "inst", add "or P	vious to any reader that (S and FEC when it is a put lanes, add "or 32:4 'MA" after PHY_XS.	Add it. Proposed Respon Cl 174 SC Ran, Adee Comment Type "MII" is define this project. S	174.2.1 TR ed in 1.4.3 aying that	P 248 Cisco Systems Comment Status X	s 2, which is 100) Mb/s. It is irrelevant t
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and Proposed Response	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in <i>Response Status</i> O	hould be quite ob h is a PHY 800GX t lanes and 32 ing f "inst", add "or P	vious to any reader that (S and FEC when it is a put lanes, add "or 32:4 'MA" after PHY_XS.	Add it. Proposed Respon Cl 174 SC Ran, Adee Comment Type "MII" is define	174.2.1 TR ed in 1.4.3 aying that	P248 Cisco Systems <i>Comment Status</i> X 93 with reference to Clause 2	s 2, which is 100) Mb/s. It is irrelevant t
Figure 173-3 is mis explanatory notes to 'inst' is PHY_XS wh FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and Proposed Response	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in <i>Response Status</i> O	hould be quite ob a is a PHY 800GX t lanes and 32 inp f "inst", add "or P a the explanation of	ovious to any reader that (S and FEC when it is a put lanes, add "or 32:4 MA" after PHY_XS. of 'inst'.	Add it. Proposed Respon Cl 174 SC Ran, Adee Comment Type "MII" is define this project. S match this define "MII" has been	TR d in 1.4.3 aying that finition. n used in	P248 Cisco Systems Comment Status X 93 with reference to Clause 2 t "The MII is not intended to be other clauses in a way that co	s 2, which is 100 e physically ins) Mb/s. It is irrelevant f stantiated" does not
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and Proposed Response	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in <i>Response Status</i> 0 .4 <i>P</i> 248	hould be quite ob a is a PHY 800GX t lanes and 32 inp f "inst", add "or P a the explanation of	ovious to any reader that (S and FEC when it is a put lanes, add "or 32:4 MA" after PHY_XS. of 'inst'.	Add it. Proposed Respon Cl 174 SC Ran, Adee Comment Type "MII" is define this project. S match this define	TR d in 1.4.3 aying that finition. n used in	P248 Cisco Systems Comment Status X 93 with reference to Clause 2 t "The MII is not intended to be other clauses in a way that co	s 2, which is 100 e physically ins) Mb/s. It is irrelevant f stantiated" does not
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wh FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and Proposed Response C/ 174 SC 174.1 Huber, Thomas Comment Type T ILT is mandatory for	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in <i>Response Status</i> O .4 P248 Nokia <i>Comment Status</i> X r 200G/lane PHYs and AUIs. 17	hould be quite ob a is a PHY 800GX t lanes and 32 ing f "inst", add "or P the explanation L1 78B appears in th	wious to any reader that KS and FEC when it is a put lanes, add "or 32:4 MA" after PHY_XS. of 'inst'. # 234 the tables in the PMD	Add it. Proposed Respon Cl 174 SC Ran, Adee Comment Type "MII" is define this project. S match this def "MII" has been and should no The text can s	TR TR d in 1.4.3 aying that finition. n used in ot be carri say that 1	P248 Cisco Systems Comment Status X 93 with reference to Clause 2 t "The MII is not intended to be other clauses in a way that co ed on. .6T Ethernet uses a specific ir	s 2, which is 100 e physically ins ontradicts the d) Mb/s. It is irrelevant i stantiated" does not lefinition. This is wrone
Figure 173-3 is miss explanatory notes b 'inst' is PHY_XS wf FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and Proposed Response Cl 174 SC 174.1 Huber, Thomas Comment Type T ILT is mandatory for clauses as Require	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in <i>Response Status</i> O .4 P248 Nokia <i>Comment Status</i> X	hould be quite ob a is a PHY 800GX t lanes and 32 ing f "inst", add "or P the explanation L1 78B appears in th	wious to any reader that KS and FEC when it is a put lanes, add "or 32:4 MA" after PHY_XS. of 'inst'. # 234 the tables in the PMD	Add it. Proposed Respon Cl 174 SC Ran, Adee Comment Type "MII" is define this project. S match this define "MII" has been and should no The text can s the 1.6TMII. C	TR TR d in 1.4.3 aying that finition. n used in ot be carri- say that 1. Dr simply	P248 Cisco Systems Comment Status X 93 with reference to Clause 2 t "The MII is not intended to be other clauses in a way that co ed on.	s 2, which is 100 e physically ins ontradicts the d) Mb/s. It is irrelevant stantiated" does not lefinition. This is wron
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wf FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and Proposed Response Cl 174 SC 174.1 Huber, Thomas Comment Type T ILT is mandatory for clauses as Require SuggestedRemedy	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in <i>Response Status</i> O .4 P248 Nokia <i>Comment Status</i> X r 200G/lane PHYs and AUIs. 17 d. As such, it should appear in the	hould be quite ob a is a PHY 800GX t lanes and 32 ing f "inst", add "or P the explanation L1 78B appears in th the tables in the in	wious to any reader that (S and FEC when it is a put lanes, add "or 32:4 'MA" after PHY_XS. of 'inst'. # 234 the tables in the PMD ntroduction as well.	Add it. Proposed Respon Cl 174 SC - Ran, Adee Comment Type "MII" is define this project. S match this define "MII" has been and should no The text can s the 1.6TMII. C SuggestedRemed	TR TR d in 1.4.3 aying that finition. n used in ot be carri- say that 1. Dr simply	P248 Cisco Systems Comment Status X 193 with reference to Clause 2 t "The MII is not intended to be other clauses in a way that co ed on. .6T Ethernet uses a specific ir use 1.6TMII everywhere instead	2, which is 100 e physically ins ontradicts the d nterface betwee ad of MII.) Mb/s. It is irrelevant stantiated" does not lefinition. This is wron en the RS and the PC
Figure 173-3 is mis explanatory notes b 'inst' is PHY_XS wi FEC sublayer (or P SuggestedRemedy At the bottom of the PMA" after PHY 80 Delete notes b and Proposed Response CI 174 SC 174.1 Huber, Thomas Comment Type T ILT is mandatory for clauses as Require SuggestedRemedy	sing the possibility that a 32:4 F o and c seem unnecessary. It s een the sublayer below the PMA MA when it is a PMA). e figure, just under the 32 outpu 0GXS, and in the explanation o c and the references to them in <i>Response Status</i> O .4 P248 Nokia <i>Comment Status</i> X r 200G/lane PHYs and AUIs. 17	hould be quite ob a is a PHY 800GX t lanes and 32 ing f "inst", add "or P the explanation L1 78B appears in th the tables in the in	wious to any reader that (S and FEC when it is a put lanes, add "or 32:4 'MA" after PHY_XS. of 'inst'. # 234 the tables in the PMD ntroduction as well.	Add it. Proposed Respon Cl 174 SC - Ran, Adee Comment Type "MII" is define this project. S match this define "MII" has been and should no The text can s the 1.6TMII. C SuggestedRemed	TR TR d in 1.4.3 aying that finition. n used in ot be carri- say that 1. Dr simply to "1.6TM	P248 Cisco Systems Comment Status X 193 with reference to Clause 2 t "The MII is not intended to be other clauses in a way that co ed on. .6T Ethernet uses a specific ir use 1.6TMII everywhere inste- fill", and change the expanded	2, which is 100 e physically ins ontradicts the d nterface betwee ad of MII.) Mb/s. It is irrelevant i stantiated" does not lefinition. This is wrony en the RS and the PC

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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	P 248	L 51	# 692	C/ 174 SC 174.2	2.12 P 250	L 42	# 177
Dawe, Piers	Nvidia			Huber, Thomas	Nokia		
Comment Type TR	Comment Status X			Comment Type T	Comment Status X		
physically instantiated					at "DATA mode" is intended to		
SuggestedRemedy					neaning for 1000BASE-T PHYs ex 178B.5 indicates that in the c		
exposed					as the value 'data', which is as		
Proposed Response	Response Status O				3B-8. As such, it would be more	clear if the text in	174.2.12 referred to
	,			the PATH_UP state	е.		
0.474 80.474.05	Bata		# 000	SuggestedRemedy	e the transition to DATA mode.	to "coordinato the	transition to the
C/ 174 SC 174.2.5	P249	L 39	# 693	PATH_UP state (se			
Dawe, Piers	Nvidia			Proposed Response	Response Status O		
Comment Type TR	Comment Status X		mont one				
	e placements in IC design one describes combinations of PM		anent, one	0.474 00.474	Data	1.04	// /==
SuggestedRemedy				C/ 174 SC 174.6		L 34	# 178
Change instantiations	to combinations			Huber, Thomas	Nokia		
Proposed Response	Response Status O			Comment Type T	Comment Status X		
					relevant to 1.6TBASE-R.		
				SuggestedRemedy			
	P 250	L 26	# 58	Change "Clause 17 182"	75 through Clause 180" to "Clau	ise 175 through Cl	ause 180 or Clause
C/ 174 SC 174.2.11				102			
	Cisco System	ns, Inc.		Proposed Pespense	Baananaa Statua		
Jones, Chad Comment Type E	Cisco System Comment Status X	ns, Inc.		Proposed Response	Response Status O		
Jones, Chad	•	ns, Inc.		· ·	,		
Jones, Chad Comment Type E Use of "may". SuggestedRemedy	Comment Status X			Proposed Response	,	L 21	# 292
Jones, Chad Comment Type E Use of "may". SuggestedRemedy	•			· ·	•		# 292
Jones, Chad Comment Type E Use of "may". SuggestedRemedy change "may optionally	Comment Status X			C/ 174A SC 174A	P 677 Alphawave		# 292
Jones, Chad Comment Type E Use of "may". SuggestedRemedy change "may optionally	Comment Status X			Cl 174A SC 174A Brown, Matt Comment Type TR Diagrams showing	P 677 Alphawave	Semi	
Jones, Chad Comment Type E Use of "may". SuggestedRemedy change "may optionally	Comment Status X			Cl 174A SC 174A Brown, Matt Comment Type TR Diagrams showing	P 677 Alphawave <i>Comment Status</i> X the various paths or domains d	Semi	
Jones, Chad Comment Type E Use of "may". SuggestedRemedy	Comment Status X			Cl 174A SC 174A Brown, Matt Comment Type TR Diagrams showing be very helpful to th SuggestedRemedy	P 677 Alphawave <i>Comment Status</i> X the various paths or domains d	Semi escribed in 174A.3	3 through 174A.7 wo

C/ 174A SC 174A

C/ 174A SC 174A.3	P 677	L35	# 590	C/ 174A S	SC 174A.4	P 678	L 3	# 36
Shrikhande, Kapil	Marvell			Salvekar, Atul		Cadence Des	sign Systems	
Comment Type T	Comment Status X			Comment Typ	e TR	Comment Status X		
path" is a bit vague. N Switch to End host). S path". Since the error service interface of th	"Error ratio allocation for an Et letwork path may mean a mult Should search for a more desc allocation is from the PLS ser e other RS, suggest using "RS Y, PCS-to-FEC, etc. terminolog	ti-hop network pa criptive term to us rvice interface of o S-to-RS" ? or MA	ath (e.g. End Host to se instead of "network one RS to the PLS C-to-MAC ? This is	generally. with a Bind <i>SuggestedRer</i> Change "li	I believe the omial Distrib <i>nedy</i> f the errors a			
SuggestedRemedy				input of th				
Replace "network pat	h" in the subclause title with "F	₹S-to-RS".		to				
Proposed Response	Response Status O			"If the error input of the		re iid with a Binomial Distribu	tion"	
C/ 174A SC 174A.3	P 677	L 44	# 105	Change of	her places in	n 174A with editorial discretio	n.	
Bruckman, Leon	Nvidia			Proposed Res	ponse	Response Status 0		
Comment Type ER	Comment Status X							
The note regarding Fl	LR is repeated several times			C/ 174A S	SC 174A.5	P678	L10	# 106
SuggestedRemedy				Bruckman, Le		Nvidia	210	" 100
	garding the FLR not being norr of 74A.2 with the note's text.	mative for any su	ıblayer. Add a general	Comment Typ	e TR	Comment Status X		
Proposed Response	Response Status 0			0		much more clear		
				SuggestedRer	•			
				0		he link in 174A.5, 174A.6 and	174A.7	
				Proposed Res	ponse	Response Status O		
				C/ 174A S	SC 174A.5	P678	L17	# 591
				Shrikhande, K	apil	Marvell		
				Comment Typ Cross refe		Comment Status X 4A.6 is missing.		
				SuggestedRer				
				Add cross	reference			

C/ 174A SC 174A.5

	P678	L28	# 585	C/ 174A SC	174A.8	P679	L 24	# 402
licholl, Gary	Cisco System	S		Mi, Guangcan		Huawei Tech	nnologies Co., Ltd	
omment Type TR	Comment Status X			Comment Type	ER	Comment Status X		
During the March plen)GBASE-ER1/ER1-20. ary the consensus was to ado rg/3/dj/public/25_03/brown_3c		, for the FLR allocation	sentence say	rs "A meth leasurem	the error ratio tests for 200G nod for constraining the error ents" The test method	ratio of a PHY ba	sed on error masks
for 800GBASE-ER1/E	R1-20.			SuggestedRemed	dv			
Also, see the final res	conse to comment #16 in					" to "ISL" in the mentioned s	entence.	
	rg/3/dj/comments/D1p4/8023c	dj_D1p4_comme	ents_final_clause.pdf.	Proposed Respon		Response Status O		
other 802.3dj PHYs, i	decision is that 800GBASE-EF n that you are only allowed to	have AUIs in the	ne PHY or Extender,			-		
	18 of brown_3dj_04a_2503). In both the PHY and the Exten		dj PHYs you are		174A.8	P 679	L 25	# 401
allowed to have AUIS	In both the PHT and the Exten	ider.		Mi, Guangcan			nnologies Co., Ltd	
	ole to have a host design that			Comment Type	TR	Comment Status X		
and one in the PHY) the support all other 802.3	nat would not support an 800G dj PHYs.	BASE-ER1/ER	1-20 PHY, but would	histogram be	ing below	osed for block error evaluation the Hmax histogram mask, however, when using the Hr	or checking block	error ratio being
I don't tihnk that an 80	0GBASE-ER1/ER1-20 PHY s	hould be treated	l as a special case.			1.55e-11, which is not passir		
I propose changing the	e FLR allocation for the 800GE	BASE-ER1/ER1	20 PHY to be	SuggestedRemed	dy			
consistent with all othe	er 802.3dj PHYs, such that the 20 PHY can be deployed in.			I am strongly Adam for hel		I by this now. no suggested r	emedy at this time	e. I will reach out to
ER1/ER1-20 PHY, wit	on #3 in brown_3dj_04a_2503 h or without an AUI, is defined h turn means reducing the FLR	as 6 x 10-11 (c	onsistent with all other	Proposed Respor	nse	Response Status O		
10-11 to 5.8 x 10-11.				C/ 174A SC	174A.8.1	P679	L 38	# 403
uggestedRemedy				Mi, Guangcan		Huawei Tech	nnologies Co., Ltd	
	ation for 800GBASE-ER1/ER1 rg/3/dj/public/25_03/brown_3c			Comment Type There is only the hierachy.		Comment Status X clause under 174A.8, which	is 174A.8.1, no ne	ed to have this level i
		4A.		SuggestedReme				
Make the necessary c	hanges in clauses 187 and 17			Suggesteurtemet	лу			
Make the necessary c A suuporting presenta	5			remove the h	ierachy o	f 174A.8.1, make its sub-clau	uses 174A.8.x	

C/ 174A SC 174A.8.1

C/ 174A SC 1	74A.8.1.2	P681	L 3	# 586	C/ 174A SC	174A.8.1.3	P681	L18	# 107	
Shrikhande, Kapil		Marvell			Bruckman, Leon		Nvidia			
Comment Type	T Com	ment Status X			Comment Type	TR Cor	mment Status X			
				nce goes on to say "or,	In Hm(i)(k) it	is not clear what	m represents.			
		s" which could be c pelieve we want it to		0 consecutive bits could	SuggestedReme	dy				
SuggestedRemedy				ve i / ini - symbols.	Define "m"					
Change the se	ntence to be "Te AM4 symbols", pe	st symbols are defir eriod. I.e. remove th			Proposed Respo	nse Res _l	oonse Status O			
Proposed Respons	e Respo	onse Status O			C/ 174A SC	174A.8.1.3	P 681	L19	# 574	
					Nicholl, Shawn		AMD			
C/ 174A SC 1	74A.8.1.2	P681	L 31	# 404	Comment Type		nment Status X			
	74A.0.1.2		-			" defined as fol		k toot overhol orr	ors in a test block for	
Mi, Guangcan	TD (1997)	ment Status X	nologies Co., Li	d	lane i.		e is the probability of	k test symbol em	DIS IT A LEST DIOCK TO	
Comment Type			d analyzad is ro	guried as: " The value	- Hm (i)(16)	is the probability	of more than 15 test	symbol errors in a	a test block for lane i.	'
				erify that the expected	SuggestedReme	dy				
block		t magaziramant ar		tion. The projection	Propose dele 174A.8.1.4 S		e text ("is the is the") a	and align the text	with 174A.8.1.2 and	
		ct measurement or s diction of the value		would be observed over	1744.0.1.4 3	Sub-Clauses.				
		rovide an upper bou			Propose the	following text:				
A statisitcal pro accurate.	ojection is an esti	mate of future even	ts with level of c	onfidence. It can not be	Option1 (mo	st preferred by co	mmenter): Introduce	the term "ratio".		
Reconsider the	statement on "a	ccurate prediction "				kt: " defined as f				
H m(k) is a sta	utistical possibility	which is observed	over a window (of measurement in a		where k < 16 is th s in a test block fo	e ratio (to total numb	er of test blocks a	inalyzed) of k test	
				the measured data and				cks analyzed) of	16 or more test symbol	ol
the projection bupper bound o		a could represent th	e value of long-	erm observation or the		st block for lane i				
SuggestedRemedy	,				Option2 (less	s preferred by cor	nmenter): Retain the	term "probability"		
Recosider the	state ment of the	statistical projectio	n.		Proposed tex	kt: " defined as f	follows:			
Proposed Respons	e Respo	onse Status O					e probability of k test of 16 or more test sy		a test block for lane i. est block for lane i."	
					Proposed Respo		oonse Status O			

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 174A SC 174A.8.1.3 Page 33 of 149 6/16/2025 2:13:37 PM

C/ 174A SC 174A.8.1.4 P681	L 50	# 575	CI 174A SC 174A	8.1.5	P 682	L 23	# 137
Nicholl, Shawn AMD			Noujeim, Leesa		Google		
comment Type TR Comment Status X			Comment Type T	Comme	ent Status X		
Current text: " are 17-bin error histograms represent blocks with k test symbol errors for k < 16 and a co- or more test symbol errors for k = 16."	senting a count of ount of the numbe	the number of test of test blocks with 16	Eqn 174A.5 is deriv and so makes no a limits especially for	llowance for bu	irstiness of errors;	or probabilities (a this results in ur	at the specified BER) areasonably tight mas
Reading this text, it sounds like these histograms a section defined them as a ratio between error court			SuggestedRemedy Adjust the mask to accordingly	increase the al	llowed ratio in bins	8-15, and reduc	e in bins ~1-4
uggestedRemedy			0,7	_	0		
Propose the following text:			Proposed Response	Respons	se Status O		
Option1 (most preferred by commenter): Introduce	the term "ratio".		C/ 174A SC 174A	8.1.5	P 682	L 26	# 38
Proposed text: " are 17-bin error histograms repr			Liu, Cathy		Broadcom Inc	2.	
blocks analyzed) of test blocks with k test symbol number of test blocks analyzed) of test blocks with			Comment Type T	Comme	ent Status X		
Option2 (less preferred by commenter): Retain the	always true. When	pre-coding is a	pplied, or inner ha	mming decoding	I error ratio SER is no is applied, the		
Proposed text is: " are 17-bin error histograms re			assumption will not SuggestedRemedy	be noid which	results in the error	r mask is nigher.	
symbol errors in a test block for k < 16 and the pro			SuggestedRemedy			-	ding, but add a note t
			SuggestedRemedy Either we ingor the clarify the assumpt	special cases on. Or we can BER)^5 for no	with pre-coding or apply two cases to precoding and inn	inner code deco o the equation 17	ding, but add a note to ′4A-6 as following: g; and RSSER = 1 –(1
symbol errors in a test block for k < 16 and the pro in a test block for k = 16. roposed Response Response Status O / 174A SC 174A.8.1.5 P682			SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2	special cases on. Or we can BER)^5 for no ding or inner co	with pre-coding or apply two cases to precoding and inn	inner code deco o the equation 17	'4A-6 as following:
symbol errors in a test block for k < 16 and the pro in a test block for k = 16. roposed Response Response Status O / 174A SC 174A.8.1.5 P682 icholl, Shawn AMD	bability of 16 or n	nore test symbol errors	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2 – BER)^5 for preco	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i>	with pre-coding or apply two cases to precoding and inn ode decoding.	inner code deco o the equation 17	'4A-6 as following:
symbol errors in a test block for k < 16 and the pro in a test block for k = 16. roposed Response Response Status O / 174A SC 174A.8.1.5 P682 icholl, Shawn AMD omment Type ER Comment Status X Current text: "For each lane i, measure the error h	bability of 16 or n	# <u>576</u> see 174A.8.1.3) and	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2 – BER)^5 for preco Proposed Response	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i>	with pre-coding or apply two cases to precoding and inn ode decoding. se <i>Status</i> O	inner code deco o the equation 17 er code decoding	′4A-6 as following: g; and RSSER = 1 –(
symbol errors in a test block for k < 16 and the pro- in a test block for k = 16. roposed Response Response Status O / 174A SC 174A.8.1.5 P682 icholl, Shawn AMD omment Type ER Comment Status X Current text: "For each lane i, measure the error h assign Hm(k) to Hm (i)(k)." However, 174A.8.1.3 G	bability of 16 or n	# <u>576</u> see 174A.8.1.3) and	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2 – BER)^5 for preco Proposed Response	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i> 8.1.6	with pre-coding or apply two cases to precoding and inn ode decoding. se Status O P682	inner code deco o the equation 17 er code decoding	′4A-6 as following: g; and RSSER = 1 –(
symbol errors in a test block for k < 16 and the pro- in a test block for k = 16. roposed Response Response Status O / 174A SC 174A.8.1.5 P682 licholl, Shawn AMD omment Type ER Comment Status X Current text: "For each lane i, measure the error h assign Hm(k) to Hm (i)(k)." However, 174A.8.1.3 o Hm(i)(k).	bability of 16 or n	# <u>576</u> see 174A.8.1.3) and	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2 – BER)^5 for preco Proposed Response Cl 174A SC 174A Nicholl, Shawn	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i> 8.1.6 Comme	with pre-coding or apply two cases to precoding and inn ode decoding. se Status O P682 AMD ent Status X	inner code deco o the equation 17 er code decoding	74A-6 as following: g; and RSSER = 1 –(# <u>577</u>
symbol errors in a test block for k < 16 and the pro- in a test block for k = 16. roposed Response Response Status O 174A SC 174A.8.1.5 P 682 icholl, Shawn AMD comment Type ER Comment Status X Current text: "For each lane i, measure the error h assign Hm(k) to Hm (i)(k)." However, 174A.8.1.3 (Hm(i)(k).	bability of 16 or n	# <u>576</u> see 174A.8.1.3) and	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2 – BER)^5 for preco Proposed Response Cl 174A SC 174A Nicholl, Shawn Comment Type ER Current text: "For e	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i> 8.1.6 Comme ach lane i, mea	with pre-coding or apply two cases to precoding and inn ode decoding. se Status O P682 AMD ent Status X asure the error hist	inner code deco o the equation 17 er code decoding <i>L</i> 37 togram Hm(k) (se	74A-6 as following: g; and RSSER = 1 –(# <u>577</u>
symbol errors in a test block for k < 16 and the pro- in a test block for k = 16. roposed Response Response Status O / 174A SC 174A.8.1.5 P682 licholl, Shawn AMD omment Type ER Comment Status X Current text: "For each lane i, measure the error h assign Hm(k) to Hm (i)(k)." However, 174A.8.1.3 o Hm(i)(k). uggestedRemedy	bability of 16 or m L 17 stogram Hm(k) (s does not define H	# 576 # 576 see 174A.8.1.3) and m(k) rather it defines	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2 – BER)^5 for preco Proposed Response Cl 174A SC 174A Nicholl, Shawn Comment Type ER Current text: "For e assign Hm(k) to Hr Hm(i)(k). SuggestedRemedy	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i> 8.1.6 8.1.6 <i>Comme</i> ach lane i, mea n (i)(k)." Howe	with pre-coding or apply two cases to precoding and inn ode decoding. se Status O P682 AMD ent Status X asure the error hist ver, 174A.8.1.3 do	inner code deco o the equation 17 er code decoding <i>L</i> 37 togram Hm(k) (se	74A-6 as following: g; and RSSER = 1 –(# <u>577</u> ee 174A.8.1.3) and
symbol errors in a test block for k < 16 and the pro- in a test block for k = 16. roposed Response Response Status O 7 174A SC 174A.8.1.5 P682 licholl, Shawn AMD comment Type ER Comment Status X Current text: "For each lane i, measure the error h assign Hm(k) to Hm (i)(k)." However, 174A.8.1.3 o Hm(i)(k). uggestedRemedy Propose to make the text more concise. Proposed text: "For each lane i, measure the error	bability of 16 or m L 17 stogram Hm(k) (s does not define H	# 576 # 576 see 174A.8.1.3) and m(k) rather it defines	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 –(1 – 2 – BER)^5 for preco Proposed Response CI 174A SC 174A Nicholl, Shawn Comment Type ER Current text: "For e assign Hm(k) to Hr Hm(i)(k).	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i> 8.1.6 8.1.6 <i>Comme</i> ach lane i, mea n (i)(k)." Howe	with pre-coding or apply two cases to precoding and inn ode decoding. se Status O P682 AMD ent Status X asure the error hist ver, 174A.8.1.3 do	inner code deco o the equation 17 er code decoding <i>L</i> 37 togram Hm(k) (se	74A-6 as following: g; and RSSER = 1 –(# <u>577</u> ee 174A.8.1.3) and
symbol errors in a test block for k < 16 and the pro- in a test block for k = 16. roposed Response Response Status O 7 174A SC 174A.8.1.5 P682 licholl, Shawn AMD comment Type ER Comment Status X Current text: "For each lane i, measure the error h assign Hm(k) to Hm (i)(k)." However, 174A.8.1.3 o Hm(i)(k). uggestedRemedy Propose to make the text more concise. Proposed text: "For each lane i, measure the error	bability of 16 or m L 17 stogram Hm(k) (s does not define H	# 576 # 576 see 174A.8.1.3) and m(k) rather it defines	SuggestedRemedy Either we ingor the clarify the assumpt RSSER = 1 -(1 - 2 - BER)^5 for preco Proposed Response Cl 174A SC 174A Nicholl, Shawn Comment Type ER Current text: "For e assign Hm(k) to Hr Hm(i)(k). SuggestedRemedy Propose to make th	special cases on. Or we can BER)^5 for no ding or inner co <i>Respons</i> 8.1.6 Comme ach lane i, mea n (i)(k)." Howe he text more co	with pre-coding or apply two cases to precoding and inn ode decoding. se Status O P682 AMD ent Status X asure the error hist ver, 174A.8.1.3 do	inner code deco o the equation 17 er code decoding <i>L</i> 37 togram Hm(k) (se ses not define Hn	74A-6 as following: g; and RSSER = 1 –(# <u>577</u> ee 174A.8.1.3) and

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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C/ 174A SC 174A.8	B.1.7 P6	83	L 2	# 578	C/ 174A SC 174A	.9	P683	L18	# 579
Nicholl, Shawn	AMD				Nicholl, Shawn		AMD		
Comment Type ER	Comment Status	Х			Comment Type ER	Comm	ent Status X		
However, 174A.8.1.3	each lane i, measure tl 3 does not define Hm(k conv(He(k) , Hm(k)) (se) rather i	stogram Hm(k) it defines Hm(i)	(see 174A.8.1.3)." (k).	a pair of 200GBAS	or ratio tests fo SE-LR1 Inner F	r 800GBASE-LR1 EC sublayers".	ISLs", the text cur	rent says " betweer
					SuggestedRemedy				
SuggestedRemedy Propose to make the	a taxt mara canaica				Propose to replace	e with " betwe	een a pair of 800G	BASE-LR1 Inner F	EC sublayers"
Flopose to make the	e lext more concise.				Proposed Response	Respor	nse Status O		
Proposed text: "a) F Proposed text: "d)	or each lane i, measure . hconv(He(k) , Hm(i)(k)	e the error) (see"	histogram Hm(i)(k) (see 174A.8.1.3)."					
Proposed Response	Response Status	0			C/ 174A SC 174A	.10.1.3	P 685	L18	# 406
					Mi, Guangcan		Huawei Tech	nologies Co., Ltd	
		~~	1-	# 405	Comment Type TR		ent Status X		
C/ 174A SC 174A.8	-		L7	# 405	The total number of value	of FEC codwor	ds being measured	and analyzed is	requried as: " The
/li, Guangcan	Huav	vei lechno	logies Co., Ltd		of FEC_cw_counter	ar should be su	ufficiently large to r	aliably varify that t	he expected block
counters are measu says "For p times, ite	block error ratio method red independently for e eratively assign the res r what does the p times	ach lane. I ult of hcon	n the determina v(He(k), Hm(k)	ation of lane I, step d)	longer-term testing	g or at least pro	ovide an upper bou	nd on the value."	d be observed over hfidence. It can not be
counters are measu says "For p times, it He(k).", It is unclear To measure p times To repeat the same histogram be average SuggestedRemedy	red independently for e eratively assign the res	ach lane. I ult of hcon mean in tl and use th ame length	n the determina v(He(k) , Hm(k) nis step. ne collected as ns of blocks for	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset?	longer-term testing A statisitcal projec accurate. H_m(k) is a statist very long window i	g or at least pro tion is an estim ical possibility f not infinite. It ed on the data	ovide an upper bount nate of future event which is observed is unclear how to o	nd on the value." ts with level of cor over a window of t decide whether the	nfidence. It can not be measurement in a e measured data and
counters are measu says "For p times, it He(k).", It is unclear To measure p times To repeat the same histogram be average	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the sa	ach lane. I ult of hcon mean in tl and use th ame length	n the determina v(He(k) , Hm(k) nis step. ne collected as ns of blocks for	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset?	longer-term testing A statisitcal projec accurate. H_m(k) is a statist very long window i the projection base upper bound on th	g or at least pro tion is an estim ical possibility f not infinite. It ed on the data	ovide an upper bount nate of future event which is observed is unclear how to o	nd on the value." ts with level of cor over a window of t decide whether the	nfidence. It can not be measurement in a
counters are measu says "For p times, it He(k).", It is unclear To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify.	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the sa	ach lane. I ult of hcon mean in tl and use th ame length measurem	n the determina v(He(k) , Hm(k) nis step. ne collected as ns of blocks for	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset?	longer-term testing A statisitcal projec accurate. H_m(k) is a statist very long window i the projection base	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value.	ovide an upper bount nate of future event which is observed is unclear how to o could represent the	nd on the value." ts with level of cor over a window of decide whether the e value of long-ter	nfidence. It can not be measurement in a e measured data and
counters are measu says "For p times, it He(k).", It is unclear To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify.	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the sa ged over the p times of	ach lane. I ult of hcon mean in tl and use th ame length measurem	n the determina v(He(k) , Hm(k) nis step. ne collected as ns of blocks for	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset?	longer-term testing A statisitcal project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value. e ment of the s	which is observed is unclear how to o could represent the	nd on the value." ts with level of cor over a window of decide whether the e value of long-ter	nfidence. It can not be measurement in a e measured data and
counters are measu says "For p times, it He(k).", It is unclear To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify. Proposed Response	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the s ged over the p times of <i>Response Status</i>	ach lane. I ult of hcon mean in tl and use th ame length measurem	n the determina v(He(k) , Hm(k) nis step. ne collected as ns of blocks for	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset?	longer-term testing A statisitcal project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value. e ment of the s	ovide an upper bount nate of future event which is observed is unclear how to o could represent the	nd on the value." ts with level of cor over a window of decide whether the e value of long-ter	nfidence. It can not be measurement in a e measured data and
counters are measu says "For p times, it He(k).", It is unclean To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify. Proposed Response	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the s ged over the p times of <i>Response Status</i>	ach lane. I ult of hcon mean in tl and use th ame length measurem 0 83	n the determina v(He(k) , Hm(k) his step. le collected as hs of blocks for lent?	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset? p times? Should the	longer-term testing A statistical project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat Proposed Response	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value. e ment of the s <i>Respor</i>	which is observed is unclear how to o could represent the statistical projection ase Status O	nd on the value." ts with level of cor over a window of i decide whether the e value of long-ter h.	nfidence. It can not be measurement in a e measured data and m observation or the
counters are measu says "For p times, it He(k).", It is unclear To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify. Proposed Response	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the si ged over the p times of <i>Response Status</i>	ach lane. I ult of hcon mean in tl and use th ame length measurem 0 83 a	n the determina v(He(k) , Hm(k) his step. le collected as hs of blocks for lent?	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset? p times? Should the	longer-term testing A statisitcal project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat Proposed Response	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value. e ment of the s <i>Respor</i>	which is observed is unclear how to o could represent the statistical projection ase Status O P685	nd on the value." ts with level of cor over a window of i decide whether the e value of long-ter n.	nfidence. It can not be measurement in a e measured data and
counters are measu says "For p times, it He(k).", It is unclean To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify. Proposed Response Cl 174A SC 174A.S Bruckman, Leon Comment Type TR	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the si ged over the p times of <i>Response Status</i> <i>P</i> 6 Nvidi	ach lane. I ult of hcon mean in tl and use th ame length measurem 0 83 a	n the determina v(He(k) , Hm(k) his step. le collected as hs of blocks for lent?	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset? p times? Should the	longer-term testing A statisitcal project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat Proposed Response Cl 174A SC 174A Mi, Guangcan	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value. e ment of the s <i>Respor</i> A.10.1.3	which is observed is unclear how to o could represent the statistical projection ase Status O P685 Huawei Tech	nd on the value." ts with level of cor over a window of i decide whether the e value of long-ter h.	nfidence. It can not be measurement in a e measured data and m observation or the
counters are measu says "For p times, it He(k).", It is unclean To measure p times To repeat the same histogram be average SuggestedRemedy please clarify. Proposed Response C/ 174A SC 174A.S Bruckman, Leon Comment Type TR This section is not a	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the si ged over the p times of <i>Response Status</i> <i>P</i> 6 Nvidi <i>Comment Status</i>	ach lane. I ult of hcon mean in tl and use th ame length measurem 0 83 a	n the determina v(He(k) , Hm(k) his step. le collected as hs of blocks for lent?	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset? p times? Should the	longer-term testing A statisitcal project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat Proposed Response Cl 174A SC 174A Mi, Guangcan Comment Type ER	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value. e ment of the s <i>Respor</i> 1.10.1.3	which is observed is unclear how to o could represent the statistical projection ase Status O P685 Huawei Tech eent Status X	nd on the value." ts with level of cor over a window of i decide whether the e value of long-ter n.	nfidence. It can not be measurement in a e measured data and m observation or the
counters are measu says "For p times, it He(k).", It is unclean To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify. Proposed Response C/ 174A SC 174A.S Bruckman, Leon Comment Type TR This section is not a SuggestedRemedy	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the si ged over the p times of <i>Response Status</i> <i>P</i> 6 Nvidi <i>Comment Status</i> bout 200GBASE-LR1	ach lane. I ult of hcon mean in tl and use th ame length measurem 0 83 a X	n the determina v(He(k) , Hm(k) his step. le collected as hs of blocks for lent?	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset? p times? Should the	longer-term testing A statistical project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat Proposed Response CI 174A SC 174A Mi, Guangcan Comment Type ER typo of the word th	g or at least pro- tion is an estim ical possibility f not infinite. It ed on the data e value. e ment of the s <i>Respor</i> 1.10.1.3	which is observed is unclear how to o could represent the statistical projection ase Status O P685 Huawei Tech eent Status X	nd on the value." ts with level of cor over a window of i decide whether the e value of long-ter n.	nfidence. It can not be measurement in a e measured data and m observation or the
counters are measu says "For p times, it He(k).", It is unclean To measure p times To repeat the same histogram be averag SuggestedRemedy please clarify. Proposed Response Cl 174A SC 174A.S Bruckman, Leon Comment Type TR This section is not a SuggestedRemedy Change: "200GBAS	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the s ged over the p times of <i>Response Status</i> <i>Pegover Status</i> <i>Pegover Status</i> <i>Comment Status</i> bout 200GBASE-LR1 E-LR1" to "800GBASE-	ach lane. I ult of hcon mean in tl and use th ame length measurem 0 83 a X -LR1"	n the determina v(He(k) , Hm(k) his step. le collected as hs of blocks for lent?	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset? p times? Should the	longer-term testing A statisitcal project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat Proposed Response Cl 174A SC 174A Mi, Guangcan Comment Type ER typo of the word th SuggestedRemedy	g or at least pro- tion is an estim- ical possibility f not infinite. It ed on the data e value. e ment of the s <i>Respor</i> A.10.1.3 <i>Comm</i> en in the sente	which is observed is unclear how to o could represent the statistical projection ase Status O P685 Huawei Tech eent Status X	nd on the value." ts with level of cor over a window of i decide whether the e value of long-ter n.	nfidence. It can not be measurement in a e measured data and m observation or the
counters are measu says "For p times, it He(k).", It is unclean To measure p times To repeat the same histogram be average SuggestedRemedy please clarify. Proposed Response CI 174A SC 174A.S Bruckman, Leon Comment Type TR This section is not a SuggestedRemedy	red independently for e eratively assign the res r what does the p times the lengths of blocks? measurement on the si ged over the p times of <i>Response Status</i> <i>P</i> 6 Nvidi <i>Comment Status</i> bout 200GBASE-LR1	ach lane. I ult of hcon mean in tl and use th ame length measurem 0 83 a X -LR1"	n the determina v(He(k) , Hm(k) his step. le collected as hs of blocks for lent?	ation of lane I, step d))) (see 174A.8.1.4) to 1 dataset? p times? Should the	longer-term testing A statistical project accurate. H_m(k) is a statist very long window i the projection base upper bound on th SuggestedRemedy Recosider the stat Proposed Response CI 174A SC 174A Mi, Guangcan Comment Type ER typo of the word th	g or at least pro- tion is an estim- ical possibility f not infinite. It ed on the data e value. e ment of the s <i>Respor</i> A.10.1.3 <i>Comm</i> en in the sente	which is observed is unclear how to o could represent the statistical projection ase Status O P685 Huawei Tech eent Status X	nd on the value." ts with level of cor over a window of i decide whether the e value of long-ter n.	nfidence. It can not be measurement in a e measured data and m observation or the

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn C/ 174A SORT ORDER: Clause, Subclause, page, line

SC 174A.10.1.3

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CI 174A SC 174A.10.1	l.3 P685	L 45	# 408	C/ 175	SC 175.1.3	P261	L 10	# 69
Vi, Guangcan	Huawei Techr	nologies Co., Lto		Bruckman	, Leon	Nvidia		
Comment Type ER	Comment Status X			Comment	Type TR	Comment Status X		
missing a word "to"						tion and signaling" is an op		
SuggestedRemedy					t is not listed in /400GBASE-R	n similar sections in 802.30 PCS)	tf (88GBASE-R PCS) or the base standard
change to " expected to				Suggested	Remedy			
Proposed Response	Response Status O					et: FEC degrade detection the end of the text for this		
C/ 174A SC 174A.12	P 686	L 22	# 409	Proposed	Response	Response Status O		
Mi, Guangcan	Huawei Techr	nologies Co., Lto	ł					
Comment Type TR	Comment Status X			C/ 175	SC 175.2.1	P 263	L10	# 70
	s changed from 6.2e-11 to 6e o the xMII extenders and PC			Bruckman	, Leon	Nvidia		
	to such case as cascading tw			Comment	51	Comment Status X		
	1 "optical PHYs with no FEC			PMA i	s also a sublay	ver, and inner FEC shall be	e capitalized	
	g that Table 174A-3 does not ASE-ER1 and 800GBASE-E			Suggestee				
the allocation for such o			g			her FEC sublayer" to: "PM/ e: "inner FEC" to "Inner FE		yers"
The change maynot affer some confusion of the r	ect the performance of a Ether readers.	ernet device mu	ch, but may cause	Proposed	Response	Response Status O		
SuggestedRemedy								
Change back to 6.2e-1 ² ER coherent PMDs	1 for Table 174A-1. Add anot	her errro allocat	ion table for the case of					
Proposed Response	Response Status 0							
C/ 175 SC 175.1.3	P 261	L 5	# 588					
Shrikhande, Kapil	Marvell							
Comment Type T	Comment Status X							
	hat transcoding is from four 6 llet which states that encodin							
SuggestedRemedy								
	let to "Transcoding from (to)	four 66-bit block	s to (from) 257-bit					
Proposed Response	Response Status 0							

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 175 SC 175.2.1 Page 36 of 149 6/16/2025 2:13:37 PM

C/ 175	SC 175.2.4.1	P 264	L 24	# 670
Opsasnick,	Eugene	Broadcom		

Comment Type T Comment Status X

The 64B/66B TX encoder function in 175.2.4.1 is allowed to use the stateless encoder defined in 172.3.4.1.2 or the state-diagram based encoder defined in Figure 119-14. This stateless encoder does some, but not all, of block sequence checking that is performed by the state-diagram based encoder. However, a 1.6TbE PCS is always co-located with an ethernet MAC above it which by definition only sends valid block sequences to the PCS. Therefore, the stateless 64B/66B encoder can be simplified to just encode the current 64B block and does not need to also look at the previous incoming block to validate the sequence of blocks sent by the MAC TX function.

SuggestedRemedy

Change the stateless 64B/66B encoder from the current definition in Table 172-1 to something like:

"When reset is asserted, tx_coded is set to LBLOCK_T, otherwise $tx_coded = ENCODE(tx_raw)$ where LBLOCK_T is defined in 175.2.6.2.1 and the ENCODE function is defined in 175.2.6.2.3." or a much simplified table closer in form to Table 172-1.

Implement with editorial license.

Proposed Response Response

Response Status 0

C/ 175	SC 175.2.4.6	P 265	L17	# 454
He, Xiang		Huawei		
<u>о</u> т		0		

Comment Type TR Comment Status X

The term "free running" is not defined clearly in the standard. One interpretation is that it is "continuously-running" whenever there is a clock (two adjacent pads are not continuous); another interpretation based on the context is that if we extract all the pads and concatenate them you will get a "continuously-running" PRBS9 sequence; and finally there is also an interpretation of the word "free" to be each PRBS9 segment could have its own random seed.

I understand this language was used in previous standards, and the pad is discarded on receive side, but there are testers out there testing these pad and warning bit slips if the don't match how the testers were designed. Explaning this to end users is very difficult especially to the non-English speaking regions. It would be a nice thing to define this clearly or define in a way that showing we really don't care.

SuggestedRemedy

Change "The initial value of the PRBS9 pattern generators may be any pattern other than all zeros." to "The initial value of the PRBS9 pattern generators in each pad may be any pattern other than all zeros."

Proposed Response Response Status **0**

C/ 175	SC 175.2.4.6	P 265	5 L 28	# 298
Brown, Ma	att	Alphaw	ave Semi	
Comment	Туре Е	Comment Status X	(
	f possesive gramr cessary here.	nar is inconsistent with	h similar phrases	used through this draft and
	cessary here.	nar is inconsistent with	h similar phrases	used through this draft and
is une S <i>uggeste</i> e	cessary here.		h similar phrases	used through this draft and

C/ 175 SC 175.2.4.6	1 P266	L10	# 694	C/ 175	SC 175.2.5.3	P 273	L 40	# 433
Dawe, Piers	Nvidia			Ran, Adee		Cisco Systen	าร	
Comment Type TR	Comment Status X			Comment Ty	rpe TR	Comment Status X		
	not a school lecture. am_x is fit has "define", which is bett			potentia	for corrupted of	w.ieee802.org/3/dj/public/25_ lata reaching the PCS client mbler error multiplication tha	after uncorrecta	able codeword is
_	e alignment marker for PCS	lane x, x=0 to 1	5, where bit 0 is the first	Solomo		CS, this can be addressed b es error extension, as descri		
bit transmitted. to				SuggestedR	emedy			
		15, is defined a	s am_x<119:0>. Bit 0	257b blo block co	ck following the	an uncorrectable codeword e uncorrectable codeword is 16 error characters. I license.		
				Proposed R	esponse	Response Status O		
C/ 175 SC 175.2.4.1	D P 272	L13	# 37					
Salvekar, Atul	Cadence Des	sign Systems						
Comment Type ER Put in Generator Polyne	<i>Comment Status</i> X omial							
SuggestedRemedy Change "X^58 scramble	er" to "G(x) =1 + x^39 + x^58	п						

Proposed Response Response Status **0**

C/ 175 SC 175.2.5.3

C/ 175	SC 175.2.5.3	P 273	L 41	# 669
Opsasnick,	, Eugene	Broadcom		

Comment Type TR Comment Status X

In ran_3dj_03a_2505.pdf, it was shown that the 64B/66B stateless decoder defined in 175.2.5.9, by reference to 172.2.5.9.2, may allow a corrupted 66-bit block to pass through to the MAC with a small probability. This can occur due to the error propagation of the descrambler from an uncorrectable FEC codeword into the first block the the following good FEC codeword. The 64B/66B stateless decoder does mark every block following an ERROR block as an ERROR which was originally intended to cover the de-scramber error propagation, but it does not work as intended due to the merging of data streams from the two parallel RX flows prior to the 64B/66B decoding.

SuggestedRemedy

The Reed-Solomon FEC decoder within each RX flow of the 1.6TbE PCS, by reference to to 119.2.5.3, causes every 66-block within two interleaved RS-FEC codewords to be set to an error block when one or both of the codewords is found to be uncorrectable. This should be extended to the four 66-bits blocks that make up the first 257-bit block of the following codeword to account for the errors possibly being propagated by the de-scramber that follows within each flow.

In addition, the 64B/66B stateless decoder in 175.2.5.9 can and should be simplified to not set each 66-block after an error block to also be set to an error block since this does not work as intended and the correct marking can be done more easily in the RE-FEC decoder within each RX flow.

The RS decoder in 200GbE, 400GbE and 800GbE PCS clauses 119.2.5.3 and 172.2.5.3 should also be updated to extend the marking of error blocks to the four 66-bits blocks that make up the first 257-bit block that follows an uncorrectable FEC codeword for all PHYs that can use the stateless 64B/66B decoder.

Proposed Response Response Status O

C/ 175	SC 175.2.5.3	B P2	73	L 50	# 71
		, r <u>z</u> Nvidi		200	
Bruckmar	i, Leon	INVIO	a		
Comment	Type TR	Comment Status	Х		
There	may be undetec	ted errors			
Suggestee	dRemedy				
		ere not corrected" etected but not correc	ted"		
Proposed	Response	Response Status	ο		

C/ 175	SC 175.2.6.2.	2 P 276	L 20	# 72
Bruckman	, Leon	Nvidia		
Comment	Type TR	Comment Status X		
The be definit		s specified in 175.2.5.3. No	need to detail it i	n the variables
Suggested	dRemedy			
		f hi_ser to: "Boolean variable ise, this variable is set to fal		e if hi_ser is asserted
Proposed	Response	Response Status 0		
Cl 175	SC 175.2.6.2.	4 P 277	L17	# 73
Bruckman	, Leon	Nvidia		
Comment	Type TR	Comment Status X		
	51	Comment Status X n of this counter is different f	rom the one in 1	19.2.6.2.4
	ext of the definition		rom the one in 1	19.2.6.2.4
The te Suggested Chang	ext of the definition and the definition of the definition of		nter counts the in	terval of 32768 FEC

C/ 175 SC 175.5	P 280	L 4	# 589
Shrikhande, Kapil	Marvell		
Comment Type T	Comment Status X		

The 1.6TbE PCS and XS delay constraint value chosen in 802.3dj (400ns) is half of that specified for 800GE (800ns). There isn't a strong justification for cutting the delay constraint in half for 1.6TbE (compared to 800GE) : both 1.6TE and 800GE use the same FEC, and functional blocks within the PCS are the same. While there is a small reduction in FEC codeword accumulation latency since 1.6TbE uses 4x400G FEC while 800GE uses 4x200G FEC, this reduction is only ~ 12.5ns. Additionally, the delay constraint for 800GE PCS (~800ns). To enable a broad base of designs, across end-hosts as well as modules, recommend changing the 1.6TbE PCS/XS delay constraint value to match 800GE/400GE/200GE.

SuggestedRemedy

Change the delay constraint for 1.6TbE PCS (and XS) to be the same as 800GE (800ns or 2500 pause quanta).

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general	C/ 175	Page 39 of 149
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	SC 175.5	6/16/2025 2:13:37 PM
SORT ORDER: Clause, Subclause, page, line		

C/ 175 SC 175.6	P 280	L17	# 340	C/ 176	SC 176.1.4	P 290	L 35	# 74
de Koos, Andras	Microchip Tec	hnology		Bruckman,	Leon	Nvidia		
Comment Type E	Comment Status X			Comment	Type TR	Comment Status X		
PCS_timesync_multilane	. path delays are reported as e_ability variable is asserted	l.		Not all are onl	functions are re y indicated for:	equired in all cases described Delay alternating PCSLs by	l in this clause, but wo RS-FEC code	ut specific restrictions ewords
	h data delays are reported a e_ability variable is asserted			Suggested	Remedy			
	if A, and B" when it should s		rue, report as if A".			al function that are not neces	sarily needed in a	all cases then delete
SuggestedRemedy						400GBASE-R PMAs". strictions then indicate for wh	ich cases each fu	unction is used
Rephrase as the sentene					ing to the releva			
path data delays are rep	c_multilane_ability variable i orted as if the DDMP (data d terleaved RS-FEC codeword	delay measuren		Proposed I	Response	Response Status 0		
Proposed Response	Response Status 0			C/ 176	SC 176.1.5	P 291	L 23	# 75
				Bruckman,	Leon	Nvidia		
CI 175 SC 175.7	P 280	L 30	# 443	Comment	Type TR	Comment Status X		
Ran, Adee	Cisco System	S		In table	es 176-1 and 17	6-2 no need for a foot note to	o limit the xAUI-m	n to a single value.
Comment Type TR	Comment Status X			Suggested	Remedy			
The timeout for link fail	inhihit timor minimum 60 c							
minimum time to retry A		seconds, creates	s an unacceptably long		es 176-1 and 17 AUI-16 and ren	6-2 change: xAUI-m instance hove footnote	es that are tagged	d with the footnote "a
minimum time to retry Al A proposal to enable fas		nted in	s an unacceptably long		AUI-16 and ren		es that are tagged	d with the footnote "a
minimum time to retry Al A proposal to enable fas https://www.ieee802.org	N. .ter restart of AN was preser	nted in)2a_2505.pdf.		to 1.6T	AUI-16 and ren	nove footnote	L 51	d with the footnote "a' # <u>76</u>
minimum time to retry Al A proposal to enable fas https://www.ieee802.org The changes proposed t	N. .ter restart of AN was preser /3/dj/public/25_05/ran_3dj_0	nted in)2a_2505.pdf.		to 1.6T Proposed F	AUI-16 and ren Response SC 176.2	nove footnote Response Status O		
minimum time to retry Al A proposal to enable fas https://www.ieee802.org The changes proposed t SuggestedRemedy Implement the changes	N. .ter restart of AN was preser /3/dj/public/25_05/ran_3dj_0	nted in)2a_2505.pdf. es 5-6 of ran_3d	dj_02a_2505.	to 1.6T Proposed F Cl 176	AUI-16 and ren Response SC 176.2 , Leon	nove footnote Response Status 0 P292		
minimum time to retry Al A proposal to enable fas https://www.ieee802.org The changes proposed t SuggestedRemedy Implement the changes license.	N. .ter restart of AN was preser /3/dj/public/25_05/ran_3dj_0 ro clause 175 appear on slid	nted in)2a_2505.pdf. es 5-6 of ran_3d	dj_02a_2505.	to 1.6T Proposed F C/ 176 Bruckman, Comment T Incons	AUI-16 and ren Response SC 176.2 , Leon Type TR	nove footnote Response Status O P 292 Nvidia	L51	# 76
minimum time to retry Al A proposal to enable fas https://www.ieee802.org The changes proposed t SuggestedRemedy Implement the changes license.	N. ter restart of AN was preser /3/dj/public/25_05/ran_3dj_0 to clause 175 appear on slid to clause 175 per slides 5-6	nted in)2a_2505.pdf. es 5-6 of ran_3d	dj_02a_2505.	to 1.6T Proposed F C/ 176 Bruckman, Comment T Incons	AUI-16 and ren Response SC 176.2 , Leon Type TR istent naming w 294 line 8)	nove footnote Response Status O P292 Nvidia Comment Status X	L51	# 76
minimum time to retry Al A proposal to enable fas https://www.ieee802.org, The changes proposed t SuggestedRemedy Implement the changes license. Proposed Response	N. ter restart of AN was preser /3/dj/public/25_05/ran_3dj_0 to clause 175 appear on slid to clause 175 per slides 5-6 <i>Response Status</i> O	nted in)2a_2505.pdf. es 5-6 of ran_3o of ran_3dj_02a	dj_02a_2505. _2505, with editorial	to 1.6T Proposed F CI 176 Bruckman, Comment 7 Incons (page 2 Suggested	AUI-16 and ren Response SC 176.2 , Leon Type TR istent naming w 294 line 8) Remedy	nove footnote Response Status O P292 Nvidia Comment Status X	L 51	# 76
minimum time to retry Al A proposal to enable fas https://www.ieee802.org. The changes proposed t SuggestedRemedy Implement the changes license. Proposed Response Cl 176 SC 176.1.1	N. iter restart of AN was preser /3/dj/public/25_05/ran_3dj_0 to clause 175 appear on slid to clause 175 per slides 5-6 <i>Response Status</i> O <i>P</i> 288	nted in)2a_2505.pdf. es 5-6 of ran_3d	dj_02a_2505.	to 1.6T Proposed F CI 176 Bruckman, Comment 7 Incons (page 2 Suggested	AUI-16 and ren Response SC 176.2 , Leon Type TR istent naming w 294 line 8) Remedy e: "from the sub	nove footnote <i>Response Status</i> O <i>P</i> 292 Nvidia <i>Comment Status</i> X ith the paragraphs above. Se	L 51	# 76
minimum time to retry Al A proposal to enable fas https://www.ieee802.org The changes proposed t SuggestedRemedy Implement the changes license. Proposed Response C/ 176 SC 176.1.1 Dawe, Piers	N. iter restart of AN was preser /3/dj/public/25_05/ran_3dj_C to clause 175 appear on slid to clause 175 per slides 5-6 <i>Response Status</i> O <i>P</i> 288 Nvidia	nted in)2a_2505.pdf. es 5-6 of ran_3o of ran_3dj_02a	dj_02a_2505. _2505, with editorial	to 1.6T Proposed F Cl 176 Bruckman, Comment 7 Incons (page 2 Suggested Chang	AUI-16 and ren Response SC 176.2 , Leon Type TR istent naming w 294 line 8) Remedy e: "from the sub	nove footnote <i>Response Status</i> O <i>P</i> 292 Nvidia <i>Comment Status</i> X ith the paragraphs above. Se player above the PMA" to: "free	L 51	# 76
minimum time to retry Al A proposal to enable fas https://www.ieee802.org The changes proposed t SuggestedRemedy Implement the changes license. Proposed Response Cl 176 SC 176.1.1 Dawe, Piers	N. tter restart of AN was preser /3/dj/public/25_05/ran_3dj_C to clause 175 appear on slid to clause 175 per slides 5-6 <i>Response Status</i> O <i>P</i> 288 Nvidia <i>Comment Status</i> X	nted in)2a_2505.pdf. es 5-6 of ran_3o of ran_3dj_02a	dj_02a_2505. _2505, with editorial	to 1.6T Proposed F Cl 176 Bruckman, Comment 7 Incons (page 2 Suggested Chang	AUI-16 and ren Response SC 176.2 , Leon Type TR istent naming w 294 line 8) Remedy e: "from the sub	nove footnote <i>Response Status</i> O <i>P</i> 292 Nvidia <i>Comment Status</i> X ith the paragraphs above. Se player above the PMA" to: "free	L 51	# 76
minimum time to retry Al A proposal to enable fas https://www.ieee802.org, The changes proposed to SuggestedRemedy Implement the changes license. Proposed Response CI 176 SC 176.1.1 Dawe, Piers Comment Type T Three types of the - delta	N. tter restart of AN was preser /3/dj/public/25_05/ran_3dj_C to clause 175 appear on slid to clause 175 per slides 5-6 <i>Response Status</i> O <i>P</i> 288 Nvidia <i>Comment Status</i> X	nted in)2a_2505.pdf. es 5-6 of ran_3o of ran_3dj_02a	dj_02a_2505. _2505, with editorial	to 1.6T Proposed F Cl 176 Bruckman, Comment 7 Incons (page 2 Suggested Chang	AUI-16 and ren Response SC 176.2 , Leon Type TR istent naming w 294 line 8) Remedy e: "from the sub	nove footnote <i>Response Status</i> O <i>P</i> 292 Nvidia <i>Comment Status</i> X ith the paragraphs above. Se player above the PMA" to: "free	L 51	# <u>76</u>
minimum time to retry Al A proposal to enable fas https://www.ieee802.org, The changes proposed t SuggestedRemedy Implement the changes license. Proposed Response Cl 176 SC 176.1.1 Dawe, Piers Comment Type T	N. tter restart of AN was preser /3/dj/public/25_05/ran_3dj_C to clause 175 appear on slid to clause 175 per slides 5-6 <i>Response Status</i> O <i>P</i> 288 Nvidia <i>Comment Status</i> X	nted in)2a_2505.pdf. es 5-6 of ran_3o of ran_3dj_02a	dj_02a_2505. _2505, with editorial	to 1.6T Proposed F Cl 176 Bruckman, Comment 7 Incons (page 2 Suggested Chang	AUI-16 and ren Response SC 176.2 , Leon Type TR istent naming w 294 line 8) Remedy e: "from the sub	nove footnote <i>Response Status</i> O <i>P</i> 292 Nvidia <i>Comment Status</i> X ith the paragraphs above. Se player above the PMA" to: "free	L 51	# 76

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 176 SC 176.2 Page 40 of 149 6/16/2025 2:13:37 PM

C/ 176 SC 176.3	P 294	L12	# 77	C/ 176 SC 176.4	P298	L 37	# 179
Bruckman, Leon	Nvidia			Huber, Thomas	Nokia		
Comment Type TR	Comment Status X			Comment Type E	Comment Status X		
176.2 the description i	IGNAL_OK is being considered is more deltailed.	ed. In the similar	paragraph of section	understand the set	graph, the phrases that start ntence (they are additional ex nas both before and after the	planatory information	
SuggestedRemedy				SuggestedRemedy		pinasos.	
Change: "the received to: "the received SIGN (PMA:IS_SIGNAL.req	NAL_OK parameter from the s	ublayer above the	e PMA	00 ,	r 800GBASE-R 32:4 PMAs a	nd after 1.6TBASE-	R 16:8 PMA, so it read
Proposed Response	Response Status O			R 32:4 PMAs, which	is used by the 200GBASE-F ch employ symbol-pair multip ys symbol-quartet multiplexir	lexing, but not by the	
C/ 176 SC 176.4.1	P 296	L 8	# 78	Proposed Response	Response Status 0	-	
Bruckman, Leon	Nvidia						
Comment Type TR Missing arrowhead	Comment Status X			C/ 176 SC 176.4	I.2.4.2 P300	L 29	# 180
SuggestedRemedy				Huber, Thomas	Nokia		
Add the arrowhead to	the input to the PAM4 decode	e process		Comment Type E	Comment Status X		
				The first contonce	had a list of two itams conor	stad with a commo r	othor than 'and'
Proposed Response	Response Status 0			The list sentence	has a list of two items separa	aleu with a comma i	allier than and.
Proposed Response	Response Status O			SuggestedRemedy		ateu with a comma i	
· · ·		L3	# 79	SuggestedRemedy	nce to read: This delay is per		
C/ 176 SC 176.4.2.		L3	# [79	SuggestedRemedy Change the senter	nce to read: This delay is per		
C/ 176 SC 176.4.2. Bruckman, Leon	3.1 <i>P</i> 298	L3	# 79	SuggestedRemedy Change the senter 400GBASE-R 16:2	nce to read: This delay is per PMAs.		
C/ 176 SC 176.4.2. Bruckman, Leon Comment Type TR	3.1 <i>P</i> 298 Nvidia	-		SuggestedRemedy Change the senter 400GBASE-R 16:2 Proposed Response	rce to read: This delay is per PMAs. Response Status O		BASE-R 8:1 and
Cl 176 SC 176.4.2 . Bruckman, Leon Comment Type TR The same information	3.1 P 298 Nvidia Comment Status X	-		SuggestedRemedy Change the senter 400GBASE-R 16:2 Proposed Response	nce to read: This delay is per PMAs. Response Status 0	formed for the 200G	
Cl 176 SC 176.4.2. Bruckman, Leon Comment Type TR The same information SuggestedRemedy Delete: "For the 200G	3.1 P298 Nvidia <i>Comment Status</i> X h is provided in the text and in BASE-R 8:1 PMA, it equals N	the eqautions be × 272 RS-FEC s	low symbols, and for the	SuggestedRemedy Change the senter 400GBASE-R 16:2 Proposed Response Cl 176 SC 176.4 Brown, Matt	nce to read: This delay is per PMAs. <i>Response Status</i> 0 1.3 <i>P</i> 273 Alphawa	formed for the 200G	BASE-R 8:1 and
Cl 176 SC 176.4.2. Bruckman, Leon Comment Type TR The same information SuggestedRemedy Delete: "For the 200G 400GBASE-R 16:2 PM	3.1 P298 Nvidia <i>Comment Status</i> X h is provided in the text and in BASE-R 8:1 PMA, it equals N MA, it equals N × 136 RS-FEC	the eqautions be x 272 RS-FEC s symbols, where	low symbols, and for the	SuggestedRemedy Change the senter 400GBASE-R 16:2 Proposed Response Cl 176 SC 176.4 Brown, Matt Comment Type E	nce to read: This delay is per PMAs. <i>Response Status</i> O I.3 P273 Alphawa <i>Comment Status</i> X	formed for the 200G <i>L</i> 46 ve Semi	BASE-R 8:1 and
Cl 176 SC 176.4.2. Bruckman, Leon Comment Type TR The same information SuggestedRemedy Delete: "For the 200G 400GBASE-R 16:2 PM After the bullets add th	3.1 P298 Nvidia <i>Comment Status</i> X h is provided in the text and in BASE-R 8:1 PMA, it equals N	the eqautions be x 272 RS-FEC s symbols, where	low symbols, and for the	SuggestedRemedy Change the senter 400GBASE-R 16:2 Proposed Response Cl 176 SC 176.4 Brown, Matt Comment Type E The would "may" is	nce to read: This delay is per PMAs. <i>Response Status</i> 0 1.3 <i>P</i> 273 Alphawa	formed for the 200G <i>L</i> 46 ve Semi	BASE-R 8:1 and
Cl 176 SC 176.4.2. Bruckman, Leon Comment Type TR The same information SuggestedRemedy Delete: "For the 200G 400GBASE-R 16:2 PM	3.1 P298 Nvidia <i>Comment Status</i> X n is provided in the text and in BASE-R 8:1 PMA, it equals N MA, it equals N × 136 RS-FEC his text: "where N is an intege	the eqautions be x 272 RS-FEC s symbols, where	low symbols, and for the	SuggestedRemedy Change the senter 400GBASE-R 16:2 Proposed Response Cl 176 SC 176.4 Brown, Matt Comment Type E	Ance to read: This delay is per PMAs. Response Status O 1.3 P273 Alphawa Comment Status X is to be used for the context "i d to" to "may".	formed for the 200G <i>L</i> 46 ve Semi	BASE-R 8:1 and

C/ 176 SC 176.4.3

				01.470				1.01	
C/ 176 SC 176.4.		L16	# 80	C/ 176	SC 1	76.7.1.2	P316	L 24	# 449
Bruckman, Leon	Nvidia			He, Xiang			Huawei		
Comment Type TR	Comment Status X			Comment	Туре	TR	Comment Status X		
In the receive function	on there are processes not step	os					agement, how would precor		
SuggestedRemedy							nderstand this is the langua troduced. Combining this wil		
Change: "to the nex	t steps" to: "to the next steps pr	rocesses"					vithout precoding may not be		
Proposed Response	Response Status 0				ling turne				
				Suggested	Remedy				
							implement precoding on th		
C/ 176 SC 176.4.	3.2.1 P 305	L28	# 696	default	mode sl	hould be	defined to have precoding d	isabled, either ir	n 176 or 178B.
Dawe, Piers	Nvidia			Proposed I	Respons	е	Response Status O		
Comment Type T	Comment Status X								
round-robin and rou	nd robin			C/ 176	SC 1	76 7 2	P316	L 28	# 81
SuggestedRemedy				Bruckman		10.1.2	Nvidia	220	
alternating, in rotatio	on			·					
Proposed Response	Response Status O			Comment		ER	Comment Status X		
				Missin	0				
				Suggested					
C/ 176 SC 176.7.	1.2 P316	L11	# 181	Chang	e: "Wher	n local loc	opback mode enabled" to: "W	When local loopl	back mode is enabled"
Huber, Thomas	Nokia			Proposed I	Respons	е	Response Status 0		
Comment Type T	Comment Status X								
	nfigured either based on ILT (as			C/ 176	SC 1	76.7.4.2	P317	L16	# 9
	the implementation" (as in the la recoder_{tx rx}_{in out}_enable_			Marris, Art	hur		Cadence Des	ian Systems	
	It doesn't sound like the user			Comment		TR	Comment Status X	igh bystems	
SuggestedRemedy							eds decoding before being s	cent to the PRB	S31 checker not after it
Either remove the va	ariables entirely, or treat them a	as status variable	s that report the			to the che			
	e is some value in the user know			Suggested	Remedv				
	at ILT is not being used is that t on a per-lane basis, make that		figure out whether to	••			ed" to "preceded" in "The Pf	RBS31Q test pa	ttern checking is
•	•	more clear.		provide	ed by the	PRBS31	checker (see 176.7.4.1), fo	llowed by invers	e precoding (if
Proposed Response	Response Status O						ray mapping in the PAM4 de	ecoder (see 176	4.3.5)." Also consider
				using s	similar wo	ording in	177.6.2.2		

Proposed Response Response Status **0**

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C/ 176 SC 176.8	P318	L7	# 567	C/ 176B SC 1	76B.2	P 700	L8	# 270
Nicholl, Shawn	AMD	-1	" 301	Wang, Xuebo	100.2	Huawei	20	" 210
Comment Type TR	Comment Status X			Comment Type	E	Comment Status X		
The entries in "Table 176-7 R, and 1.6TBASE-R. They			GBASE-R, 400GBASE-	"of" is missing	between	"the number" and "upper".		
		OD/IOL IN		SuggestedRemed	/			
Current text: " the definiti	ons for bit times and pau	se_quanta can l	pe found in 169.4."	Add "of" betwe	en "the n	umber" and "upper".		
SuggestedRemedy				Proposed Respon	se	Response Status 0		
Proposed text: " the defir 169.4, and 174.4"	itions for bit times and pa	ause_quanta ca	n be found in 116.4,					
Proposed Response R	esponse Status O			C/ 176B SC 1	76B.2	P 701	L 40	# 271
				Wang, Xuebo		Huawei		
C/ 176B SC 176B	P699	L12	# 263	<i>Comment Type</i> Typo: "my" sh	E ould be cl	Comment Status X nanged to "may".		
Ofelt, David	Juniper Netwo	orks		SuggestedRemed	/			
Comment Type TR	Comment Status X			Change "my" 1				
We have changed the ppm This leads to interoperabilit 50Gb/s SERDES) into a ne PMD is plugged into an old	y issues when plugging a w 200Gb/s SERDES-bas	an older PMD (g sed receiver or v	enerated with 25Gb/s or when a new 802.3dj	Proposed Respon		Response Status O		
end of those links generate	s data at 100ppm and th	e receive side c	an only handle 50ppm.	C/ 176B SC 1	76B.3	P 702	L 22	# 272
The solution is to insert an issue is not called out anyw				Wang, Xuebo		Huawei		
the reader's attention to the	e fact that this issue exist	s. Adding the r	equired XS also will	Comment Type	т	Comment Status X		
cause PTP accuracy to suf because they were specifie				"4:32 BM-PMA	" should	be changed to "4:32 SM-PMA	", as the PMA	above it is an SM-PMA
generational interop issues				SuggestedRemed	/			
sourced PMDs are connec	ted because the 100Gb/s			Change "4:32	BM-PMA	' to "4:32 SM-PMA".		
transmitters that are 50ppn	າ.			Proposed Respon	se	Response Status O		
SuggestedRemedy								

team in finding a solution. One approach would be to add two examples in clause 176B showing the stack with an included XS for an existing 100ppm-based PMD plugged into a new 200Gb/s-based host and a new 200Gb/s sourced PMD plugged into an older system. We should also include a comment that PTP performance will be impacte due to the requirement for that XS to add or delete idles to match the rates. Another apporach would be to add a comment to all the places that 50ppm receiver tolerance is specified, but there are a lot of those and the way 176B is structured seems to lend itself well to documenting this issue.

Unhelpfully, I don't have fully worked out edit, but will be happy to work with the editorial

Proposed Response Response Status **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 176B SC 176B.3 Page 43 of 149 6/16/2025 2:13:37 PM

C/ 176B	SC 176B.4	P 702	L 40	# 266	Proposed	Response	9	Response St	atus O		
Wang, Xu	ebo	Huawei									
Comment		Comment Status X			C/ 176B	SC 17	6B.4.2		P 706	L1	# 278
The cu	urrent content of PM	A instantiations seems to	include interfac	es with all possible data	Wang, Xu	ebo			Huawei		
		or 200 Gb/s and 400 Gb/s			Comment	Type	E	Comment S	tatus X		
Annex 176B.4 and Annex 176B.5, some cases are missing. For example, some interfaces with 25 Gbps per lane and 50 Gbps per lane are not included for now. For a complete presentation, it is suggested to add those missing cases.				The tit Extend	le should	not inclu ame issu	ide "200GBAS ue happens in	E-R PHYs" a	s the sub-clause ge 711 of CL176	only talks about B.5.2 and Line 27 on	
Suggested	IRemedy				Suggested						
		change the title "8:1 and 8			•••			HYs" in Line 1	on Dogo 706	·.	
four 50) Gb/s physical lane	PMA instantiations for 20 s. change "n = 2 or 4" to "n =			Delete	= "400GBA	ASE-R PI	HYs" in Line 1 HYs" in Line 2	on Page 711	;	
interfa	ce.	-			Proposed	Response	9	Response St	atus O		
		nd 22: change "{n,p}" to "				•			-		
		and avoids the trouble o and avoids the trouble o change "120E (C2M)" to "									
		change "n = 2 or 4" to "n =			C/ 176B	SC 17	′6B.4.2		P 706	L 3	# 273
interfa					Wang, Xue	ebo			Huawei		
		change "120E (C2M)" to "			Comment	Туре -	т	Comment S	tatus X		
interfa		change "n = 2 or 4" to "n =	= 2, 4 01 8 10 10	ciude 200GAUI-8			' should b	be changed to	"Figure 176E	-3", as the Exter	der is shown in Figure
		nd 24: change "{n,p}" to "	p". This change	is consistent with the	"Figure 176B-2" should be changed to "Figure 176B-3", as the Extender is shown in Figure 176B-3 instead of 176B-2. The same issue happens in Line 3 on Page 711.						
		and avoids the trouble o			Suggested	Remedv					
		change the title "16:8, 16: 6:16, 16:8, 16:4, and 16:2				-	176B-2"	to "Figure 176	6B-3" in Line	3 on Page 706 a	nd Line 3 on Page 711
	to include 400GBA			10115 101 400GDA3E-R	Proposed	•		•			
		change "p is 2, 4, or 8" to	o "p is 2, 4, 8, or	16".	Froposeu	Response	7	Response St			
11. Or	n Page 708, Line 4, d	change " 16:{4,8,16}:{4,8}	, 16:4:4" to "16:{	{4,8,16}:{4,8,16}".							
	ange "{4,8}" in table 709, Line 4 and Line	titles to "{4,8,16}" in Line	21 on Page 708	8, Line 4 and Line 28 on	C/ 176B	SC 17	6B.5.1		P 710	L10	# 280
		change "n=4" to "n=4, 8, c	or 16" to include	400GAUI-8 and	Wang, Xue				Huawei	-	
	UI-16 interfaces.				•		-				
		change "p=4" to "p=4, 8,	or 16" to include	e PMDs with 8 and 16	Comment		E	Comment S			
	al lanes.	change "p=4: or 8" to "p=	-1 9 or 16" to in	aduda DMD with 16		n is missi d 51 on P			76. The sam	e nappens in Lin	e 16, 19, 24, 36, 42,
	al lanes.	change p=4. of o to p=	=4, 8, 01 16 10 11				age / 10				
		9 and Line 53 on Page 71	0, change "p=4	or 8" to "p=4, 8, or 16"	Suggested						
to inclu	ude PMD with 16 ph	ysical lanes.	-	•	Add a	colon bet	ween 2 a	and 176 in Line	e 10, 16, 19, 2	24, 36, 42, 45, ar	id 51 on Page 710.
		and 16, change "{m, n}" t			Proposed	Response	e	Response St	atus O		
18. Or interfa		change "n=4 or 8" to "n=	4, 8, 0r 16" to in	iciude 400GAUI-16							
		add "n=16: 120C (C2C)"	to include 4000	GAUI-16 C2C.							
	Dago 710 Lino 22										

20. On Page 710, Line 23, change "{n,p}=4 or 8" to "{n,p}=4, 8, or 16".

A contribution covering all the remedies will be provided.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 176B SC 176B.5.1 Page 44 of 149 6/16/2025 2:13:37 PM

C/176B S	C 176B.6.1	P 713	L 28	# 274	C/ 176B	SC 176B.7.1	P 717	L 2	# 276
Nang, Xuebo		Huawei			Wang, Xue	ebo	Huawei		
Comment Type	e T	Comment Status X			Comment	Туре Е	Comment Status X		
The note s	hould describ	e how an n:p PMA is formed	instead of an n	n:n PMA	"or 8" i	s redundant.			
SuggestedRem	nedy				Suggested	Remedy			
		he combination of m:32 PM/ 2 PMA and 32:p PMA forms		forms an m:n PMA" to	Delete	"or 8" in Line 2 o	on Page 717.		
		I I	an n.p PMA .		Proposed F	Response	Response Status 0		
Proposed Resp	oonse	Response Status O							
		D=45	/ 00	" [222]	C/ 176B	SC 176B.7.2	P 718	L 24	# 277
	C 176B.6.2	P715	L 39	# 279	Wang, Xue	ebo	Huawei		
Wang, Xuebo		Huawei			Comment	Туре Е	Comment Status X		
Comment Type		Comment Status X					d be changed to "m=16" and	"m=8", as the o	corresponding row is of
		xtender. The example should 00GAUI-n is denoted "SB" of		tantiation with a one S	1.6TAL	JI-m.			
		UUGAUI-II IS denoted 3D U	53.		Suggested	Remedy			
SuggestedRem Change "or		"one B 800GAUI-n".					6" in Line 24 on Page 718; in Line 25 on Page 718.		
Proposed Resp	oonse	Response Status O			Proposed I	Response	Response Status O		
C/ 176B S	C 176B.6.2	P715	L 44	# 275	C/ 176C	SC 176C.2	P 720	L 5	# 39
Nang, Xuebo		Huawei			Liu, Cathy		Broadcom Inc		
Comment Type	, T	Comment Status X			Comment T	Туре Е	Comment Status X		
"B", respec	tively, per CL	interfaces and bit-multiplexe 176B.6.2. However, "S" and	"B" are missing	in the titles of Table		ER_added is def ent are two-bit d	ned as 2.841 x 10 ^ -4. It is th ecimal.	nree-bit decima	I. Other places in the
		le happens in the titles of 17			Suggested	Remedy			
•		ng also does not fit with the t	Itle style of othe	er tables in Annex 176B.	Chang	e to 2.84 x 10 ^ ·	4		
SuggestedRem	,				Proposed F	Response	Response Status O		
"800 Ğb/s 3 Change the instantiatio	32:4:32 and 3 e title of Table ns" to "800 G	 176B-25 "800 Gb/s 32:4:32 32:8:32 (S or B) PMA instanti 176B-26 "800 Gb/s 32:8:8: b/s 32:8:8:32 and 32:4:4:32 176B-27 "800 Gb/s PMA 32 	ations"; 32 and 32:4:4:3 (n = m, BB or S	2 (n = m) PMA S) PMA instantiations";	, ropossu i				
		b/s 32:4:8:32 and 32:8:4:32							

Proposed Response Response Status **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 176C SC 176C.2 Page 45 of 149 6/16/2025 2:13:37 PM

	P 721	L15	# 40	C/ 176C SC 176C.6.	2 P 723	L18	# 66
Liu, Cathy	Broadcom Inc.			Mellitz, Richard	Samtec		
Comment Type T	Comment Status X			Comment Type TR	Comment Status X		
	s one mated connector illustrate			The reference impeda	nce for measurement should a	align with the tes	t fixture reference.
	o connector or up to one connector or up to one connector		might misleading the	SuggestedRemedy			
SuggestedRemedy				Change line to:			
,	nat the connector is optional.			The reference impeda	nce for differential specificatio	ns is 92.5 ohms.	The reference
Proposed Response	Response Status O				on-mode specifications is 23.1		
				Proposed Response	Response Status 0		
C/ 176C SC 176C.5.3	B.1 P706	L 35	# 462			/	
Slavick, Jeff	Broadcom			C/ 176C SC 176C.6.		L 39	# 504
Comment Type TR	Comment Status X			Dudek, Mike	Marvell		
There is ILT has a Typ	be E1 not type E.			Comment Type T	Comment Status X	· · • • • • • • • • • • • • • • • • • •	
SuggestedRemedy Change Type E to Typ	be E1.				Frequency AC common mod ck Error ratio requirement. Th		
Proposed Response	Response Status O			SuggestedRemedy Change the C2C valu	e to 30mV in table 176C-2.		
C/ 176C SC 176C.6.2	2 P 723	L17	# 614	Proposed Response	Response Status O		
Palkert, Thomas	Samtec, Maco	m					
Comment Type TR	Comment Status X			CI 176C SC 176C.6.	3 P 723	L 46	# 493
All impedance values	should be 92.5 ohms			Dudek, Mike	Marvell		
				Comment Type TR	Comment Status X		
SuggestedRemedy				T I I I			
SuggestedRemedy Change reference imp	edance to 92.5 ohms			The common-mode t	o differential-mode output retu	rn loss specificat	ions is missing for C2C
	edance to 92.5 ohms Response Status O			The common-mode t SuggestedRemedy	o differential-mode output retu	rn loss specificat	ions is missing for C2C
Change reference imp				SuggestedRemedy Add this specification this link does not have proposed in a separat	to Table 176C-2 using the sar a minimum loss consider as e comment for C2M for both th de input return loss specification	ne values as in e an alternative us his new specifica	equation 176C-1. As ing the values tion and the differential-

Cl 176C SC 176C.6.3

C/ 176C SC 176C.6.3 P724 L22 # 362	C/ 176C SC 176C.6.3.5 P726 L 38 # 62
Ghiasi, Ali Ghiasi Qunatum/Marvell	Mellitz, Richard Samtec
Comment Type TR Comment Status X	Comment Type TR Comment Status X
J4U03 has two values, package A and package B, not clear what determines actual DUT	ERL impedance should be aligned to Rd and 179B.
package as Class A or Class B. Is it total loss? What happens if one has Class B package with short trace, is that class A?	SuggestedRemedy
SuggestedRemedy	Add line: The reference differential impedance for the test fixture ERL computation shall be 92.5
Please provide how to determine DUT package is Class A or B.	ohms.
Also add reference to table 176C-7	Proposed Response Response Status O
Proposed Response Response Status O	
	C/ 176C SC 176C.6.4.2 P727 L9 # 535
C/ 176C SC 176C.6.3.1 P724 L35 # 109	Dudek, Mike Marvell
Bruckman, Leon Nvidia	Comment Type TR Comment Status X
Comment Type TR Comment Status X There is no Type E defined in Annex 178B	There isn't a minimum loss specified for the C2C channel. Inserting the the minimum channel loss from the KR interference tolerance test isn't appropriate.
SuggestedRemedy	SuggestedRemedy
Change: "Type E"	Consider whether using the same minimum loss used for the interference tolerance test is
to: "Type E1"	appropriate. If so add to 176C.7.2. The recommended minimum channel insertion loss is 13dB.
Proposed Response Response Status O	On page 727 line 9 replace "using a channel with the minimum insertion loss specified in 178.9.3.4" with "using an amplitude tolerance test channel" Add a sentence to the end
C/ 176C SC 176C.6.3.5 P726 L18 # 606	of the paragraph. The loss of the amplitude tolerance test channel including the package
C/ 176C SC 176C.6.3.5 P726 L18 # 606 Palkert, Thomas Samtec, Macom	loss of the compliant transmitter used in the test is equal to the Test 1 loss in table 176C-
Comment Type TR Comment Status X	If not then replace "using a channel with the minimum insertion loss specified in 178.9.3.4' with "using a minimal loss channel"
The C2C specification should use 92.5 ohm impedance for transmitter and receiver ERL	Proposed Response Response Status O
SuggestedRemedy	Response Status O
add line in Table 176C-3 to specify 92.5 ohm impedance	
Proposed Response Response Status O	C/ 176C SC 176C.6.4.4 P727 L33 # 366
	Ghiasi, Ali Ghiasi Qunatum/Marvell Comment Type TR Comment Status X
	802.3ck common mode to differential return loss frequency was up to 50 GHz
	802.3ck common mode to differential return loss frequency was up to 50 GHz

C/ 176C SC 176C.6.4.4

C/ 176C SC 176C.6	6.4.4	P 727	L33	# 365	C/ 176C	SC 176C.7	P 731	L13	# 536
Ghiasi, Ali	Gł	niasi Qunatu	m/Marvell		Dudek, Mike	е	Marvell		
Comment Type TR	Comment Stat	tus X			Comment T	уре Т	Comment Status X		
		mode to diffe	erential, but for s	some reason in clause	lt isn't c	lear what the c	hannel includes. (including	where the IIdd is	measured from).
176C instead RLcd i	is defined				SuggestedF	Remedy			
SuggestedRemedy Change RLcd to RL	.dc (common mode to	o differential))				n in table to "Maximum inse ended)" (as used for KR).	rtion loss from Tp	od to Tp5d, ILdd, at
Proposed Response	Response State	us O			Proposed R	esponse	Response Status O		
C/ 176C SC 176C.6	6.4.5.3	P 729	L 48	# 532	C/ 176C	SC 176 C .7	P 731	L17	# 503
Dudek, Mike	Ma	arvell			Dudek, Mike	е	Marvell		
Comment Type TR	Comment Stat	tus X			Comment T	ype TR	Comment Status X		
The C2C receeiver s	should be able to dot	ormino what	her pre-codina i	e used	There is	no specificati	on for differential-mode to o	common-mode co	nversion for the C2C
				3 4364.			allow a very large amount o		
SuggestedRemedy						, which would	allow a very large amount o		
SuggestedRemedy Change "test transm		the ILT funct	tion" to "test tra	nsmitter equalizer and	channel <i>SuggestedF</i> Add a s	, which would Remedy pecification to	the channel specification fo	f common mode t r differential-mode	to be input to the Rx. e to common-mode
SuggestedRemedy Change "test transm	nitter equalizer using	the ILT functor fr KR on pag	tion" to "test tra		channel SuggestedF Add a s convers	, which would Remedy pecification to	the channel specification fo me equation as used for KR	f common mode t r differential-mode	to be input to the Rx. e to common-mode
SuggestedRemedy Change "test transm precoder using the I	nitter equalizer using ILT function" Also fo	the ILT functor fr KR on pag	tion" to "test tra		channel SuggestedF Add a s convers	, which would Remedy pecification to ion with the sa equation 179-28	the channel specification fo me equation as used for KR	f common mode t r differential-mode	to be input to the Rx. e to common-mode
SuggestedRemedy Change "test transm precoder using the I Proposed Response	nitter equalizer using ILT function" Also fo <i>Response State</i>	the ILT functor fr KR on pag	tion" to "test tra		channel SuggestedF Add a s convers cable (e	, which would Remedy pecification to ion with the sa equation 179-28	the channel specification fo me equation as used for KF 3)	f common mode t r differential-mode	to be input to the Rx. e to common-mode
UggestedRemedy Change "test transm precoder using the l proposed Response	nitter equalizer using ILT function" Also fo Response Statu 7 I	the ILT func or KR on pag <i>us</i> O	tion" to "test tra le 368 line 22	nsmitter equalizer and	channel SuggestedF Add a s convers cable (e	, which would Remedy pecification to ion with the sa equation 179-28	the channel specification fo me equation as used for KF 3) <i>Response Status</i> O	f common mode t r differential-mode	to be input to the Rx. e to common-mode
CuggestedRemedy Change "test transm precoder using the I Proposed Response T 176C SC 176C.7 Healey, Adam Comment Type T	nitter equalizer using ILT function" Also fo <i>Response State</i> 7 / 7 Bro <i>Comment Stat</i>	the ILT functor fr KR on pag <i>us</i> O P731 roadcom, Inc	tion" to "test tran le 368 line 22	nsmitter equalizer and # 482	channel SuggestedR Add a s convers cable (e Proposed R	, which would Remedy pecification to ion with the sa quation 179-20 esponse SC 176C.7.1	the channel specification fo me equation as used for KF 3) <i>Response Status</i> O	f common mode f r differential-mode R (equation 178-6	to be input to the Rx. e to common-mode) or as used for CR
SuggestedRemedy Change "test transm precoder using the I Proposed Response Cl 176C SC 176C.7 Healey, Adam Comment Type T There is potential co	nitter equalizer using ILT function" Also fo <i>Response State</i> 7 // 7 // 8r <i>Comment Stat</i> onfusion about what c	the ILT functor for KR on pag <i>us</i> O P731 roadcom, Inc <i>tus</i> X channel inset	tion" to "test tra e 368 line 22 L13	msmitter equalizer and # 482	channel SuggestedR Add a s convers cable (e Proposed R Cl 176C	which would Remedy pecification to ion with the sa equation 179-20 esponse SC 176C.7. 1	the channel specification for me equation as used for KF 3) <i>Response Status</i> O <i>P</i> 731	f common mode f r differential-mode R (equation 178-6	to be input to the Rx. e to common-mode) or as used for CR
SuggestedRemedy Change "test transm precoder using the I Proposed Response C/ 176C SC 176C.7 Healey, Adam Comment Type T There is potential co defines the "channel	nitter equalizer using ILT function" Also fo <i>Response State</i> 7 / 7 Bro <i>Comment Stat</i>	the ILT functor for KR on pag us O P731 roadcom, Inc tus X channel inser o TP5d, the ir	tion" to "test tra e 368 line 22 L13	the second secon	channel SuggestedF Add a s convers cable (e Proposed R C/ 176C Brown, Matt Comment T In Table frequen	I, which would Remedy pecification to ion with the sa equation 179-2 esponse SC 176C.7.1 t ype TR e 176C-6 (C2C cy" is specified	the channel specification fo me equation as used for KF B) Response Status 0 P731 Alphawave Comment Status X channel characteristics), th as 50 kHz, whereas the co	f common mode t r differential-mode R (equation 178-6 <i>L</i> 18 Semi e "Maximum AC	to be input to the Rx. e to common-mode) or as used for CR # <u>323</u> coupling 3 dB corner
SuggestedRemedy Change "test transm precoder using the I Proposed Response Cl 176C SC 176C.7 Healey, Adam Comment Type T There is potential co defines the "channel portion between TP(TP0 or TP5.	nitter equalizer using ILT function" Also fo <i>Response State</i> 7 // 7 // 7 // 7 // 8 7 // 8 7 // 9 7 // 9 8 7 // 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	the ILT functor for KR on pag us O P731 roadcom, Inc tus X channel inser o TP5d, the ir	tion" to "test tra e 368 line 22 L13	the second secon	channel SuggestedR Add a s convers cable (e Proposed R Cl 176C Brown, Matt Comment T In Table frequen and C21	I, which would Remedy pecification to ion with the sa equation 179-2: esponse SC 176C.7.1 t ype TR = 176C-6 (C2C cy" is specified V (176D.6.4) is	the channel specification fo me equation as used for KF B) Response Status 0 P731 Alphawave Comment Status X channel characteristics), th as 50 kHz, whereas the co	f common mode t r differential-mode R (equation 178-6 <i>L</i> 18 Semi e "Maximum AC	to be input to the Rx. e to common-mode) or as used for CR # <u>323</u> coupling 3 dB corner
SuggestedRemedy Change "test transm precoder using the I Proposed Response Cl 176C SC 176C.7 Healey, Adam Comment Type T There is potential co defines the "channel portion between TP(TP0 or TP5. SuggestedRemedy To eliminate the pos	nitter equalizer using ILT function" Also fo <i>Response State</i> 7 <i>I</i> 7 <i>I</i> 7 <i>I</i> 7 <i>I</i> 7 <i>I</i> 7 <i>I</i> 7 <i>I</i> 8 7 <i>I</i> 7 <i>I</i> 8 7 <i>I</i> 8 8 9 9 10 be from TP0d to 0 and TP5 and the input 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	the ILT functor for KR on pag us O P731 roadcom, Inc tus X channel inser o TP5d, the ir put to the EF	tion" to "test tran le 368 line 22 <i>L</i> 13	msmitter equalizer and # 482 s. While 176C.3 I calculation is the a measurement at	channel SuggestedR Add a s convers cable (e Proposed R C/ 176C Brown, Matt Comment T In Table frequen and C21 SuggestedR	I, which would Remedy pecification to ion with the sa equation 179-24 response SC 176C.7.1 t ype TR e 176C-6 (C2C cy" is specified V (176D.6.4) is Remedy	the channel specification for me equation as used for KF 3) Response Status O P 731 Alphawave Comment Status X channel characteristics), th as 50 kHz, whereas the cos s 100 kHz.	f common mode to r differential-mode R (equation 178-6 <i>L</i> 18 Semi le "Maximum AC-1	to be input to the Rx. e to common-mode) or as used for CR # <u>323</u> coupling 3 dB corner
SuggestedRemedy Change "test transm precoder using the I Proposed Response Cl 176C SC 176C.7 Healey, Adam Comment Type T There is potential co defines the "channel portion between TP(TP0 or TP5. SuggestedRemedy To eliminate the pos	nitter equalizer using ILT function" Also fo <i>Response State</i> 7 // 7 // 7 // 7 // 7 // 7 // 7 // 7 /	the ILT functor for KR on pag us O P731 roadcom, Inc tus X channel inser o TP5d, the ir put to the EF	tion" to "test tran le 368 line 22 <i>L</i> 13	msmitter equalizer and # 482 s. While 176C.3 I calculation is the a measurement at	channel SuggestedR Add a s convers cable (e Proposed R C/ 176C Brown, Matt Comment T In Table frequen and C21 SuggestedR	I, which would Remedy pecification to ion with the sa equation 179-22 esponse SC 176C.7.1 t SC 176C.6 (C2C cy" is specified V (176D.6.4) is Remedy "50 kHz" to "1	the channel specification for me equation as used for KF 3) Response Status O P 731 Alphawave Comment Status X channel characteristics), th as 50 kHz, whereas the cos s 100 kHz.	f common mode to r differential-mode R (equation 178-6 <i>L</i> 18 Semi le "Maximum AC-1	to be input to the Rx. e to common-mode) or as used for CR # <u>323</u> coupling 3 dB corner

C/ 176C SC 176C.7.1

C/ 176C SC 176C.7.1	P 733	L 4	# 259	C/ 176C SC 176C.	7.1 <i>P</i> 734	L 9	# 540
Shakiba, Hossein		nologies Canada	# 259	Levin, Itamar	Altera corp.	23	# 340
Comment Type TR	Comment Status X	lologico cuildu		Comment Type T	Comment Status X		
	t, quantization noise paramet	ters should be ad	ded to Table 176C-8.	The table says the h	highest allowed tap index is 56 floating tap is 50. Given that th		
SuggestedRemedy					cy between the comment and h		
	bise parameters with suggest anying document for the prop		table. Please refer to	SuggestedRemedy		0	
Also, see shakiba_3dj_		ioseu change.			ent and highest index to be 54 of	or add clarifying to	ext in the comment
Proposed Response	Response Status 0			explaining the apare	ent discerpency.		
				Proposed Response	Response Status O		
C/ 176C SC 176C.7.1	P 733	L10	# 238		7.0 0704		# 007
Mellitz, Richard	Samtec			C/ 176C SC 176C.		L 43	# 607
Comment Type TR	Comment Status X			Palkert, Thomas	Samtec, Ma	com	
Adjust COM voltage to	46.25 ohms measurement re	eference.		Comment Type TR	Comment Status X		
SuggestedRemedy					on should use 92.5 ohm imped	ance for channel	EKL
Change				SuggestedRemedy			
A_vto 0.415 A feto 0.415					6C-9 to specify 92.5 ohm impe	dance	
A_neto 0.610				Proposed Response	Response Status O		
Proposed Response	Response Status 0						
				CI 176D SC 176D.	2 P 741	L 5	# 41
C/ 176C SC 176C.7.1	P 733	L 46	# 258	Liu, Cathy	Broadcom II	nc.	
Shakiba, Hossein		nologies Canada	200	Comment Type E	Comment Status X		
Comment Type TR	Comment Status X	leiegiee Canada		—	defined as 2.681 x 10 ^ -4. It is	three-bit decimal	I. Other places in the
21	t, an updated value for One-s	sided noise spect	ral densitv in Table	document are two-b			
176C-8 is needed.	,		,	SuggestedRemedy			
SuggestedRemedy				Change to 2.68 x 10			
	e spectral density parameter accompanying document for			Proposed Response	Response Status O		
Also, see shakiba_3dj_	elec_01_250626.pdf.						

C/ 176D SC 176D.2

C/ 176D	SC 176D.3	P 741	L 19	# 324
Brown, Ma	tt	Alphawave Se	emi	
Comment	Type TR	Comment Status X		
the ser service equiva specific also be	tence is prefixed interface defined lent functionally t cation in the sam time to subdivid	e C2M interface includes ILT I with the word "Specifically," d in the previous sentence. C o a CR interface. The ILT is e way as done for CR (see 1 ed the C2M functional speci 2C in Annex 176C.	as though ILT v C2M interface is a rather major fr 79.8.9) and KR	was related to the defined as being unction and deserves t (see 178.8.9). It may
Suggested	Remedy			
		e similar 178.8.9 and 179.8.9 functional specification into		.3.
Proposed I	Response	Response Status 0		
C/ 176D	SC 176D.6.3	P 745	L16	# 506
C/ 176D Dudek, Mił		P 745 Marvell	L16	# 506
Dudek, Mił	<e< td=""><td></td><td>L16</td><td># 506</td></e<>		L16	# 506
Dudek, Mił Comment The ma low fre (and 30 the mo	Ke <i>Type</i> TR odule AC commo quency. The allo OmV max for the odule input tolerar	Marvell	DmV max full ban n-mode full ban utput value shou a reason why th	nd and 32mV for the d is however 85mV max Ild not be higher than
Dudek, Mił Comment The ma low fre (and 30 the mo	ke Type TR odule AC commo quency. The allo DmV max for the dule input tolerar e more than the h	Marvell Comment Status X on-mode input tolerance is 80 wed host output AC commo low frequency). The host of nce full band, and there isn't	DmV max full ban n-mode full ban utput value shou a reason why th	nd and 32mV for the d is however 85mV max Ild not be higher than

Proposed Response Response Status **O**

C/ 176D	SC 176D.6.3		P 745	L 21	# 492
Dudek, Mik	æ		Marvell		
•		~			

Comment Type **TR** Comment Status **X**

The differential-mode to common mode input return loss module specification in combination with the common-mode to differential-mode return loss specification for the host output are inadequate, allowing for an interfereing signal that is only 16dB below the wanted signal at frequencies above 35GHz. (The specifications are probably adequate for the original purpose in CR because there is a minimum loss of 16dB at Nyquist between these points). These specifications are also weaker than the specifications for 100G chip to module in 802.3ck

SuggestedRemedy

Replace the references to equations 179-20 in tables 176D-2 and 176D-3 and equation 179-27 in tables 176D-4 and 176D-5 with references to new equations. The equations should be 25-22(f/106.25) from 0.05 to 53.12 GHz and 19-10(f/106.25) from 53.12 to 67 GHz which are the same equations as used for 100G C2M scaled in frequency. In addition to this change in order to measure this the common-mode to differential-mode return loss for the mated compliance boards need to be improved. Change equation 179B-8 and Figure 179B-5 to 30-26(f/106.25) from 0.05 to 53.12 GHz and 22-10(f/106.25) from 53.12 to 67 GHz

Proposed Response Response Status **O**

C/ 176D	SC 176D.6.3	P 745	L 38	# 352
Ghiasi, Ali		um/Marvell		

Comment Type TR Comment Status X

We currently have no effective output compliance test method for C2M or input caliburtion of stressor. We replaced VEC with with JRMS, EOJ, and J4U back in Sept 2024 and it has been more than 9 months without any proof that using jitter alone is sufficient for receive compliance.

SuggestedRemedy

TDECQ/EECQ already captrues the jitter as shown in ghiasi_3dj_01a_2409 but also captures amplitude penalty and the effect of PM to AM conversion in thre same way as receiver will observe the penalty. In COM we use reference equalizer to determine compliance, in 802.3ck we used VEC/VEO with a reference equalizer and in OIF Linear and RTLR we use EECQ with reference equalizer for compliance. We have not proven that discrete jitter measurements without a reference equalizer is sufficient for C2M compliance. Task force need to investigate either show that current methdology works otherwise replace it with CKmethod or OIF EECQ before going to SA ballot.

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 176D SC 176D.6.3 Page 50 of 149 6/16/2025 2:13:37 PM

C/ 176D	SC	176D.6.4	P 745	L 47	# 447	C/ 176D	SC 17	6D.6.4	
Ran, Adee			Cisco Systems	6		Mi, Guangca	an		
Comment T	Гуре	т	Comment Status X			Comment Ty	vpe T	R	C
200G p	er lan	e. At the sa	using capacitors is becoming ame time, modules are build ke the host ASICs.			As Ali's contribu			
			-die AC coupling in the receiv			For mod IL at the			
			t to the same range on both s rnal AC coupling in modules			SuggestedR	emedy		
explicit	requii	ement.	noving this requirement.		(x), but it is currently an	The AUI commur sides, ar	nity. The	newly	intro
			5			Proposed Re	esponse		R
be cons - Addin be cons - Chang Suggested Add co	g DC sisteni g DC sisteni ging te Reme mmor n the c	common m t with the ho common m t with the m ext and figu dy n mode rang comment, w	ode range specifications for ost's respective specifications ode tolerance specifications odule's respective specificat res to remove the AC couplir ge and tolerance specification ith editorial license. <i>Response Status</i> O	s for host input a ions. ng requirement	and output. These can s.	Cl 176D Ghiasi, Ali Comment Ty We curre of stress been mo complian SuggestedR	enlty hav sor. We bre than nce.	R /e no e replace	ed V
met by	can <i>Type</i> rrent v the re		P746 Huawei Techn <i>Comment Status</i> X of module output in AUI-C2 M model as shown by the C	M is set too hig	gh, which can not be	TDECQ/ captures receiver complian and RTL that disc complian otherwis	amplitu will obse nce, in 8 .R we us rete jitte nce. Tas	de pen erve the 02.3ck e EEC r meas sk force	alty e pe we Q w urer
Suggested						Proposed Re	esponse		R
change	Rpea	ak to 0.456	as a starting point. A contribu	ution will be pro	ovided.				
Proposed F	Respo	nse	Response Status 0						

C/ 176D SC	176D.6.4	P 746	L 34	# 414
Mi, Guangcan		Huawei Techi	nologies Co., Ltd	
Comment Type	TR	Comment Status X		

_3dj_02b_2505, dSNDR is a complicated parameter. Rich's ed to set a set of SNDR ref values.

SNDR and dSNDR are newly introduced, and dependent on the ot practical for the module vendors to test for all the IL variations.

ay affects both the SERDES/eugipment and the optical module oduced parameters need to be open for consideration from both in simplfying the measurements.

Response Status **O**

C/ 176D	SC 176D.6.4	P 746	L 38	# 353
Ghiasi, Ali		Ghiasi Qunat	um/Marvell	
Comment Ty	vpe TR	Comment Status X		

ctive output compliance test method for C2M or input caliburtion VEC with with JRMS, EOJ, and J4U back in Sept 2024 and it has without any proof that using jitter alone is sufficent for receive

ptrues the jitter as shown in ghiasi_3dj_01a_2409 but also ty and the effect of PM to AM conversion in thre same way as benalty. In COM we use reference equalizer to determine e used VEC/VEO with a reference equalizer and in OIF Linear with reference equalizer for compliance. We have not proven ements without a referecne equalizer is sufficent for C2M eed to investigate either show that current methology works Kmethod or OIF EECQ before going to SA ballot.

Response Status 0

C/ 176D SC 176D.6.4

CI 176D SC 176D.6.5 P747	L12	# 354	C/ 176D SC 17	6D.6.6	P 747	L 36	# 505
Ghiasi, Ali Ghiasi Qunatum/Ma	arvell		Dudek, Mike		Marvell		
Comment Type T Comment Status X			Comment Type 1	R Comme	ent Status X		
In 802.3ck VCM(LF) was 32 mV which is more than 2x lar TP4 with only 15 mV	rger than limit	in the DJ draft at	specified in 176	D.6.1 page 744 lir		he for the host in	section 176D.6.5 no
SuggestedRemedy Given that Module/TP4 would be the larget source of VCN	M(LE) recomm	mend increasing to	tolerance at TP1		6D.8.10 specifical	ly calls out AC c	ommon mode voltage
20 mV		field increasing to	SuggestedRemedy				
Proposed Response Response Status O			Change from "sp	pecifications at TF	P1a" to "Specifictio	ns at TP1"	
			Proposed Response	Respon	se Status O		
C/ 176D SC 176D.6.5 P747	L13	# 507		CD 7 4	P 748	L 25	# 054
Oudek, Mike Marvell				00.7.1			# 654
Comment Type T Comment Status X			Swenson, Norman	D 0	Nokia, Point2		
The Host AC common-mode input tolerance is 80mV max			21		ent Status X tor, which is actual	lv a mated conne	actor though that is
output AC common-mode full band is however only 60mV the host should tolerate more than the module outputs.	/ max . Ther	e isn't a reason why	not clear.			., a matea com	color, though that is
the host should tolerate more than the module outputs.	/ max . Ther	e isn't a reason wny				., a maioa com	
the host should tolerate more than the module outputs. SuggestedRemedy Change the host AC common-mode input tolerance full ba			not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a	ine down the cent ed connector are and 176D-5. Cha	ter of the rectangle included in the 28. nge "Connector" to	labeled connect 2dB Host channe "Mated Connec	or to indicate that bo el loss. Compare wit tor" in the figure so it
the host should tolerate more than the module outputs. SuggestedRemedy Change the host AC common-mode input tolerance full ba Proposed Response Response Status O	and from 80m	NV to 60mV	not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a	ine down the cent ed connector are and 176D-5. Cha ss of the mated co	ter of the rectangle included in the 28.	labeled connect 2dB Host channe "Mated Connec	or to indicate that bo el loss. Compare wit tor" in the figure so it
the host should tolerate more than the module outputs. SuggestedRemedy Change the host AC common-mode input tolerance full be Proposed Response Response Status O Ch 176D SC 176D.6.6 P747	and from 80m		not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a clear that the los	ine down the cent ed connector are and 176D-5. Cha ss of the mated co	ter of the rectangle included in the 28. nge "Connector" to onnector is include	labeled connect 2dB Host channe "Mated Connec	or to indicate that bo el loss. Compare wit tor" in the figure so it
the host should tolerate more than the module outputs. <i>uggestedRemedy</i> Change the host AC common-mode input tolerance full be <i>troposed Response</i> Response Status O 176D SC 176D.6.6 P747 If Iidaka, Yasuo Credo Semiconduct	and from 80m	NV to 60mV	not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a clear that the los	ine down the cent ed connector are and 176D-5. Cha ss of the mated co <i>Respon</i>	ter of the rectangle included in the 28. nge "Connector" to onnector is include	labeled connect 2dB Host channe "Mated Connec	or to indicate that bo el loss. Compare wit tor" in the figure so it
the host should tolerate more than the module outputs. uggestedRemedy Change the host AC common-mode input tolerance full be roposed Response Response Status O 1 176D SC 176D.6.6 P747 b idaka, Yasuo Credo Semiconduct	and from 80m <i>L</i> 35 xtor, Inc.	NV to 60mV	not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a clear that the los Proposed Response	ine down the cent ed connector are and 176D-5. Cha ss of the mated co <i>Respon</i>	ter of the rectangle included in the 28. nge "Connector" to onnector is include se Status O P748	labeled connect 2dB Host channo "Mated Connec d on the Host ch	tor to indicate that bo el loss. Compare wit tor" in the figure so it annel loss. # 413
the host should tolerate more than the module outputs. SuggestedRemedy Change the host AC common-mode input tolerance full be Proposed Response Response Status O C/ 176D SC 176D.6.6 P747 H Hidaka, Yasuo Credo Semiconduct Comment Type T Comment Status X Module input specification should refer to TP1, not TP1a.	and from 80m <i>L</i> 35 xtor, Inc.	NV to 60mV	not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a clear that the los Proposed Response C/ 176D SC 170 Mi, Guangcan	ine down the cent ed connector are and 176D-5. Cha ss of the mated co <i>Respon</i> 6D.7.1	ter of the rectangle included in the 28. nge "Connector" to onnector is include se Status O P748	Labeled connect 2dB Host channed "Mated Connect d on the Host ch	tor to indicate that bo el loss. Compare wit tor" in the figure so it annel loss. # <u>413</u>
the host should tolerate more than the module outputs. SuggestedRemedy Change the host AC common-mode input tolerance full ba Proposed Response Response Status O C/ 176D SC 176D.6.6 P747 II Hidaka, Yasuo Credo Semiconduct Comment Type T Comment Status X Module input specification should refer to TP1, not TP1a. SuggestedRemedy Change TP1a to TP1 in the caption of Table 176D-5.	and from 80m <i>L</i> 35 xtor, Inc.	NV to 60mV	not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a clear that the los Proposed Response Cl 176D SC 176 Mi, Guangcan Comment Type I In the reference However, in CL1 loss was assum same mated cor	ine down the cent ed connector are and 176D-5. Cha is of the mated co <i>Respon</i> 6D.7.1 IR Commu- insertion loss bud 79A.4 for CR cha ed. Since the CR anector and packa ctor loss could be	ter of the rectangle included in the 28. nge "Connector" to onnector is include se Status O P748 Huawei Tech ent Status X dget of AUI-C2M, t annel parameter, a can be implement aging formfacotr as	Labeled connect 2dB Host channed "Mated Connect of on the Host ch L37 nologies Co., Ltc he connector los 2.45dB of mater ed as DAC, which smany of the IM	tor to indicate that bo el loss. Compare wit tor" in the figure so it annel loss. # <u>413</u>
the host should tolerate more than the module outputs. SuggestedRemedy Change the host AC common-mode input tolerance full back Proposed Response Response Status O C/ 176D SC 176D.6.6 P747 L Hidaka, Yasuo Credo Semiconduct Comment Type T Comment Status X Module input specification should refer to TP1, not TP1a. SuggestedRemedy Change TP1a to TP1 in the caption of Table 176D-5.	and from 80m <i>L</i> 35 xtor, Inc.	NV to 60mV	not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a clear that the los Proposed Response Cl 176D SC 170 Mi, Guangcan Comment Type T In the reference However, in CL1 loss was assum- same mated cor the same conne	ine down the cent ed connector are and 176D-5. Cha is of the mated co <i>Respon</i> 6D.7.1 IR Commu- insertion loss bud 79A.4 for CR cha ed. Since the CR anector and packa ctor loss could be	ter of the rectangle included in the 28. nge "Connector" to onnector is include se Status O P748 Huawei Tech ent Status X dget of AUI-C2M, t annel parameter, a can be implement aging formfacotr as	Labeled connect 2dB Host channed "Mated Connect of on the Host ch L37 nologies Co., Ltc he connector los 2.45dB of mater ed as DAC, which smany of the IM	tor to indicate that bo el loss. Compare wit tor" in the figure so it annel loss. # 413 s was not specified. d connector insertion h has been using the DD pluggable modul
the host should tolerate more than the module outputs. SuggestedRemedy Change the host AC common-mode input tolerance full ba Proposed Response Response Status O C/ 176D SC 176D.6.6 P747 II Hidaka, Yasuo Credo Semiconduct Comment Type T Comment Status X Module input specification should refer to TP1, not TP1a. SuggestedRemedy Change TP1a to TP1 in the caption of Table 176D-5.	and from 80m <i>L</i> 35 xtor, Inc.	NV to 60mV	not clear. SuggestedRemedy Draw a vertical li parts of the mate figures 176D-4 a clear that the los Proposed Response Cl 176D SC 176 Mi, Guangcan Comment Type I In the reference However, in CL1 loss was assume same mated cor the same conne clear illustration. SuggestedRemedy	ine down the cent ed connector are and 176D-5. Cha so of the mated co <i>Respon</i> 6D.7.1 FR Comme insertion loss bud 79A.4 for CR cha ed. Since the CR nector and packa ctor loss could be	ter of the rectangle included in the 28. nge "Connector" to onnector is include se Status O P748 Huawei Tech ent Status X dget of AUI-C2M, t annel parameter, a can be implement aging formfacotr as	Labeled connect 2dB Host channed "Mated Connect d on the Host ch <i>L</i> 37 nologies Co., Ltc he connector los 2.45dB of mater ed as DAC, whice many of the IM ence channel mo	tor to indicate that bo el loss. Compare wit tor" in the figure so it annel loss. # 413 s was not specified. d connector insertion h has been using the DD pluggable modul del of AUI-C2M for a

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C/ 176D SC 176D.7.1	1 P 750	L17	# 261	C/ 176D S	C 176D.7.2	P 748	L 51	# 350
Shakiba, Hossein	Huawei Techne	ologies Canada		Ghiasi, Ali		Ghiasi Quna	tum/Marvell	
Comment Type TR	Comment Status X			Comment Type	e TR	Comment Status X		
Following first commen	nt, quantization noise paramete	ers should be add	led to Table 176D-7.			nly needed for cable assem	bly CR and not for	or C2M which has the
SuggestedRemedy				•	S-Parameters			
	noise parameters with suggeste		able. Please refer to	SuggestedRen	-	for C2M COM and should	he removed	
Also, see shakiba_3dj	panying document for the propo	osed change.					be removed	
Proposed Response	Response Status O			Proposed Res	oonse	Response Status O		
			" []	C/ 176D S	C 176D.7.2	P 749	L 34	# 609
C/ 176D SC 176D.7.1	-	L 23	# 260	Palkert, Thoma	as	Samtec, Mac	com	
Shakiba, Hossein		ologies Canada		Comment Type	F TR	Comment Status X		
Comment Type TR	Comment Status X			All impeda	nce values sl	ould be 92.5 ohms		
Following first commer 176D-7 is needed.	nt, an updated value for One-si	ided noise spectr	al density in Table	SuggestedRen	nedy			
SuggestedRemedy				Change Co	OM Impedano	e to 92.5 ohms		
				Proposed Res	oonse	Response Status O		
Please refer to slide 18	ise spectral density in Table 17 8 of the accompanying docume elec. 01, 250626.pdf							
Please refer to slide 18 Also, see shakiba_3dj	8 of the accompanying docume _elec_01_250626.pdf.				C 176D.7.2	P749	L 51	# 140
Please refer to slide 18	8 of the accompanying docume					P 749	L 51 conductor, Inc.	# 140
Please refer to slide 18 Also, see shakiba_3dj Proposed Response	8 of the accompanying docume _elec_01_250626.pdf. <i>Response Status</i> O	ent for the propos	ed change.	C/ 176D S	,	P 749	•	# 140
Please refer to slide 18 Also, see shakiba_3dj Proposed Response	8 of the accompanying docume _elec_01_250626.pdf. <i>Response Status</i> O			C/ 176D S Hidaka, Yasuo Comment Type tau^(h) val	T ue of 5.97x10	P 749 Credo Semio	conductor, Inc.	
Please refer to slide 18 Also, see shakiba_3dj Proposed Response C/ 176D SC 176D.7.2 Swenson, Norman	8 of the accompanying docume _elec_01_250626.pdf. <i>Response Status</i> O 2 P748	ent for the propos	ed change.	C/ 176D S Hidaka, Yasuo Comment Type tau^(h) val	e T ue of 5.97x10 179-16 and I	P 749 Credo Semic <i>Comment Status</i> X ^(-3) in Table 176D-6 seem	conductor, Inc.	
Please refer to slide 18 Also, see shakiba_3dj Proposed Response Cl 176D SC 176D.7.2 Swenson, Norman Comment Type ER "COM calculation, as c	8 of the accompanying docume _elec_01_250626.pdf. <i>Response Status</i> O 2 <i>P</i> 748 Nokia, Point2	L 45	# <mark>655</mark>	C/ 176D S Hidaka, Yasuo Comment Type tau^(h) val 3) in Table SuggestedRen	e T ue of 5.97x10 179-16 and I <i>nedy</i>	P 749 Credo Semic <i>Comment Status</i> X ^(-3) in Table 176D-6 seem	conductor, Inc.	
Please refer to slide 18 Also, see shakiba_3dj Proposed Response C/ 176D SC 176D.7.2 Swenson, Norman Comment Type ER "COM calculation, as of interference tolerance test (see 176	8 of the accompanying docume _elec_01_250626.pdf. <i>Response Status</i> 0 2 <i>P</i> 748 Nokia, Point2 <i>Comment Status</i> X	<i>L</i> 45 for calibration of g of "also", that is	# 655	C/ 176D S Hidaka, Yasuo Comment Type tau^(h) val 3) in Table SuggestedRen	 T ue of 5.97x10 179-16 and I nedy 97x10^(-3) to 	P 749 Credo Semic <i>Comment Status</i> X ^(-3) in Table 176D-6 seem im_3dj_01a_2409, slide 2.	conductor, Inc.	
Please refer to slide 18 Also, see shakiba_3dj Proposed Response Cl 176D SC 176D.7.2 Swenson, Norman Comment Type ER "COM calculation, as of interference tolerance test (see 176 It is not clear, as no ot	8 of the accompanying docume _elec_01_250626.pdf. <i>Response Status</i> O 2 <i>P</i> 748 Nokia, Point2 <i>Comment Status</i> X defined in 178A.1, is also used 6D.8.12)." What is the meaning	<i>L</i> 45 for calibration of g of "also", that is	# 655	Cl 176D S Hidaka, Yasuo Comment Type tau^(h) val 3) in Table SuggestedRen Change 5.	 T ue of 5.97x10 179-16 and I nedy 97x10^(-3) to 	<i>P</i> 749 Credo Semic <i>Comment Status</i> X ^(-3) in Table 176D-6 seem im_3dj_01a_2409, slide 2. 5.79x10^(-3).	conductor, Inc.	
Please refer to slide 18 Also, see shakiba_3dj. Proposed Response Cl 176D SC 176D.7.2 Swenson, Norman Comment Type ER "COM calculation, as of interference tolerance test (see 176 It is not clear, as no ot SuggestedRemedy Clarify (This may be th	8 of the accompanying docume _elec_01_250626.pdf. <i>Response Status</i> O 2 <i>P</i> 748 Nokia, Point2 <i>Comment Status</i> X defined in 178A.1, is also used 6D.8.12)." What is the meaning	<i>L</i> 45 for calibration of g of "also", that is ere. 49, line 9. If that	# 655 noise in the s, in addition to what? is the case, I believe	Cl 176D S Hidaka, Yasuo Comment Type tau^(h) val 3) in Table SuggestedRen Change 5.	 T ue of 5.97x10 179-16 and I nedy 97x10^(-3) to 	<i>P</i> 749 Credo Semic <i>Comment Status</i> X ^(-3) in Table 176D-6 seem im_3dj_01a_2409, slide 2. 5.79x10^(-3).	conductor, Inc.	

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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CI 176D SC 176D.7.	.2 P750	L23	# 239	C/ 176D SC 1	76D.8.2	P 752	L 29	# 142
/lellitz, Richard	Samtec			Hidaka, Yasuo		Credo Semico	onductor, Inc.	
Comment Type TR	Comment Status X			Comment Type	т	Comment Status X		
, 0	to 46.25 ohms measurement r	eference.				needs a parameter M that is efinition in Annex 178A.	not defined in T	Table 176D-8, because
SuggestedRemedy				SuggestedRemedy	,			
Change A_vto 0.415 A_feto 0.415				,		the same way as Annex 93	A and to all rela	ated tables that refer
A_neto 0.611				Proposed Respons	se	Response Status 0		
Proposed Response	Response Status O							
				C/ 176D SC 1	76D.8.2	P 752	L 29	# 361
C/ 176D SC 176D.8.	.1 P751	L 50	# 358	Ghiasi, Ali		Ghiasi Qunatu	um/Marvell	
Shiasi, Ali	Ghiasi Quna	tum/Marvell		Comment Type	TR	Comment Status X		
Comment Type TR	Comment Status X			Line 30 savs th	nat "Tfx e	qual to twice the test fixture of	delav" stateme	nt is not clear
							aciay, stateme	
Differential and comm	non-mode signals are not defi	ned in 93.8.1.3, ju	ust the figure is used				addy , statemer	
Differential and comn for level definition.	non-mode signals are not defi	ned in 93.8.1.3, ju	ust the figure is used	SuggestedRemedy	/			
for level definition.	non-mode signals are not defi	ned in 93.8.1.3, ju	ust the figure is used	SuggestedRemedy Tfx for measure	, ement of	Host Input/Output is twice the Module Input/Output is twice	ne HCB delay.	
for level definition. SuggestedRemedy	non-mode signals are not defin ntial and common-mode signa		,	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mo	, ement of ement of ve Tfx int	Host Input/Output is twice th Module Input/Output is twice o the table and make the ab	ne HCB delay. e the MCB delay ove as footnote	y. s in the table.
for level definition. SuggestedRemedy	Ŭ		,	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s	, ement of ement of ve Tfx int tate in IE	Host Input/Output is twice th Module Input/Output is twice o the table and make the ab EE standard "Tfx is provided	ne HCB delay. e the MCB delay ove as footnote	y. s in the table.
for level definition. SuggestedRemedy Replace with, Differen	ntial and common-mode signa		,	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture	ement of ement of ve Tfx int tate in IE suplier do	Host Input/Output is twice th Module Input/Output is twice o the table and make the ab EE standard "Tfx is provided besn't!	ne HCB delay. e the MCB delay ove as footnote	y. s in the table.
for level definition. SuggestedRemedy Replace with, Differen Proposed Response	ntial and common-mode signa Response Status O	I levels definition	is given by 93.8.1.3.	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s	ement of ement of ve Tfx int tate in IE suplier do	Host Input/Output is twice th Module Input/Output is twice o the table and make the ab EE standard "Tfx is provided	ne HCB delay. e the MCB delay ove as footnote	y. s in the table.
for level definition. SuggestedRemedy Replace with, Differen Proposed Response	ntial and common-mode signa Response Status O	al levels definition	,	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture	ement of ement of ve Tfx int tate in IE suplier do	Host Input/Output is twice th Module Input/Output is twice of the table and make the ab EE standard "Tfx is provided wesn't! Response Status O	he HCB delay. the MCB delay ove as footnote by the test fixtu	y. s in the table. ure provider", what
for level definition. SuggestedRemedy Replace with, Differen Proposed Response Cl 176D SC 176D.8 . Ghiasi, Ali	ntial and common-mode signa Response Status O .1 P752 Ghiasi Quna	al levels definition	is given by 93.8.1.3.	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture	ement of ement of ve Tfx int tate in IE suplier do	Host Input/Output is twice th Module Input/Output is twice to the table and make the ab EE standard "Tfx is provided wesn't! Response Status O	the HCB delay. The MCB delay ove as footnote by the test fixto L 44	y. s in the table.
for level definition. SuggestedRemedy Replace with, Differen Proposed Response Cl 176D SC 176D.8. Ghiasi, Ali Comment Type TR	ntial and common-mode signa Response Status O .1 P 752 Ghiasi Quna Comment Status X	L 13	is given by 93.8.1.3. # 359	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture	ement of ement of ve Tfx int tate in IE suplier do	Host Input/Output is twice th Module Input/Output is twice of the table and make the ab EE standard "Tfx is provided wesn't! Response Status O	the HCB delay. The MCB delay ove as footnote by the test fixto L 44	y. s in the table. ure provider", what
for level definition. SuggestedRemedy Replace with, Differen Proposed Response Cl 176D SC 176D.8. Ghiasi, Ali Comment Type TR The VCM(LF, FB) is r	ntial and common-mode signa Response Status O .1 P752 Ghiasi Quna	L 13	is given by 93.8.1.3. # 359	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture Proposed Respons Cl 176D SC 1 Palkert, Thomas Comment Type	rement of ement of ve Tfx int tate in IE suplier do ce 76D.8.2 TR	Host Input/Output is twice th Module Input/Output is twice to the table and make the ab EE standard "Tfx is provided besn't! Response Status O P 752 Samtec, Maco Comment Status X	the HCB delay. The MCB delay ove as footnote by the test fixto <i>L</i> 44	y. s in the table. ure provider", what # <u>608</u>
for level definition. SuggestedRemedy Replace with, Differen Proposed Response Cl 176D SC 176D.8. Ghiasi, Ali Comment Type TR The VCM(LF, FB) is n SuggestedRemedy	ntial and common-mode signa <i>Response Status</i> O .1 <i>P</i> 752 Ghiasi Quna <i>Comment Status</i> X measured at probability of 1E-	L13 Lum/Marvell 5, in DJ it is tighte	is given by 93.8.1.3. # 359 en to P=1E-7	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture Proposed Respons Cl 176D SC 1 Palkert, Thomas Comment Type	rement of ement of ve Tfx int tate in IE suplier do ce 76D.8.2 TR	Host Input/Output is twice th Module Input/Output is twice to the table and make the ab EE standard "Tfx is provided pesn't! Response Status O P 752 Samtec, Mace	the HCB delay. The MCB delay ove as footnote by the test fixto <i>L</i> 44	y. s in the table. ure provider", what # <u>608</u>
for level definition. SuggestedRemedy Replace with, Differen Proposed Response Cl 176D SC 176D.8. Ghiasi, Ali Comment Type TR The VCM(LF, FB) is r SuggestedRemedy Common mode is big	ntial and common-mode signa <i>Response Status</i> O .1 <i>P</i> 752 Ghiasi Quna <i>Comment Status</i> X measured at probability of 1E- gger issue at 200G compared f	L13 Lum/Marvell 5, in DJ it is tighte	is given by 93.8.1.3. # 359 en to P=1E-7	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture Proposed Respons Cl 176D SC 1 Palkert, Thomas Comment Type	rement of ement of ve Tfx int tate in IE suplier do se 76D.8.2 TR ification s	Host Input/Output is twice th Module Input/Output is twice to the table and make the ab EE standard "Tfx is provided besn't! Response Status O P 752 Samtec, Maco Comment Status X	the HCB delay. The MCB delay ove as footnote by the test fixto <i>L</i> 44	y. s in the table. ure provider", what # <u>608</u>
for level definition. SuggestedRemedy Replace with, Differen Proposed Response Cl 176D SC 176D.8. Ghiasi, Ali Comment Type TR The VCM(LF, FB) is r SuggestedRemedy Common mode is big	ntial and common-mode signa <i>Response Status</i> O .1 <i>P</i> 752 Ghiasi Quna <i>Comment Status</i> X measured at probability of 1E-	L13 Lum/Marvell 5, in DJ it is tighte	is given by 93.8.1.3. # 359 en to P=1E-7	SuggestedRemedy Tfx for measure Tfx for measure Suggest to mov We shouldn't s about if fixture : Proposed Respons Cl 176D SC 1 Palkert, Thomas Comment Type The C2M speci SuggestedRemedy	ement of ement of ve Tfx int tate in IE suplier do se 76D.8.2 TR ification s	Host Input/Output is twice th Module Input/Output is twice to the table and make the ab EE standard "Tfx is provided besn't! Response Status O P 752 Samtec, Maco Comment Status X	the HCB delay. The MCB delay ove as footnote by the test fixto <i>L</i> 44 om ance for TP1a E	y. s in the table. ure provider", what # <mark>608</mark>

C/ 176D SC 176D.8.2

V 176D SC 176D.8.2	P 752	L 50	# 360		C/ 176D	SC 17	76D.8.6		P 753	L36	# 541
Shiasi, Ali	Ghiasi Qunat	um/Marvell			Levin, Itam	ar		A	ltera corp.		
Comment Type TR	Comment Status X				Comment 7	уре	TR	Comment Sta	atus X		
Not clear why Nbx is ze	ro						set that h	nas a different th	nan 0 precur	sor c(1). Also - th	e initialize and pre
SuggestedRemedy					Suggested						
	4 which number of fixed FF	E taps			00	,		:(1) <> 0, this m	av help with	CDR locking on :	some channels. Al
Proposed Response	Response Status 0										ing why it was add
					Proposed F	Respons	е	Response Sta	tus O		
C/ 176D SC 176D.8.6	P 735	L 51	# 463								
Slavick, Jeff	Broadcom				C/ 176D	SC 17	76D.8.7		P 754	L 20	# 355
Comment Type TR	Comment Status X				Ghiasi, Ali			G	Shiasi Qunat	um/Marvell	
	the number TAPs the C2M the separate sub-clauses for			in	Comment 7	уре	TR	Comment Sta	atus X		
	align the C2M and C2C deso				determ					e some of the para raph is for actual	agraph are for measurement of D
SuggestedRemedy					SNDR.	-					
Replace the text of 176	D.8.6 with the following:				Suggested	-					
link training (ILT) function exceptions: * Table 179D-9 is used * Host output step size a	s identical to that specified in on for Type E1 interface as o instead of Table 179-8 for co and coefficient limits are spec te coefficient limits are speci	lefined in 179.8. pefficient initializ cified in Table 1	9 with the following ation values 79D-2		- Pleas DUT SI - After - In the sentens	NDR definitio 2nd par se "of (ate the m n of refer t clarly id 6 ps is us	rence SNDR "ca	alculate referedure is for n edure is for n	rence SNDR" neasurement of E T SNDR"	n measurement of DUT SNDR add to
Replace the text of 1760	C.5.3.1 with the following:				Proposed F	Respons	е	Response Sta	tus O		
link training (ILT) function exceptions: * Table 179D-9 is used	s identical to that specified in on for Type E1 interface as c instead of Table 179-8 for co coefficient limits are specified	lefined in 179.8. Defficient initializ	9 with the following ation values								
Proposed Response	Response Status O										
. ,	•										

C/ 176D SC 176D.8.7

C/ 176D SC 176D.8.	P754	L 34	# 357	C/ 176D	C/ 176D SC 176D.8.7	C/ 176D SC 176D.8.7 P754	C/ 176D SC 176D.8.7 P754 L36
Ghiasi, Ali	Ghiasi Quna	tum/Marvell		Levin, Itam	Levin, Itamar	Levin, Itamar Altera corp	Levin, Itamar Altera corp.
Comment Type TR	Comment Status X			Comment T	Comment Type T	Comment Type T Comment Status X	Comment Type T Comment Status X
	e for DUT measurement is m	issing			no reference / example requirements for TP0		no reference / example test-fixture like in the previous annex 163B, requirements for TP0
SuggestedRemedy			allowed a second address	Suaaested	SuggestedRemedy	SuaaestedRemedy	SuggestedRemedy
PRBS31Q or PCS data, with transn	TP1 on each lane are driven it equalization (see 176D.8.6	, ,	, ,	can we	can we add an example		can we add an example rest-fixture annex for 200G similar to 163B
transition time of	imum steady-state voltage a urement of DUT SNDR.	s specified in Tab	ble 176D–3 and	Proposed F	Proposed Response	Proposed Response Response Status O	Proposed Response Response Status O
Proposed Response	Response Status O						
C/ 176D SC 176D.8.	P754	L34	# 356				
Ghiasi, Ali	Ghiasi Quna	tum/Marvell					
Comment Type TR	Comment Status X						
	e for module is not clear as s ence SNDR but the last parag						
SuggestedRemedy							
DUT SNDR - After definition of re - In the 2nd part clarly	measurement of reference c erence SNDR "calculate refe identify this procedure is for IDR=DUT SNDR - Ref SNDF	erence SNDR" measurement of					
Proposed Response	Response Status 0						

C/ 176D SC 176D.8.7

C/ 176D SC 176D.8.1	1 P 755	L12	# 411	C/ 176D	SC 176D.	8.11	P 755	L 21	# 410
1i, Guangcan	Huawei Techr	ologies Co., Ltd		Mi, Guango	can		Huawei Tech	nologies Co., Ltd	
omment Type TR	Comment Status X			Comment 7	Type TR	Com	ment Status X		
based on the receiver in Data mode. In 176D.2, the error all the method described	receiver can tolerate a given satisfies the error allocation re ocation is to meet the block er in 174A.8, where one can exa block error ratio based on th	equirements in 176 rror ratio of 1.45e- mine the histograr	D.2 when operating	steady In the s request	state voltage same time, th ts it.	e. In this not ne receiver is	nplitude tolerance is e, it says the steady s not required to tole ge is used and how it	-state voltage is c rate preset 1 unle	defined with preset 1.
The histogram consist with value, to calculate	s of 17 bins, with bin 0 to bin 1 d bin 16p.	5 should be meas	sured or projected	Suggestedl Please	-				
	ement time of getting direct me is impractical in both DVT and			Proposed F	Response	Respo	onse Status O		
	nt in bin 15 in the cases of the are expected to be better tha			C/ 176D	SC 176D.	8.12.4	P 758	L 35	# 533
observe.			-	Dudek, Mik	e		Marvell		
My previous contributi	on with 100G/L data and Micha	ael He's 200G/L da	ata have shown that	Comment 7	Type TR	Com	ment Status X		
statistical projection ca	in be very subjective approach	n, sometimes ever	impossible. This	The C2	M receeiver	should be a	ble to determine who	ether pre-coding i	is used.
	ror histogram and the block e tive metric for link performance			Suggestedl	Remedy				
	n. Whether or not a DUT pass						"PRBS31Q pattern v ng the ILT protocol"	with the precoder	enabled or disabled
Judgement of amplitud ratio is not ecnomical f	le tolerance of the module inp easible.	ut and host input b	based on block error	Proposed F	Response	Respo	onse Status O		
uggestedRemedy				C/ 177	SC 177.1		P 327	L11	# 241
	of using BER, and use block		ecommendation /	Gorshe, St	eve		Microchip Te	chnology	
	plement verification of the sys	stem.		Comment 7	Гуре Е	Com	ment Status X		
roposed Response	Response Status O						igure. It is defined in figure and others.	n some figures as	s meaning "Signal
				Suggestedl	Remedy				
					SIL is used in abbreviation I			ent definition, I re	commend adding SIL
				Proposed F	Doononoo	Poon	onse Status O		

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 177 SC 177.1

C/ 177	SC 177.1.1.3	P326	L6	# 583	C/ 177	SC 17	72	P328	L 21	# 83
Nowell, Ma		Cisco	-•		Bruckman,			Nvidia		
Comment T		Comment Status X			Comment 7		ER	Comment Status X		
Unlike (177.1.3	Clause 184.1.3 3 doesn't include	which summarizes the function the basic detail that it is a B sistency these two subclause	CH(128,120) en	coding/decoding.	Differer parame parame	nt lenguageters are electricated en alternative en alternative en alternative en alternative en alternative en a	undefin	I in adjacent paragraphs. In th ed." and in the next paragraph are unspecified.		
the rea					Suggested	,				
Suggested	Remedy							both paragraphs. he two last paragraphs of 177	.3	
	se 177.1.3, inclu (128,120)	de the description that that th	he inner FEC en	coding for Clause 177	Proposed F		0	Response Status O	.0	
Proposed F	Response	Response Status O			C/ 177	SC 17	73	P328	L45	# 183
					Huber, Tho		7.5	Nokia	L 4 5	# [105
C/ 177	SC 177.1.3	P 326	L 7	# 82	Comment 1		r	Comment Status X		
Suggested	Type E nvolutial interlea Remedy e: "using the cor	Nvidia Comment Status X ver is "a convolutional interle volutional interleaver" to: "us Response Status O		nal interleaver"	below t the inte potentia Suggested	he Inner erface in 1 al need to Remedy	FEC is 183.3. F o regula	nly PMD that is used with this not limited to the PMD service Rather than enumerating all the rly update the clause), a more ce interface defined in 182.3"	e interface in 1 e clauses (whi e generic state	82.3. It could also be ch would create a ment can be used.
	•				Proposed F	Response	•	Response Status O		
C/ 177	SC 177.2	P 328	L14	# 182						
Huber, Tho		Nokia			C/ 177	SC 17	7.4.2	P 331	L 29	# 184
	d be better to no	Comment Status X t list the specific PMDs here PHYs are added that use this		tential need to regularly	Huber, Tho Comment T	Гуре Е		Nokia <i>Comment Status</i> X The data from deskwed PMA I	ana ia fad "	
Suggested	Remedy					0		The data from deskwed FIMA is		
DR2-2,	4 for 800GBAS	of parallel streams, n, is 1 for E-DR4-2, 800GBASE-FR4, a			Suggested Change	-	a from t	ne deskwed PMA lane is fed	."	
1.6TBA with	SE-DR8-2." umber of paralle	streams, n, is 1 for 200GBA	SE-R PHYs, 2 f	or 400GBASE-R PHYs,	Proposed F	Response	ļ	Response Status O		
"The nu		Ys, and 8 for 1.6TBASE-R P	HYs."							

C/ 177 SC 177.4.2

C 177 SC 177.4.2	P 331	L 30	# 84	C/ 177 SC 177.4.5	P333	L 24	# 700
Bruckman, Leon	Nvidia			Dawe, Piers	Nvidia		
Comment Type E Missing word	Comment Status X			Comment Type TR T	Comment Status X		
SuggestedRemedy				SuggestedRemedy			
Change: "The data fror	n deskewed PMA lane" to: "	The data from a d	deskewed PMA lane"	Define			
Proposed Response	Response Status O			Proposed Response	Response Status O		
C/ 177 SC 177.4.5	P333	L16	# 697	C/ 177 SC 177.4.5	P333	L 25	# 701
Dawe, Piers	Nvidia			Dawe, Piers	Nvidia		
Comment Type ER is most naturally define	Comment Status X			Comment Type TR MSB	Comment Status X		
SuggestedRemedy Clean up				SuggestedRemedy Define			
Proposed Response	Response Status O			Proposed Response	Response Status O		
C/ 177 SC 177.4.5	P333	L18	# 698	C/ 177 SC 177.4.5	P333	L 30	# 702
Dawe, Piers	Nvidia			Dawe, Piers	Nvidia		
Comment Type TR alpha	Comment Status X			Comment Type TR big dot	Comment Status X		
SuggestedRemedy Define				SuggestedRemedy Define			
Proposed Response	Response Status O			Proposed Response	Response Status O		
CI 177 SC 177.4.5	P333	L 20	# 699	Cl 177 SC 177.4.5	P333	L 50	# 703
Dawe, Piers	Nvidia			Dawe, Piers	Nvidia		
Comment Type TR x	Comment Status X			Comment Type TR big dot	Comment Status X		
SuggestedRemedy Define				SuggestedRemedy Define			
				Proposed Response	Response Status 0		

 TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
 C/ 177

 COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
 SC 177.4.5

 SORT ORDER: Clause, Subclause, page, line
 C/

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C/ 177	SC 177.4.5	P 334	L1	# 704	C/ 177	SC 177.4.7.3	3 P 336	L 4	# 85
Dawe, Pie	ers	Nvidia			Bruckman,	Leon	Nvidia		
Comment	Type TR	Comment Status X			Comment T	ype TR	Comment Status X		
^-1					The bit	pair interleavin	g function for the pad field is	not described.	
uggeste	dRemedy				SuggestedF	Remedy			
Defin	e						the bit-pair interleaving fucntion		
roposed	Response	Response Status O					er FEC encoding, the eight pa er as decribed in 177.4.6".	id flows of Inner I	-EC codewords shal
					Also ref	er to comment	against the figures in Clause	177 vs the ones	in Annex 177A
/ 177	SC 177.4.5	P 334	L4	# 705	0	0	rtion function liocation.		
awe, Pie	ers	Nvidia	-		Proposed R	esponse	Response Status O		
omment		Comment Status X							
genei	rator matrix vs. Ge	eneration matrix - confusingly	y similar names		C/ 177	SC 177.4.8.2	2 P 336	L15	# 186
uggeste	dRemedy				Huber, Tho	mas	Nokia		
Rena	me one				Comment T	ype T	Comment Status X		
roposed	Response	Response Status O					gured either based on ILT or		d by the
•							is the purpose of having the ut}_enable_i" variables to enable		t for each
	00 / / -			"			sn't sound like the user has ar		
177	SC 177.4.7	P334	L 37	# 185	SuggestedF	Remedy			
uber, Th		Nokia					ables entirely, or treat them a		
omment	51	Comment Status X	the environment of	mhan af bita an "Ou			s some value in the user know ILT is not being used is that t		
	e 177-7 is a dit co	nfusing. The 1024-bit pad is					nake that more clear.		0
	FEC codewords".	but of course is not that, it s							
Inner and s		the figure. More generatlly, th	he use of "8x" in t	ne figure is not	Proposed R	esponse	Response Status O		
Inner and s appro	ubclauses under priate, as there is	the figure. More generatlly, the no multiplication going on.	he use of "8x" in the text under t	he figure is not he horizontal brace	Proposed R	esponse	Response Status O		
Inner and s appro (8704 codev	ubclauses under opriate, as there is Inner FEC codew words (a total of 8	the figure. More generatlly, the s no multiplication going on. I words), the intent is that there 704 codewords), but this cou	he use of "8x" in t In the text under t e are 1088 blocks uld easily be misin	he figure is not he horizontal brace of 8 Inner FEC terpreted by a	Proposed R	esponse SC 177.5.1	Response Status O	L 36	# 187
Inner and s appro (8704 codev carele	ubclauses under opriate, as there is Inner FEC codew words (a total of 8 ess reader as 870	the figure. More generatlly, the s no multiplication going on. I words), the intent is that there 704 codewords), but this cou 4 blocks of 8 Inner FEC code	he use of "8x" in the In the text under the are 1088 blocks uld easily be misin ewords It would a	he figure is not he horizontal brace of 8 Inner FEC terpreted by a lso be helpful to		SC 177.5.1	-	L 36	# [187
Inner and s appro (8704 codev carele explic	ubclauses under opriate, as there is Inner FEC codew words (a total of 8 ess reader as 870	the figure. More generatlly, the s no multiplication going on. I words), the intent is that there 704 codewords), but this cou	he use of "8x" in the In the text under the are 1088 blocks uld easily be misin ewords It would a	he figure is not he horizontal brace of 8 Inner FEC terpreted by a lso be helpful to	Cl 177	SC 177.5.1 mas	P336	L 36	# 187
Inner and s appro (8704 codev carele explic 1088/	ubclauses under opriate, as there is Inner FEC codew words (a total of 8 ess reader as 870 citly indicate 1088	the figure. More generatlly, the s no multiplication going on. I words), the intent is that there 704 codewords), but this cou 4 blocks of 8 Inner FEC code	he use of "8x" in the In the text under the are 1088 blocks uld easily be misin ewords It would a	he figure is not he horizontal brace of 8 Inner FEC terpreted by a lso be helpful to	Cl 177 Huber, Tho Comment T	SC 177.5.1 mas ype E	Р 336 Nokia	L 36	# [187
Inner and s appro (8704 codev carele explic 1088/ uggeste In the	ubclauses under opriate, as there is Inner FEC codew words (a total of 8 ess reader as 870 citly indicate 1088 (1089 ratio. dRemedy e pad blocks, repla	the figure. More generatlly, the s no multiplication going on. I words), the intent is that there 704 codewords), but this cou 4 blocks of 8 Inner FEC code blocks, as that would more c ace "8x Inner FEC codewords	he use of "8x" in ti In the text under t e are 1088 blocks uld easily be misin ewords It would a clearly relate back s" with "1024 bits"	he figure is not he horizontal brace of 8 Inner FEC terpreted by a so be helpful to to the text about the . In the other blocks,	Cl 177 Huber, Tho Comment T	SC 177.5.1 mas ype E : sentence is a	P 336 Nokia Comment Status X	L 36	# 187
Inner and s appro (8704 codev carele explic 1088/ uggeste In the chang	ubclauses under opriate, as there is Inner FEC codew words (a total of 8 ess reader as 870 citly indicate 1088 (1089 ratio. dRemedy e pad blocks, repla ge "8x" to "8". In t	the figure. More generatlly, the s no multiplication going on. I words), the intent is that there 704 codewords), but this cou 4 blocks of 8 Inner FEC code blocks, as that would more c ace "8x Inner FEC codewords the text under the brace, add	he use of "8x" in ti In the text under t e are 1088 blocks uld easily be misin ewords It would a clearly relate back s" with "1024 bits"	he figure is not he horizontal brace of 8 Inner FEC terpreted by a so be helpful to to the text about the . In the other blocks,	Cl 177 Huber, Tho Comment T The las SuggestedF	SC 177.5.1 mas ype E sentence is a Remedy	P 336 Nokia Comment Status X		
Inner and s appro (8704 codev carele explic 1088/ Suggeste In the chang 8 inne	ubclauses under opriate, as there is Inner FEC codew words (a total of 8 ess reader as 870 citly indicate 1088 (1089 ratio. dRemedy e pad blocks, repla	the figure. More generatlly, the s no multiplication going on. I words), the intent is that there 704 codewords), but this cou 4 blocks of 8 Inner FEC code blocks, as that would more c ace "8x Inner FEC codewords the text under the brace, add	he use of "8x" in ti In the text under t e are 1088 blocks uld easily be misin ewords It would a clearly relate back s" with "1024 bits"	he figure is not he horizontal brace of 8 Inner FEC terpreted by a so be helpful to to the text about the . In the other blocks,	Cl 177 Huber, Tho Comment T The las SuggestedF Change	SC 177.5.1 mas ype E sentence is a Remedy	P336 Nokia <i>Comment Status</i> X comma splice. hard-decision PAM4 decoding		

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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01 477	00 477 5 0		10	# [22	01 477	00 477 5 0		1.00	# 400
C/ 177	SC 177.5.2	P337	L 9	# 86	C/ 177	SC 177.5.2	P337	L 20	# 188
Bruckman,		Nvidia			Huber, Th		Nokia		
Comment T	51	Comment Status X		een obeum in Fieure	Comment	51	Comment Status X		
177-10		ed to frame the data stream i	n the state diag	am shown in Figure		-bit blocks" has a	a stray b		
Suggested	Remedv				Suggested				
	•	dewords inserted as pad (see	e 177.4.7) are us	sed to frame the data		ge to "128-bit blo	CIS		
stream To: "Th	and are then re ne eight codewoi	moved before the received of rds inserted as pad (see 177 ta is processed further."	lata is prócesse	d further."	Proposed	Response	Response Status O		
Proposed H	Response	Response Status O			C/ 177	SC 177.5.5	P 338	L 31	# 568
					Nicholl, Sl	hawn	AMD		
					Comment	Type E	Comment Status X		
C/ 177	SC 177.5.2	P337	L19	# 281			oder is expected to correct all	codewords with	n one bit error. It ma
Ren, Hao		Huawei			also b	e able to correct			
Comment		Comment Status X			The c	urrent sentence,	although containing no langua	age that indicate	es a mandatory
The de	finition of the ca	ndidate location and the syn	chronization loca	ation is not clear.	require	ement, might be	interpretted by readers as a r	equirement.	
The ca	indidate location	is the inner FEC codeword to is regarded as the synchron alid for a second window of 1	ization location		may b		the language as improved so implementation that is not be		
Suggested	Remedy				Suggested	dRemedy			
Chang The sv		ocess searches for a valid se	et of codewords	in a window of 128-bit		ring to 802.3-202 les sufficient clar	2 Sub-Clause "1.1.6 Word us	age", perhaps t	he word "should"
blocks,	, confirms the ca	indidate location is valid for a	a second window	v of 128b-bit blocks and	provid	es sumulent Udi	ity.		
to:		synchronization location con		0 1		sed text: "The de	ecoder should correct all code	words with one	bit error. It may als
	,	n process searches for a val rv of these codewords is ma			Proposed	Response	Response Status 0		

bit blocks. The boundary of these codewords is marked as candidate location, which is confirmed as the synchronization location if it is valid for a second window of 128b-bit blocks. The synchronization process contiuously validates the synchronization location during operation.

[B]: The synchronization process searches for a valid set of codewords in a window of 128bit blocks, marking the boundary of these codewords as candidate location, confirms the candidate location as sychronization location by validating for a second window of 128b-bit blocks, and then monitors that the synchronization location continues to be valid during operation.

Proposed Response

Response Status 0

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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	SC 177.5.5	P 339	L 5	# 282	C/ 177	SC 177.5.5	P 339	L11	# 87
Ren, Hao		Huawei			Bruckman,	Leon	Nvidia		
Comment 1	Type TR	Comment Status X			Comment T	pe TR	Comment Status X		
		EC_codeword_error_bin_k c			There is	no mention re	garding when are the 8 parity	bits removed	
		d, because this counter value not set for RS-FEC error bin			Suggested	Remedy			
Suggested				51.0.17.	Add to	he end of the s	ection: "Parity bits are then re	emoved from ea	ch Inner FEC codeword
Change					Proposed R	esponse	Response Status 0		
A set o	of four 32-bit cou	inters where counter k counts		codeword received with					
exactly to:	k bits corrected	d (flipped) when fas_lock is tru	ue (k = 0 to 3).		C/ 177	SC 177.5.8	P339	L26	# 88
A set o		ounters where counter k count					Vidia	L 20	# 00
with ex	actly k bits corre	ected (flipped) when fas_lock	is true ($k = 1$ to	3).	Bruckman,		Comment Status X		
roposed F	Response	Response Status 0			Comment T		leaver function is not trivial.	leeds a more de	tailed description
					Suggested				
7 177	SC 177.5.5	P 339	L 6	# 569	00		ibes the convolutional deinter	rleaver (refer to '	184 5 8)
					7100.01	guio inai uoooi			101.0.0)
licholl, Sh	awn	AMD			Proposed R	esnonse	Response Status 0		
,		AMD Comment Status X			Proposed R	esponse	Response Status O		
Comment 7 Current	<i>Type</i> TR t text: " when t	Comment Status X fas_lock is true (k = 0 to 3).			• 		,		
<i>comment 1</i> Current has exa	<i>Type</i> TR It text: " when t actly two bits co	Comment Status X fas_lock is true (k = 0 to 3). F rrected, then Inner_FEC_cod	leword_error_bir	n_2 is incremented.	Proposed R Cl 177	esponse SC 177.6.1.1	,	L 44	# <u>89</u>
<i>comment 1</i> Current has exa	<i>Type</i> TR It text: " when t actly two bits co	Comment Status X fas_lock is true (k = 0 to 3). F	leword_error_bir	n_2 is incremented.	• 	SC 177.6.1.1	, -	L 44	# 89
omment 7 Current has exa Error b The tex	Type TR t text: " when t actly two bits co in 3 increments xt in Sub-Clause	Comment Status X fas_lock is true (k = 0 to 3). F rrected, then Inner_FEC_cod when three or more bits are of a "177.5.5 Inner FEC decode"	leword_error_bir corrected in an li ' is inconsistent	n_2 is incremented. nner FEC codeword." with "Table 45-212l	Cl 177	SC 177.6.1.1 Leon	P339	L 44	# 89
Comment 1 Current has exa Error b The tex Inner F	Type TR t text: " when t actly two bits co in 3 increments in Sub-Clause EC codeword e	Comment Status X fas_lock is true (k = 0 to 3). F rrected, then Inner_FEC_cod when three or more bits are o	leword_error_bir corrected in an li ' is inconsistent	n_2 is incremented. nner FEC codeword." with "Table 45-212l	<i>Cl</i> 177 Bruckman,	SC 177.6.1.1 Leon ype ER	Р 339 Nvidia	L 44	# 89
Comment 1 Current has exa Error b The tex Inner F through	Type TR It text: " when to actly two bits co in 3 increments in Sub-Clause EC codeword e h bin_4.	Comment Status X fas_lock is true (k = 0 to 3). F rrected, then Inner_FEC_cod when three or more bits are of a "177.5.5 Inner FEC decode"	leword_error_bir corrected in an li ' is inconsistent	n_2 is incremented. nner FEC codeword." with "Table 45-212l	CI 177 Bruckman, Comment T	SC 177.6.1.1 Leon <i>ype</i> ER "the"	Р 339 Nvidia	L 44	# <u>89</u>
Comment 7 Current has exa Error b The tex Inner F through	Type TR t text: " when to actly two bits co in 3 increments xt in Sub-Clause EC codeword e h bin_4. Remedy	Comment Status X fas_lock is true (k = 0 to 3). F rrected, then Inner_FEC_cod when three or more bits are of e "177.5.5 Inner FEC decode" rror bin register definitions".	leword_error_bir corrected in an li ' is inconsistent v The MDIO regist	n_2 is incremented. nner FEC codeword." with "Table 45-212l ter contains bin_0	Cl 177 Bruckman, Comment T Missing Suggestedf	SC 177.6.1.1 Leon ype ER "the" Remedy	Р 339 Nvidia		
has exa Error b The tex Inner F through Suggested Propos codewo	Type TR at text: " when the actly two bits co in 3 increments the in Sub-Clause EC codeword e h bin_4. Remedy sed text: " whe ord has exactly the ented. Error bin	Comment Status X fas_lock is true (k = 0 to 3). F rrected, then Inner_FEC_cod when three or more bits are of a "177.5.5 Inner FEC decode"	leword_error_bir corrected in an li ' is inconsistent v The MDIO regist . For example, i _FEC_codeword	n_2 is incremented. nner FEC codeword." with "Table 45-212I ter contains bin_0 f an Inner FEC d_error_bin_2 is	Cl 177 Bruckman, Comment T Missing Suggestedf	SC 177.6.1.1 Leon ype ER "the" Remedy : "is processed	P 339 Nvidia Comment Status X		

C/ 177 SC 177.6.1.1

C/ 177 SC 177.	6.1.4	P 340	L10	# 189	C/ 177	SC 177.10		P 346	L 47	# 570
Huber, Thomas		Nokia			Nicholl, Sh	awn		AMD		
Comment Type T	Comm	nent Status X			Comment 7	Type TR	Comment	Status X		
PRBS 31 generato	r at the input t n at the outpu	to the PAM4 encod t of the PAM4 enco	er, it stands to reader; that is not a	.2? I.e., if there is a ason that there can be unique test pattern,	"Inner_ status	FEC_codewo variables and	rd_error_bin_k MDIO mapping	(Inner FEC lane ".		e 177-8-Inner FEC
uggestedRemedy	ico. Or if thora	e is some value in n	oting that this pa	ttorn oviete, rothor			_codeword_erro			< (Inner FEC lane 1)"
				e PRBS31 generator	Suggested	Remedy				
		S31Q pattern at the								ord_error_bin_k (Inne
Proposed Response	Respor	nse Status O				ne 0)" row of and 1.2333.	Table 177-8-Ini	ner FEC status	variables and ML	DIO mapping" add
C/ 177 SC 177. Bruckman, Leon	5.2.3	<i>Р</i> 340 Nvidia	L 41	# 90	"Inner_				(Inner FEC lane e 7)" also add the	1)" through MDIO registers that
<i>Comment Type</i> TR This checker is no		nent Status X			Proposed F	Response	Response	Status O		
SuggestedRemedy					C/ 177	SC 177.10		P346	L 47	# 571
Add the PRBS31 e	encoded by Inr	ner FEC test patter	n checker location	n in Figure 177-2.	Nicholl, Sh	awn		AMD		
roposed Response	Respor	nse Status O			Comment 7	Гуре Е	Comment	Status X		
					0)" row					bin_k (Inner FEC lane oping", it is not obvious
							ved for rows "In _codeword_erro			k (Inner FEC lane 1)"
					Suggested	Remedy				
					(Inner I		ow of "Table 17			eword_error_bin_k and MDIO mapping"
					through				d_error_bin_k (In FEC lane 7)" also	ner FEC lane 1)" add the text "(k = 0 to
					4)".					

C/ 177 SC 177.10

C/ 177A SC 177A	P 765	L1	# 453	C/ 178 S	C 178.1	P357	L1	# 91
He, Xiang	Huawei			Bruckman, Leo	on	Nvidia		
Comment Type TR	Comment Status X			Comment Type	er er	Comment Status X		
	e not been updated since scran		I to the padding bits.	Table 178-	4 footnotes	are in the next page		
	be updated to reflect the chang	je.		SuggestedRem	nedy			
SuggestedRemedy				Make sure	the footnote	s of Table 178-4 are in the sa	ame page with t	heir correspondent
A presentation with z	zipped files will be provided.			table.				
Proposed Response	Response Status O			Proposed Resp	oonse	Response Status O		
C/ 177A SC 177A	P 765	L 21	# 294	C/ 178 S	C 178.2	P 357	L 5	# 638
Brown, Matt	Alphawave S	emi		Li, Mike		Altera (An Int	el compnany)	
Comment Type TR	Comment Status X			Comment Type	e T	Comment Status X		
as the requirement s	vectors do not include scrambli crambling was added in a later		s specified in 177.4.7.2	1.) BERado		ER contribution outside of the link is PCS-to-PCS including		
as the requirement s SuggestedRemedy Provide a new test ve		draft.		1.) BERad 2.) Measur FEC must signal mus to use PM 3.) May the not 8e-6 ac	ded is the B ed sublayer be included t be encode A-based bloc e measured ccording to C	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir k error measurement). link have xMII extender outsio CL-174A.4).	PMD and FEC nent. To use FE ng signal does r de this sublayer	. Both TX-FEC and RX- C decoder, the incoming ot need to be encoded link (its BER budget is
as the requirement s SuggestedRemedy	crambling was added in a later ector set which includes scram	draft.		1.) BERad 2.) Measur FEC must signal mus to use PM 3.) May the not 8e-6 ac 4.) with Tal	ded is the B ed sublayer be included t be encode A-based bloc e measured ccording to C	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir k error measurement). link have xMII extender outsid	PMD and FEC nent. To use FE ng signal does r de this sublayer	. Both TX-FEC and RX- C decoder, the incoming ot need to be encoded link (its BER budget is
as the requirement s SuggestedRemedy Provide a new test ve Proposed Response Cl 177A SC 177A	crambling was added in a later ector set which includes scram <i>Response Status</i> O	draft.	bits.	1.) BERado 2.) Measur FEC must signal mus to use PM/ 3.) May the not 8e-6 ac 4.) with Tal spec. 5.) Conside	ded is the Bi ed sublayer be included t be encode A-based bloc e measured ccording to C ble 174A-2, ering all of th	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir ck error measurement). link have xMII extender outsio CL-174A.4). table 174A-3, xMII extender (nese, the BERsdded value for	PMD and FEC nent. To use FE ng signal does r de this sublayer (if used) is not p r CL-178.2 shou	. Both TX-FEC and RX- C decoder, the incoming ot need to be encoded link (its BER budget is art of CER < 1.45e-11 Id not be simple 8e-6.
as the requirement s SuggestedRemedy Provide a new test ve Proposed Response Cl 177A SC 177A Bruckman, Leon	ector set which includes scraml Response Status O P765	draft.	bits.	1.) BERado 2.) Measur FEC must signal mus to use PM/ 3.) May the not 8e-6 ad 4.) with Tal spec. 5.) Conside Instead, it s	ded is the Bi red sublayer be included t be encode A-based blod ccording to C ble 174A-2, ering all of the should be 86	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir k error measurement). link have xMII extender outsic CL-174A.4). table 174A-3, xMII extender (nese, the BERsdded value for e-6 * Number_of_C2C_SubLa	PMD and FEC nent. To use FE ng signal does r de this sublayer (if used) is not p r CL-178.2 shou	. Both TX-FEC and RX- C decoder, the incomin ot need to be encoded link (its BER budget is art of CER < 1.45e-11 Id not be simple 8e-6.
as the requirement s SuggestedRemedy Provide a new test ve Proposed Response CI 177A SC 177A Bruckman, Leon Comment Type TR	crambling was added in a later ector set which includes scramb <i>Response Status</i> O <i>P</i> 765 Nvidia	draft. bling of the pad b <i>L</i> 46	bits. # 1 <u>10</u>	1.) BERado 2.) Measur FEC must signal mus to use PM/ 3.) May the not 8e-6 ac 4.) with Tal spec. 5.) Conside Instead, it s sublayer lin	ded is the Bi ed sublayer be included t be encode A-based bloc e measured ccording to C ble 174A-2, ering all of the should be 86 hk between t	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir ck error measurement). link have xMII extender outsio CL-174A.4). table 174A-3, xMII extender (nese, the BERsdded value for	PMD and FEC nent. To use FE ng signal does r de this sublayer (if used) is not p r CL-178.2 shou	. Both TX-FEC and RX- C decoder, the incomin ot need to be encoded link (its BER budget is art of CER < 1.45e-11 Id not be simple 8e-6.
as the requirement s SuggestedRemedy Provide a new test ve Proposed Response CI 177A SC 177A Bruckman, Leon Comment Type TR Figure 177A-1 shows	crambling was added in a later ector set which includes scramb <i>Response Status</i> O <i>P</i> 765 Nvidia <i>Comment Status</i> X	draft. bling of the pad b <i>L</i> 46	bits. # 1 <u>10</u>	1.) BERado 2.) Measur FEC must signal mus to use PMA 3.) May the not 8e-6 ac 4.) with Tal spec. 5.) Conside Instead, it sublayer lir SuggestedRem	ded is the Bi ed sublayer be included t be encode A-based bloc e measured ccording to C ble 174A-2, ering all of the should be 86 hk between the nedy	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir ck error measurement). link have xMII extender outsid CL-174A.4). table 174A-3, xMII extender (nese, the BERsdded value for e-6 * Number_of_C2C_SubLa he two ends MACs.	PMD and FEC nent. To use FE ng signal does r de this sublayer (if used) is not p r CL-178.2 shou ayerLink outside	. Both TX-FEC and RX- C decoder, the incomin ot need to be encoded link (its BER budget is art of CER < 1.45e-11 ild not be simple 8e-6. of the measured
as the requirement s SuggestedRemedy Provide a new test w Proposed Response Cl 177A SC 177A Bruckman, Leon Comment Type TR Figure 177A-1 shows SuggestedRemedy Make the figures cor	ector set which includes scramb Response Status O P765 Nvidia Comment Status X s the pad insertion in a different	draft. bling of the pad b <i>L</i> 46	# 1 <u>10</u> gure 177-2	1.) BERado 2.) Measur FEC must signal mus to use PMA 3.) May the not 8e-6 ac 4.) with Tal spec. 5.) Conside Instead, it s sublayer lir SuggestedRem change the	ded is the Bi ed sublayer be included t be encode A-based bloce e measured ccording to C ble 174A-2, ering all of the should be 86 hk between the nedy BERsdded	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir k error measurement). link have xMII extender outsic CL-174A.4). table 174A-3, xMII extender (nese, the BERsdded value for e-6 * Number_of_C2C_SubLa	PMD and FEC nent. To use FE ng signal does r de this sublayer (if used) is not p r CL-178.2 shou ayerLink outside mber_of_C2C_	. Both TX-FEC and RX- C decoder, the incomin ot need to be encoded link (its BER budget is art of CER < 1.45e-11 lid not be simple 8e-6. of the measured
as the requirement s SuggestedRemedy Provide a new test w Proposed Response Cl 177A SC 177A Bruckman, Leon Comment Type TR Figure 177A-1 shows SuggestedRemedy Make the figures cor Either move the pad	ector set which includes scraml Response Status O P765 Nvidia Comment Status X s the pad insertion in a different	draft. bling of the pad b <i>L</i> 46 t position than Fi before the Inner	# 1 <u>10</u> gure 177-2	1.) BERado 2.) Measur FEC must signal mus to use PMA 3.) May the not 8e-6 ac 4.) with Tal spec. 5.) Conside Instead, it s sublayer lir SuggestedRem change the	ded is the Bi red sublayer be included t be encode A-based bloo e measured coording to C ble 174A-2, ering all of the should be 86 hk between the nedy e BERsdded red sublayer	link is PCS-to-PCS including in the PHY-based measurem d (compared with the incomir ck error measurement). link have xMII extender outsid 2L-174A.4). table 174A-3, xMII extender (nese, the BERsdded value for e-6 * Number_of_C2C_SubLa he two ends MACs. value from 8e-6 to 8e-6 * Nu	PMD and FEC nent. To use FE ng signal does r de this sublayer (if used) is not p r CL-178.2 shou ayerLink outside mber_of_C2C_	. Both TX-FEC and RX- C decoder, the incoming ot need to be encoded link (its BER budget is art of CER < 1.45e-11 lid not be simple 8e-6. of the measured

C/ 178 SC 178.2

C/ 178	SC 178.7	P 359	L 23	# 300	C/ 178	SC 178	.8.1	P360	L 24	# 92
Brown, Mat	tt	Alphawave Se	mi		Bruckman,	Leon		Nvidia		
Comment T	Гуре Т	Comment Status X			Comment 7	ype T I	R	Comment Status X		
	are no "FEC lan ndeed does hav	es". This is likely a carry-over ve FEC lanes.	from 802.3ck fo	r 100GBASE-KR1		function a function a		GNAL_OK handling is missing	. In the optic	al PMDs appears in the
Suggested	Remedy				Suggested	Remedy				
Change	e "PCS or FEC"	to "PCS".						ILT function above the PMD to		
Proposed F	Response	Response Status 0			function		ht side	input to the ILT function at the (refer for example to Figure 1 9-2.		as an output to the ILT
C/ 178	SC 178.8.1	P 360	L15	# 640	Proposed F	Response		Response Status O		
Swenson, N	Norman	Nokia, Point2								
Comment T	Type ER	Comment Status X			C/ 178	SC 178	.8.1	P 360	L32	# 304
		igure are not the test points at			Brown, Mat	t		Alphawave Sen	ni	
		YOV, which is not shown in the est that these are the only test		sentence starting with	Comment 7	ype E	R	Comment Status X		
uggestedl					The die	is labelle	d "dev	ice", whereas the "device" is th	e combinatio	on of die and package.
	-	section from "Specified Test F	Points" to "Refe	anced Test Points"	Suggestedl	Remedy				
		at the beginning of the first se			Change	e label poi	nting to	o the die on the left side of the	Figure 178-2	2 to "Die".
	ce that reads: "7 8.9.3.1)."	The PMD is specified at test p	pints TP0v and	TP5v (see 178.9.2.1	Proposed F	Response	-	Response Status 0	-	
Proposed F	Response	Response Status 0								
					C/ 178	SC 178	.8.1	P 360	L 33	# 302
2/ 178	SC 178.8.1	P360	L23	# 303	Brown, Mat	t		Alphawave Sen	ni	
			-	# 303	Comment 7	vpe E	R	Comment Status X		
Brown, Mat		Alphawave Se	mi			• •	e interf	ace at TP0 is helpfully labelled	as "packag	e-to-board interface". A
comment 7	• •	Comment Status X			similar	label woul	d be h	elpful at TP0d.		
		e medium begins at the MDI. A and TP5d. Further, in most ca			Suggested	Remedy				
though	there are some	cases that reference the TP0 of to Tp5d, ILdd, at 53.125 GF	d to TP5d chan	nel, e.g., "Maximum				e-to-package interface". Figure 176C-2.		
Suggested	Remedv				Proposed F	Response		Response Status O		
In Figur Show th Add a la	re 178-2, make he PMD ending abel at TP0 and	the following changes: and "channel" beginning at TI I TP5 "MDI". to Figure 176C-2.	P0 and TP5.		·	·				
Proposed F	•	Response Status O								
roposcu r	0000100	Response Status U								

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 178 SC 178.8.1 Page 65 of 149 6/16/2025 2:13:37 PM

Cl 178	SC 178.8.1	P 360	L 38	# 301	C/ 178	SC 178.8.9	P 36	51	L 25	# 305
Brown, Matt	t	Alphawave	Semi		Brown, Matt		Alpha	wave Semi		
Comment T	ype E	Comment Status X			Comment T	/pe TR	Comment Status	Х		
is unece	essary here.	mar is inconsistent with sir	nilar phrases used	d through this draft and	transmit	ter not the MD	transmitter on each la I and to be clear it is c from the link peer inter	ontrolling the		
SuggestedF	-				SuggestedR	•				
Change Implem 176D-4,	, Table 176D-5,	"receiver" gure 179-2, Table 179-10,	Ç .	able 176C-4, Table	Change transmit	"control the tra ter output on e	ansmitter output on ea each lane based on red 179.8.9, 176C.3, and	quests from t		
On page	e 756 line 1 cha	nange "component's" to "co ange "transmitter's to "measured transmitter p			Proposed R	esponse	Response Status	0		
Proposed R	Response	Response Status O			C/ 178	SC 178.8.9	P36	51	L 26	# 190
					Huber, Thor	nas	Nokia			
C/ 178	SC 178.8.9	P361	L13	# 416	Comment T	/pe T	Comment Status	x		
-			-		While it		DATA mode" is intend	ed to mean l		,
Ran, Adee Comment T In order Annex 1	ype TR to bring up a lin 178B (specifical	Cisco Syste Comment Status X nk that includes multiple IS ly Figure 178B–7 and Figu	ems SLs, the functionali re 178B–8) is requ	ity of ILT as specified by uired across ISLs.	While it term ha (see 1.4 variable state pe	s specific mean .278) Annex 1 tx_mode has t		ed to mean l PHYs that di the context is associate	iffers from v of ILT, "dat ed with being	vhat is intended here a mode" means the g in the PATH_UP
Ran, Adee Comment T In order Annex 1 In PMD	ype TR to bring up a lii 178B (specifical s that have a tra	Cisco Syste Comment Status X nk that includes multiple IS ly Figure 178B–7 and Figu aining protocol but it's disal	ems iLs, the functionali re 178B–8) is requ bled, the "quiet" ar	ity of ILT as specified by uired across ISLs. nd "local pattern" modes	While it term ha (see 1.4 variable state pe	s specific mean .278) Annex 1 tx_mode has t r figure 178B-8 JP state.	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which	ed to mean l PHYs that di the context is associate	iffers from v of ILT, "dat ed with being	what is intended here a mode" means the g in the PATH_UP
Ran, Adee Comment T In order Annex 1 In PMD are the	ype TR to bring up a lii 178B (specifical s that have a tra	Cisco Syste Comment Status X nk that includes multiple IS ly Figure 178B–7 and Figu	ems iLs, the functionali re 178B–8) is requ bled, the "quiet" ar	ity of ILT as specified by uired across ISLs. nd "local pattern" modes	While it term ha: (see 1.4 variable state pe PATH_L SuggestedR Change	s specific mea .278) Annex 1 tx_mode has 1 r figure 178B-8 JP state. <i>Pemedy</i> "coordinate th	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which	ed to mean I PHYs that di the context is associate more clear i	iffers from v of ILT, "dat ed with being if the text in	vhat is intended here a mode" means the g in the PATH_UP 178.8.9 referred to th
Ran, Adee Comment T In order Annex 1 In PMD are the currently Apples clauses	to bring up a lin 78B (specifical s that have a tra method of com y not defined. to the multiple I 178 through 18	Cisco Syste Comment Status X nk that includes multiple IS ly Figure 178B–7 and Figu aining protocol but it's disal	ems iLs, the functionali re 178B–8) is requ bled, the "quiet" ar peer. However, th the PMD functiona	ity of ILT as specified by uired across ISLs. nd "local pattern" modes le local pattern is	While it term ha: (see 1.4 variable state pe PATH_L SuggestedR Change	s specific mea .278) Annex 1 tx_mode has t r figure 178B-8 JP state. <i>Pemedy</i> "coordinate th JP state (see F	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which 3. As such, it would be the transition to DATA n	ed to mean I PHYs that di the context is associate more clear i	iffers from v of ILT, "dat ed with being if the text in	what is intended here a mode" means the g in the PATH_UP 178.8.9 referred to th
Ran, Adee Comment T In order Annex 1 In PMD are the currently Apples Clauses SuggestedF	Type TR to bring up a lin 178B (specifical s that have a tra method of come y not defined. to the multiple I a 178 through 18 Remedy	Cisco Syste Comment Status X nk that includes multiple IS ly Figure 178B–7 and Figu aining protocol but it's disal municating the RTS to the LT function subclauses of 32 (which have an SM-PM/	ems Ls, the functionali re 178B–8) is requ bled, the "quiet" ar peer. However, th the PMD functiona A above the PMD)	ity of ILT as specified by uired across ISLs. nd "local pattern" modes le local pattern is al specifications in	While it term ha: (see 1.4 variable state pe PATH_L SuggestedR Change PATH_L Proposed R	s specific mea .278) Annex 1 tx_mode has t r figure 178B-8 JP state. <i>Remedy</i> "coordinate th JP state (see F esponse	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which 3. As such, it would be the transition to DATA n Figure 178B-8)." Response Status	ed to mean I PHYs that di the context is associate more clear i node." to "co O	iffers from v of ILT, "dat ad with being if the text in pordinate the	what is intended here a mode" means the g in the PATH_UP 178.8.9 referred to th e transition to the
Ran, Adee Comment T In order Annex 1 In PMD are the currently Apples Suggested Specify used w	Type TR to bring up a lin 178B (specifical s that have a tra method of come y not defined. to the multiple I a 178 through 18 Remedy that PRBS31Q hen mr_training	Cisco Syste <i>Comment Status</i> X nk that includes multiple IS ly Figure 178B–7 and Figu aining protocol but it's disal municating the RTS to the LT function subclauses of	ems SLs, the functionali re 178B–8) is requ bled, the "quiet" ar peer. However, th the PMD functiona A above the PMD) by the PMA, see 1	ity of ILT as specified by uired across ISLs. nd "local pattern" modes le local pattern is al specifications in 176.7.4.2) is the pattern	While it term ha: (see 1.4 variable state pe PATH_U <i>Suggested</i> F Change PATH_U	s specific meai .278) Annex 1 tx_mode has t r figure 178B-8 JP state. <i>Remedy</i> "coordinate th JP state (see F <i>esponse</i> SC 178.8.9	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which 3. As such, it would be the transition to DATA n Figure 178B-8)."	ed to mean I PHYs that di the context is associate more clear i node." to "co O	iffers from v of ILT, "dat ed with being if the text in	vhat is intended here a mode" means the g in the PATH_UP 178.8.9 referred to th
Ran, Adee Comment T In order Annex 1 In PMD are the currently Apples Clauses SuggestedF Specify	Type TR r to bring up a lin 178B (specifical s that have a tra method of commy not defined. to the multiple I 178 through 18 Remedy that PRBS31Q hen mr_training 4.3.1).	Cisco Syste Comment Status X nk that includes multiple IS ly Figure 178B–7 and Figu aining protocol but it's disal municating the RTS to the LT function subclauses of 32 (which have an SM-PM/ (which may be generated	ems SLs, the functionali re 178B–8) is requ bled, the "quiet" ar peer. However, th the PMD functiona A above the PMD) by the PMA, see 1	ity of ILT as specified by uired across ISLs. nd "local pattern" modes le local pattern is al specifications in 176.7.4.2) is the pattern	While it term ha: (see 1.4 variable state pe PATH_L SuggestedR Change PATH_L Proposed R C/ 178 Dawe, Piers Comment T	s specific mea .278) Annex 1 tx_mode has t r figure 178B-8 JP state. Permedy "coordinate th JP state (see F esponse SC 178.8.9 C 178.8.9	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which 3. As such, it would be te transition to DATA n Figure 178B-8)." <i>Response Status</i>	ed to mean I PHYs that di the context is associate more clear i node." to "co O	iffers from v of ILT, "dat ad with being if the text in bordinate the	what is intended here a mode" means the g in the PATH_UP 178.8.9 referred to th e transition to the # 706
Ran, Adee Comment T In order Annex 1 In PMD: are the currently Apples t clauses SuggestedF Specify used wt 178B.14	Type TR r to bring up a lin 178B (specifical s that have a tra method of commy not defined. to the multiple I 178 through 18 Remedy that PRBS31Q hen mr_training 4.3.1).	Cisco Syste <i>Comment Status</i> X Ink that includes multiple IS Iy Figure 178B–7 and Figure aining protocol but it's disal municating the RTS to the LT function subclauses of 32 (which have an SM-PMA (which may be generated _enable is false and tx_mod	ems SLs, the functionali re 178B–8) is requ bled, the "quiet" ar peer. However, th the PMD functiona A above the PMD) by the PMA, see 1	ity of ILT as specified by uired across ISLs. nd "local pattern" modes le local pattern is al specifications in 176.7.4.2) is the pattern	While it term ha: (see 1.4 variable state pe PATH_L SuggestedR Change PATH_L Proposed R CI 178 Dawe, Piers Comment Ty supports SuggestedR	s specific mean .278) Annex 1 tx_mode has t r figure 178B-8 JP state. <i>Bernedy</i> "coordinate th JP state (see F <i>esponse</i> SC 178.8.9 <i>SC</i> 178.8.9 <i>cype</i> E <i>s</i> the coefficient <i>Bernedy</i>	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which 3. As such, it would be the transition to DATA n Figure 178B-8)." <i>Response Status</i> <i>P</i> 36 Nvidia <i>Comment Status</i> nt indexes k_list = {-3,	ed to mean I PHYs that di the context is associate more clear i node." to "co O \mathbf{O} \mathbf{I} \mathbf{X} $-2 -1, 0, 1$ }	iffers from v of ILT, "dat ad with being if the text in bordinate the <i>L</i> 31	what is intended here a mode" means the g in the PATH_UP 178.8.9 referred to th e transition to the # 706 nerdy, too little Englis
Ran, Adee Comment T In order Annex 1 In PMD: are the currently Apples t clauses SuggestedF Specify used wt 178B.14	Type TR r to bring up a lin 178B (specifical s that have a tra method of commy not defined. to the multiple I 178 through 18 Remedy that PRBS31Q hen mr_training 4.3.1).	Cisco Syste <i>Comment Status</i> X Ink that includes multiple IS Iy Figure 178B–7 and Figure aining protocol but it's disal municating the RTS to the LT function subclauses of 32 (which have an SM-PMA (which may be generated _enable is false and tx_mod	ems SLs, the functionali re 178B–8) is requ bled, the "quiet" ar peer. However, th the PMD functiona A above the PMD) by the PMA, see 1	ity of ILT as specified by uired across ISLs. nd "local pattern" modes le local pattern is al specifications in 176.7.4.2) is the pattern	While it term ha: (see 1.4 variable state pe PATH_L SuggestedR Change PATH_L Proposed R CI 178 Dawe, Piers Comment Ty supports SuggestedR	s specific mean .278) Annex 1 tx_mode has t r figure 178B-8 JP state. <i>Bernedy</i> "coordinate th JP state (see F <i>esponse</i> SC 178.8.9 <i>SC</i> 178.8.9 <i>cype</i> E <i>s</i> the coefficient <i>Bernedy</i>	DATA mode" is intend ning for 1000BASE-T 78B.5 indicates that in the value 'data', which 3. As such, it would be the transition to DATA n Figure 178B-8)." Response Status P36 Nvidia Comment Status	ed to mean I PHYs that di the context is associate more clear i node." to "co O \mathbf{O} \mathbf{I} \mathbf{X} $-2 -1, 0, 1$ }	iffers from v of ILT, "dat ad with being if the text in bordinate the <i>L</i> 31	what is intended here a mode" means the g in the PATH_UP 178.8.9 referred to th e transition to the # 706 nerdy, too little Englis

C/ 178 SC 178.8.9

C/ 178 SC 178.9	P 361	L 40	# 707	C/ 178 SC 178.9.	1.2 P 363	L 32	# 616
Dawe, Piers	Nvidia			Palkert, Thomas	Samtec, Mac	om	
Comment Type TR	Comment Status X			Comment Type TR	Comment Status X		
characteristics				The KR specificatio	n should use 92.5 ohm impedan	ce for TP0v test	fixture
SuggestedRemedy				SuggestedRemedy			
specifications				add line in Table 17	8-7 to specify 92.5 ohm impeda	nce	
Proposed Response	Response Status O			Proposed Response	Response Status O		
7 178 SC 178.9.1	I P361	L 43	# 611	C/ 178 SC 178.9	2 <i>P</i> 361	L 47	# 708
alkert, Thomas	Samtec, Mac	com		Dawe, Piers	Nvidia		
Comment Type TR	Comment Status X s should be 92.5 ohms			Comment Type TR characteristics	Comment Status X		
SuggestedRemedy	3 310000 00 32.0 01113						
,	npedance to 92.5 ohms			SuggestedRemedy specifications			
Proposed Response	Response Status O			Proposed Response	Response Status O		
7 178 SC 178.9.1	I P361	L 43	# 63	C/ 178 SC 178.9.	2 P361	L 48	# 641
lellitz, Richard	Samtec			Swenson, Norman	Nokia, Point2		
omment Type TR	Comment Status X			Comment Type ER	Comment Status X		
The reference imped	dance for measurement should	align with the tes	st fixture reference.	The sentence states defined.	s that specifications must be me	t at TP0v, but TF	20v has not yet been
Change line to:				SuggestedRemedy			
0	dance for differential specification	ons is 92.5 ohms	. The reference	Change the sentend TP0v (see 178.9.2.1	ce to "The transmitter on each la 1) given …"	ne shall meet th	e specifications at
impedance for comm	non-mode specifications is 23.1	125 ohms.		Proposed Response	Response Status 0		
1							

C/ 178 SC 178.9.2

C/ 178 SC 178.9.2	P 361	L 53	# 709	C/ 178	SC 178.9	.2.1	P 362	L 49	# 642
Dawe, Piers	Nvidia			Swens	on, Norman		Nokia, Point2		
Comment Type TR	Comment Status X			Comme	ent Type ER	Comment	Status X		
fourth-order vs. 5th ord	ler BT4. And why 60 GHz?					the transmitter ar			
SuggestedRemedy						8–3 and describe 163A, which it is		A" reads like the	e test fixture is
Change to 5th order, 5	3.125 GHz				stedRemedy				
roposed Response	Response Status 0			Ch the	ange to "the trar	fixture (TP0v) as		ethodology desc	cribed in Annex 163A a
C/ 178 SC 178.9.2	P 362	L 24	# 494		ed Response	Response	Status O		
Dudek, Mike	Marvell								
Comment Type TR	Comment Status X								
	on for common-mode to differ			C/ 178		.2.1	P 362	L 49	# 644
	% of the common mode return				on, Norman		Nokia, Point2		
	% of the common mode return acted as interfering differential			Comme	ent Type ER		Status X		
end receiver to be refle degrade performance.				Comme "Ar	ent Type ER	xture is described	Status X I in Annex 163B	." Annex 163B	does not describe an be a drawing of a
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu		l mode energy w e values as in ec nmon-mode refl	which would severely quation 178-4. (Note lections from the far	Comme "Ar exa phy fixt refe	ent Type ER n example test fix ample test fixture vsical test fixture ure. Annex 163 erence values ca	xture is described e. A description of , or perhaps a de B gives example	Status X I in Annex 163B of an example te scription of a po electrical charac	" Annex 163B of st fixture would ssible implement steristics for a te	does not describe an be a drawing of a ntation of an example est fixture for which on is correct and would
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu end receiver as well as	ected as interfering differential o Table 178-6 using the same im loss for the channel so con	l mode energy w e values as in ec nmon-mode refl	which would severely quation 178-4. (Note lections from the far	Comme "Ar exa phy fixt refe like	ent Type ER example test fi ample test fixture vsical test fixture ure. Annex 163 erence values ca e clarification.)	xture is described e. A description of , or perhaps a de B gives example	Status X I in Annex 163B of an example te scription of a po electrical charac	" Annex 163B of st fixture would ssible implement steristics for a te	be a drawing of a ntation of an example est fixture for which
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu end receiver as well as	ected as interfering differential o Table 178-6 using the same im loss for the channel so con from the channel can create	l mode energy w e values as in ec nmon-mode refl	which would severely quation 178-4. (Note lections from the far	Comme "Ar exa phy fixt refe like Sugges	ent Type ER n example test fix ample test fixture vsical test fixture ure. Annex 163 erence values ca e clarification.) stedRemedy	xture is described e. A description o , or perhaps a de B gives example an be calculated.	Status X I in Annex 163B. of an example te scription of a po electrical charac (I am not certain	" Annex 163B of st fixture would ssible implement teristics for a te my interpretati	be a drawing of a ntation of an example est fixture for which on is correct and would
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu end receiver as well as Proposed Response	ected as interfering differential o Table 178-6 using the same im loss for the channel so con from the channel can create	l mode energy w e values as in ec nmon-mode refl	which would severely quation 178-4. (Note lections from the far	Comme "Ar exa phy fixt refe like Sugges Ch	ent Type ER a example test fix ample test fixture vsical test fixture ure. Annex 163 erence values ca e clarification.) stedRemedy ange to " Annex	xture is described e. A description o , or perhaps a de B gives example an be calculated.	Status X I in Annex 163B. of an example te scription of a po electrical charac (I am not certain	" Annex 163B of st fixture would ssible implement teristics for a te my interpretati	be a drawing of a ntation of an example est fixture for which
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu end receiver as well as Proposed Response	o Table 178-6 using the same im loss for the channel so con from the channel can create <i>Response Status</i> O	I mode energy w e values as in ec nmon-mode refl the interference	which would severely quation 178-4. (Note lections from the far e).	Comme "Ar exa phy fixt refe like Sugges Ch refe	ent Type ER a example test fix ample test fixture vsical test fixture ure. Annex 163 erence values ca e clarification.) stedRemedy ange to " Annex	xture is described e. A description of , or perhaps a de B gives example an be calculated. 163B gives exan	Status X I in Annex 163B. of an example te scription of a po electrical charac (I am not certain	" Annex 163B of st fixture would ssible implement teristics for a te my interpretati	be a drawing of a ntation of an example est fixture for which on is correct and would
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu end receiver as well as Proposed Response CI 178 SC 178.9.2 Dudek, Mike	ected as interfering differential o Table 178-6 using the same im loss for the channel so con from the channel can create <i>Response Status</i> O <i>P</i> 362	I mode energy w e values as in ec nmon-mode refl the interference	which would severely quation 178-4. (Note lections from the far e).	Comme "Ar exa phy fixt refe like Sugges Ch refe	ent Type ER n example test fixture vsical test fixture ure. Annex 1631 erence values ca e clarification.) stedRemedy ange to " Annex erence values ca	Atture is described A description of or perhaps a de B gives example an be calculated. 163B gives exam an be calculated.	Status X I in Annex 163B. of an example te scription of a po electrical charac (I am not certain	" Annex 163B of st fixture would ssible implement teristics for a te my interpretati	be a drawing of a ntation of an example est fixture for which on is correct and would
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu end receiver as well as Proposed Response CI 178 SC 178.9.2 Dudek, Mike Comment Type TR The signal-to-residual-	ected as interfering differential o Table 178-6 using the same im loss for the channel so con from the channel can create <i>Response Status</i> O <i>P</i> 362 Marvell	I mode energy w e values as in economon-mode refl the interference <i>L</i> 36 is an additional	which would severely quation 178-4. (Note lections from the far e). # <u>495</u> effective transmitter	Comme "Ar exa phy fixt refe like Sugges Ch refe	ent Type ER n example test fin ample test finture vsical test finture ure. Annex 1630 erence values ca e clarification.) stedRemedy ange to " Annex erence values ca ed Response	Atture is described A description of or perhaps a de gives example an be calculated. 163B gives exan an be calculated. <i>Response</i>	Status X I in Annex 163B. of an example te scription of a po electrical charac (I am not certain	" Annex 163B of st fixture would ssible implement teristics for a te my interpretati	be a drawing of a ntation of an example est fixture for which on is correct and would
end receiver to be refle degrade performance. SuggestedRemedy Add this specification t that there is no minimu end receiver as well as Proposed Response CI 178 SC 178.9.2 Dudek, Mike Comment Type TR The signal-to-residual-	ected as interfering differential o Table 178-6 using the same im loss for the channel so con from the channel can create <i>Response Status</i> O <i>P</i> 362 Marvell <i>Comment Status</i> X intersymbol-interference ratio	I mode energy w e values as in economon-mode refl the interference <i>L</i> 36 is an additional	which would severely quation 178-4. (Note lections from the far e). # <u>495</u> effective transmitter	Comme "Ar exa phy fixt refe like Sugges Ch refe Propos	ent Type ER n example test fin ample test finture vsical test finture ure. Annex 1630 erence values ca e clarification.) stedRemedy ange to " Annex erence values ca ed Response	Atture is described A description of or perhaps a de gives example an be calculated. 163B gives exan an be calculated. <i>Response</i>	Status X I in Annex 163B. of an example te scription of a po electrical charace (I am not certain nple electrical ch Status O	" Annex 163B of st fixture would basible implement teristics for a te manacteristics of haracteristics of	be a drawing of a ntation of an example est fixture for which on is correct and would a test fixture for which

complete the calculations and put in the value that matches).

Response Status 0

Proposed Response

Annex 163A describes methods for measuring transmitter characteristics applicable to 802.3ck. Are these same methods applicable here? Annex 163A refers to use of Clause value of 0 dB where the reference is the value of signal-to-residual-intersymbolinterference for the package claimed. Make the same change for C2C, C2M and CR 93A. Is that still applicable here, or should Clause 178A be used instead? where the reference is the COM module appropriate to the specification. (Or better

SuggestedRemedy

Please clarify.

Proposed Response Response Status **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general	C/ 178	Page 68 of 149
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	SC 178.9.2.1	6/16/2025 2:13:38 PM
SORT ORDER: Clause, Subclause, page, line		

	SC 178.9.2.1	P 363	L 6	# 306	C/ 178	SC 178.9.2.1	.2 P 363	L 45	# 59
Brown, Ma	itt	Alphawave Se	emi		Mellitz, Rid	chard	Samtec		
Comment	Type TR	Comment Status X			Comment	Type TR	Comment Status X		
		iguous where the test fixture I			ERL ir	npedance should	be aligned to Rd and 179	В.	
		would be good to properly de lefine the start and end points			Suggested	lRemedy			
Suggested In Figu Add tes	<i>Remedy</i> ire 178-3 do the st point TP0 at t				Add lir The re ohms. Proposed	ference different	al impedance for the test fi Response Status O	ixture ERL compt	utation shall be 92.5
Adjust	the test fixture li	ine/arrow to end at this TP0 ir							
		d interface "die-to-package in Ilowing sentence	terface".		C/ 178	SC 178.9.2.2	P364	L3	# 308
"The tr	ansmitter test fix	xture is between TP0 and TP0			Brown, Ma		Alphawave		<i>"</i> 500
	•	for the receiver test fixture in 1	78.9.3.1 and Fi	igure 178-4.	Comment		Comment Status X	Conn	
roposed I	Response	Response Status O			As is c	51	ameters, it would be helpfu	ul to follow "differ	ence ERL" with variable
7 178	SC 178.9.2.1	.2 P363	L 24	# 595	Suggested	lRemedy			
Kocsis, Sa	ım	Amphenol					L" to "difference ERL dERL		
	_	•			Make	a similar change	in other subclause through	nout that enacity c	IFRI
Comment	Type TR	Comment Status X				-	-	iout that speeny c	
referen	RL for a test fixtunce impedance is	ure at TP0v is defined without s inferred from 178.9.1, 100-c	hm. The use of		Proposed	-	Response Status O		
The EF referen impeda	RL for a test fixtunce impedance is ance for ERL is i	ure at TP0v is defined without	hm. The use of			-	Response Status O	L 4	# 309
The EF referen impeda	RL for a test fixtunce impedance is ance for ERL is not set of the	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f	hm. The use of 20.	a 100-ohm reference	Proposed	Response SC 178.9.2.2	Response Status O	L 4	
The EF referen impeda uggested	RL for a test fixtunce impedance is ance for ERL is i <i>Remedy</i> efinition of a 92.5	ure at TP0v is defined without s inferred from 178.9.1, 100-c	hm. The use of 20.	a 100-ohm reference	Proposed C	Response SC 178.9.2.2 att	Response Status 0 P 364	L 4	
The EF referen impeda <i>uggested</i> Add de Annex	RL for a test fixtu nace impedance is ance for ERL is i <i>Remedy</i> efinition of a 92.5 179B.	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f	hm. The use of 20.	a 100-ohm reference	Proposed Cl 178 Brown, Ma Comment	Response SC 178.9.2.2 att Type T	Response Status O P 364 Alphawave	L 4	
The EF referen impeda <i>uggested</i> Add de Annex	RL for a test fixtu nace impedance is ance for ERL is i <i>Remedy</i> efinition of a 92.5 179B.	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance fo	hm. The use of 20.	a 100-ohm reference	Proposed Cl 178 Brown, Ma Comment	SC 178.9.2.2 att <i>Type</i> T Table 178-7 sho	Response Status O P364 Alphawave Comment Status X	L 4	
The EF referen impeda uggested Add de Annex roposed F	RL for a test fixtu- nace impedance is ance for ERL is i <i>Remedy</i> efinition of a 92.5 179B. <i>Response</i>	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance fo <i>Response Status</i> 0	hm. The use of 20. or the ERL com	a 100-ohm reference putation, consistent with	Proposed Cl 178 Brown, Ma Comment Likely, Suggested	Response SC 178.9.2.2 att Type T Table 178-7 sho IRemedy	Response Status O P364 Alphawave Comment Status X	L 4 Semi	
The EF referen impeda <i>Suggested</i> Add de Annex ² Proposed F	RL for a test fixtunce impedance is ance for ERL is in <i>IRemedy</i> efinition of a 92.5 179B. <i>Response</i> SC 178.9.2.1	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance for <i>Response Status</i> O	hm. The use of P0. or the ERL com	a 100-ohm reference	Proposed Cl 178 Brown, Ma Comment Likely, Suggested	SC 178.9.2.2 att <i>Type</i> T Table 178-7 sho <i>IRemedy</i> je cross-reference	Response Status O P364 Alphawave Comment Status X uld be Table 178-8.	L 4 Semi	
The EF referen impeda Suggested Add de Annex Proposed F C/ 178 Brown, Ma	RL for a test fixtunce impedance is ance for ERL is in <i>Remedy</i> efinition of a 92.5 179B. <i>Response</i> SC 178.9.2.1	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance for <i>Response Status</i> O 1.2 <i>P</i> 363 Alphawave Se	hm. The use of P0. or the ERL com	a 100-ohm reference putation, consistent with	Proposed Cl 178 Brown, Ma Comment Likely, Suggested Chang	SC 178.9.2.2 att <i>Type</i> T Table 178-7 sho <i>IRemedy</i> je cross-reference	Response Status O P364 Alphawave Comment Status X uld be Table 178-8. e from "Table 178-7" to "Ta	L 4 Semi	
The EF referen impeda Suggested Add de Annex Proposed F C/ 178 Brown, Ma Comment T	RL for a test fixtunce impedance is ance for ERL is ance for ERL is a <i>Remedy</i> efinition of a 92.5 179B. <i>Response</i> SC 178.9.2.1	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance for <i>Response Status</i> O 1.2 <i>P</i> 363 Alphawave Se <i>Comment Status</i> X	hm. The use of P0. or the ERL com <i>L</i> 25	a 100-ohm reference putation, consistent with	Proposed Cl 178 Brown, Ma Comment Likely, Suggested Chang	SC 178.9.2.2 att <i>Type</i> T Table 178-7 sho <i>IRemedy</i> je cross-reference	Response Status O P364 Alphawave Comment Status X uld be Table 178-8. e from "Table 178-7" to "Ta	L 4 Semi	
The EF referen impeda Suggested Add de Annex Proposed F C 178 Brown, Ma Comment T It appe	RL for a test fixtu- nee impedance is ance for ERL is in <i>Remedy</i> efinition of a 92.5 179B. <i>Response</i> SC 178.9.2.1 att <i>Type</i> T ears that to mease appropriate imp	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance for <i>Response Status</i> O 1.2 <i>P</i> 363 Alphawave Se	hm. The use of 20. or the ERL com <i>L</i> 25 emi ure would have	a 100-ohm reference putation, consistent with # 307	Proposed Cl 178 Brown, Ma Comment Likely, Suggested Chang	SC 178.9.2.2 att <i>Type</i> T Table 178-7 sho <i>IRemedy</i> je cross-reference	Response Status O P364 Alphawave Comment Status X uld be Table 178-8. e from "Table 178-7" to "Ta	L 4 Semi	
The EF referen impeda <i>auggested</i> Add de Annex ² <i>troposed F</i> <i>t</i> 178 Frown, Ma <i>comment T</i> It appe with an	RL for a test fixtures in the sector of the	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance for <i>Response Status</i> O 1.2 <i>P</i> 363 Alphawave Se <i>Comment Status</i> X sure ERL properly the test fixt	hm. The use of 20. or the ERL com <i>L</i> 25 emi ure would have	a 100-ohm reference putation, consistent with # 307	Proposed Cl 178 Brown, Ma Comment Likely, Suggested Chang	SC 178.9.2.2 att <i>Type</i> T Table 178-7 sho <i>IRemedy</i> je cross-reference	Response Status O P364 Alphawave Comment Status X uld be Table 178-8. e from "Table 178-7" to "Ta	L 4 Semi	
The EF referen impeda Add de Annex roposed F 7 7 178 Frown, Ma comment T It appe with an gated o	RL for a test fixtures impedance is ance for ERL is a response of a 92.5 response of a 92.5 response of a 92.5 response of a 92.5 response of a propriate impout. Remedy response of a propriate impout. Remedy	ure at TP0v is defined without s inferred from 178.9.1, 100-c not consistent throughout D2f 5-ohm reference impedance for <i>Response Status</i> O 1.2 <i>P</i> 363 Alphawave Se <i>Comment Status</i> X sure ERL properly the test fixt	hm. The use of P0. For the ERL com <i>L</i> 25 emi ure would have be device under	a 100-ohm reference putation, consistent with # 307	Proposed Cl 178 Brown, Ma Comment Likely, Suggested Chang	SC 178.9.2.2 att <i>Type</i> T Table 178-7 sho <i>IRemedy</i> je cross-reference	Response Status O P364 Alphawave Comment Status X uld be Table 178-8. e from "Table 178-7" to "Ta	L 4 Semi	

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 178 SC 178.9.2.2 Page 69 of 149 6/16/2025 2:13:38 PM

C/ 178 SC 178.9.2.2	P 364	L15	# 617	C/ 178 SC 178.9.2.4	P 364	L 35	# 478
Palkert, Thomas	Samtec, Mac	om		Healey, Adam	Broadcom, In	с.	
Comment Type TR Comr	ment Status X			Comment Type T	Comment Status X		
The KR specification should use SuggestedRemedy			nit ERL	device adheres." SInce] is calculated based on the this subclause is about trans lation should be based on the	smitter difference	e steady-state voltage,
add line in Table 178-8 to specif		nce		SuggestedRemedy			
Proposed Response Respo	nse Status O			Change "receiver" to "t	ransmitter".		
				Proposed Response	Response Status 0		
C/ 178 SC 178.9.2.3	P 364	L 28	# 367				
Ghiasi, Ali	Ghiasi Qunat	um/Marvell		C/ 178 SC 178.9.2.6	P 364	L 53	# 48
51	ment Status X			Mellitz, Richard	Samtec		
802.3ck common mode return lo	oss frequency was u	up to 50 GHz		Comment Type TR	Comment Status X		
SuggestedRemedy We should at least extend the R	RLcc to 67 GHz.			SNDR(meas) replaced SNDR(meas) (eq 179-	V_peak^2 with P_signal. SC 9)	MR should be a	ligned with
Proposed Response Respo	onse Status O			SuggestedRemedy			
Nv = 400 ! That's ludicrously ra SuggestedRemedy		L 34 100 is enough	# <u>710</u>	SNDR(meas) (eq 179- Replace equation 178- SCMR= 10*log10(P_si In P365 line 4 Replace: V_peak is defined in With P_signal is defined in e	1 with gnal / VCM_FB^2) 179.9.4.1.2		
Change Nv to 100 wherever it is				Proposed Response	Response Status O		
Proposed Response Respo	onse Status O				Door	1.40	# 054
				C/ 178 SC 178.9.2.7		L12	# 351
				Ghiasi, Ali	Ghiasi Qunati	um/Marvell	
				Comment Type TR The reference pacakge	Comment Status X A and B SDNR are known s	pecific value	
				SuggestedRemedy			
					alue in g/3/dj/public/24_11/healey_3 to community reference SND		
				Proposed Response	Response Status 0		

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SC 178.9.2.7 6/16/2025 2:13:38 PM SORT ORDER: Clause, Subclause, page, line

C/ 178 SC 178	0.0.0.2	P 366	L23	# 310		SC 178.9.3.4.	/ 3	66 L 48	# 711
Brown, Matt		Alphawave Se	emi		Dawe, Piers		Nvidi	а	
<i>comment Type</i> T 178.9.3.3 should		ent Status X er the range as we	ell.		Comment Ty _l 0.8V	pe E	Comment Status	x	
<i>uggestedRemedy</i> Change "178.9.3.	.4 and 178.9.3.5	' to "178.9.3.3 thro	ough 178.9.3.5"		SuggestedRe insert spa	-			
roposed Response	Respons	se Status O			Proposed Re	sponse	Response Status	0	
7 178 SC 178	3.9.3.3	P 366	L9	# 537	C/ 178	SC 178.9.3.4.	.1 P3	66 L 50	# 312
udek, Mike		Marvell			Brown, Matt		Alpha	wave Semi	
omment Type T	Comme	ent Status X			Comment Ty	pe T	Comment Status	Х	
channel loss from very clear what lo	n the KR interfere	ence tolerance test) this as the minimum ropriate. It is also not	distortion noise? D	s per se, but raistortion implie		s noise referring to aunched signal suc	
uggestedRemedy			a d fan tha intenfan	ence tolerance test is	SuggestedRe				
appropriate. If so is 18dB. " On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli If not then replace	eo add to 178.10. 9 replace "using using an amplituc . The loss of the liant transmitter u re "using a chann	 "The recomme g a channel with the de tolerance test cl amplitude tolerand used in the test is el with the minimu 	ended minimum c e minimum inser hannel" Add a ce test channel ir equal to the Test	tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10 specified in 178.9.3.4"	Change " noise, an transmitte To "The o	d any other no er or channel." channel noise lizable signal	source emulates cro	distortions that may sstalk, alien and int ay be introduced by	y be introduced by a rinsic noise, and any othe a transmitter or channel."
appropriate. If so is 18dB. " On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli If not then replace with "using a mini	so add to 178.10. 9 replace "using using an amplituc . The loss of the liant transmitter u re "using a chann uimal loss channe	2. "The recomme g a channel with the de tolerance test cl amplitude tolerand used in the test is el with the minimu el"	ended minimum c e minimum inser hannel" Add a ce test channel ir equal to the Test	thannel insertion loss tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10	Change " noise, an transmitte To "The o non-equa Proposed Re	d any other no er or channel." channel noise lizable signal	on-equalizable signal source emulates cro perturbations that m Response Status	distortions that ma sstalk, alien and int ay be introduced by O	rinsic noise, and any othe a transmitter or channel."
appropriate. If so is 18dB. " On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli If not then replace with "using a mini	so add to 178.10. 9 replace "using using an amplituc . The loss of the liant transmitter u re "using a chann uimal loss channe	 "The recomme g a channel with the de tolerance test cl amplitude tolerand used in the test is el with the minimu 	ended minimum c e minimum inser hannel" Add a ce test channel ir equal to the Test	thannel insertion loss tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10	Change " noise, an transmitte To "The o non-equa Proposed Re	d any other no er or channel." channel noise ilizable signal sponse	on-equalizable signal source emulates cro perturbations that ma <i>Response Status</i> .2 P3	distortions that ma sstalk, alien and int ay be introduced by O 67 <i>L</i> 17	rinsic noise, and any othe
appropriate. If so is 18dB. " On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli If not then replace with "using a mini	so add to 178.10. 9 replace "using using an amplituc . The loss of the liant transmitter u re "using a chann uimal loss channe	2. "The recomme g a channel with the de tolerance test cl amplitude tolerand used in the test is el with the minimu el"	ended minimum c e minimum inser hannel" Add a ce test channel ir equal to the Test	thannel insertion loss tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10	Change " noise, an transmitte To "The o non-equa Proposed Re C/ 178 Brown, Matt	d any other no er or channel." channel noise ilizable signal sponse SC 178.9.3.4 .	on-equalizable signal source emulates cro perturbations that ma <i>Response Status</i> .2 P3	distortions that ma sstalk, alien and int ay be introduced by 0 67 <i>L</i> 17 wave Semi	rinsic noise, and any othe a transmitter or channel."
appropriate. If so is 18dB." On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli If not then replace with "using a mini roposed Response	e add to 178.10. 9 replace "using using an amplitud The loss of the liant transmitter u re "using a chann imal loss channe Respons	2. "The recomme g a channel with the de tolerance test cl amplitude tolerand used in the test is el with the minimu el"	ended minimum c e minimum insert hannel" Add a ce test channel ir equal to the Test im insertion loss : <i>L</i> 32	thannel insertion loss tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10	Change " noise, an transmitte To "The o non-equa Proposed Re C/ 178 Brown, Matt Comment Tyj It is not c	d any other no er or channel." channel noise ilizable signal sponse SC 178.9.3.4 . De ER lear which text	on-equalizable signal source emulates cro perturbations that m <i>Response Status</i> .2 P3 Alpha <i>Comment Status</i>	distortions that ma sstalk, alien and int ay be introduced by 0 67 <i>L</i> 17 wave Semi X exceptions vs addi	rinsic noise, and any othe a transmitter or channel."
appropriate. If so is 18dB." On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli- If not then replace with "using a mini roposed Response	so add to 178.10. 9 replace "using using an amplituc The loss of the liant transmitter u re "using a channe imal loss channe <i>Respons</i> 3.9.3.3	2. "The recomme g a channel with the de tolerance test of amplitude tolerand used in the test is el with the minimu el" se Status O P366	ended minimum c e minimum insert hannel" Add a ce test channel ir equal to the Test im insertion loss : <i>L</i> 32	thannel insertion loss tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10 specified in 178.9.3.4"	Change " noise, an transmitte To "The o non-equa Proposed Re C/ 178 Brown, Matt Comment Tyj It is not c	d any other no er or channel." channel noise ilizable signal sponse SC 178.9.3.4. De ER lear which text shed list to anr	on-equalizable signal source emulates cro perturbations that ma <i>Response Status</i> .2 P3 Alpha <i>Comment Status</i> t below this table are	distortions that ma sstalk, alien and int ay be introduced by 0 67 <i>L</i> 17 wave Semi X exceptions vs addi	rinsic noise, and any othe a transmitter or channel." # <mark>[313]</mark>
appropriate. If so is 18dB." On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli If not then replace with "using a mini roposed Response / 178 SC 178 rown, Matt omment Type T The more formal	so add to 178.10. 9 replace "using using an amplituc . The loss of the liant transmitter u re "using a channe mainal loss channe <i>Respons</i> 3.9.3.3 <i>Comme</i> word "may" shou	 "The recomme g a channel with the de tolerance test of amplitude tolerand used in the test is el with the minimu el" se Status O P366 Alphawave So cent Status X uld be used instead 	ended minimum c e minimum insert hannel" Add a ce test channel ir equal to the Test im insertion loss s <i>L</i> 32 emi d of "is allowed to	tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10 specified in 178.9.3.4" # 311	Change " noise, an transmittu To "The o non-equa Proposed Re C/ 178 Brown, Matt Comment Tyy It is not c use a das Suggested Re	d any other no er or channel." channel noise ilizable signal sponse SC 178.9.3.4 . De ER lear which text shed list to anr emedy	on-equalizable signal source emulates cro perturbations that ma <i>Response Status</i> .2 P3 Alpha <i>Comment Status</i> t below this table are	distortions that mainstak, alien and introduced by O 67 L17 wave Semi X exceptions vs addi	rinsic noise, and any othe a transmitter or channel." # <mark>[313]</mark>
appropriate. If so is 18dB." On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli If not then replace with "using a mini roposed Response / 178 SC 178 rown, Matt omment Type T The more formal	so add to 178.10. 9 replace "using using an amplituc . The loss of the liant transmitter u re "using a channe mainal loss channe <i>Respons</i> 3.9.3.3 <i>Comme</i> word "may" shous s used to indicate	 "The recomme g a channel with the de tolerance test of amplitude tolerand used in the test is el with the minimu el" se Status O P366 Alphawave So ent Status X uld be used instead a course of action 	ended minimum c e minimum insert hannel" Add a ce test channel ir equal to the Test im insertion loss s <i>L</i> 32 emi d of "is allowed to	tion loss specified in sentence to the end acluding the package 1 loss in table 178-10 specified in 178.9.3.4" # 311	Change " noise, an transmittu To "The o non-equa Proposed Re C/ 178 Brown, Matt Comment Tyy It is not c use a das Suggested Re	d any other no er or channel." channel noise ilizable signal sponse SC 178.9.3.4 . De ER lear which text shed list to anr emedy ne relevant exc	on-equalizable signal source emulates cro perturbations that ma <i>Response Status</i> .2 P3 Alpha <i>Comment Status</i> t below this table are notate the exceptions	distortions that ma sstalk, alien and int ay be introduced by 0 67 <i>L</i> 17 wave Semi X exceptions vs addi s. hed list.	rinsic noise, and any othe a transmitter or channel." # <mark>[313]</mark>
appropriate. If so is 18dB." On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli- If not then replace with "using a mini proposed Response of 178 SC 178 Brown, Matt comment Type T The more formal "The word may is standard (may equilation)	so add to 178.10. 9 replace "using using an amplituc . The loss of the liant transmitter u re "using a channe mainal loss channe <i>Respons</i> 3.9.3.3 <i>Comme</i> word "may" shous s used to indicate	 "The recomme g a channel with the de tolerance test of amplitude tolerand used in the test is el with the minimu el" se Status O P366 Alphawave So ent Status X uld be used instead a course of action 	ended minimum c e minimum insert hannel" Add a ce test channel ir equal to the Test im insertion loss s <i>L</i> 32 emi d of "is allowed to	tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10 specified in 178.9.3.4" # 311	Change " noise, an transmitte To "The o non-equa Proposed Re C/ 178 Brown, Matt Comment Typ It is not c use a das SuggestedRe Identify th	d any other no er or channel." channel noise ilizable signal sponse SC 178.9.3.4 . De ER lear which text shed list to anr emedy ne relevant exc	on-equalizable signal source emulates cro perturbations that ma <i>Response Status</i> .2 P3 Alpha <i>Comment Status</i> t below this table are notate the exceptions ceptions within a das	distortions that ma sstalk, alien and int ay be introduced by 0 67 <i>L</i> 17 wave Semi X exceptions vs addi s. hed list.	rinsic noise, and any othe a transmitter or channel." # <mark>[313]</mark>
appropriate. If so is 18dB." On page 727 line 178.9.3.4" with "u of the paragraph. loss of the compli- If not then replace with "using a mini Proposed Response C/ 178 SC 178 Brown, Matt Comment Type T The more formal "The word may is standard (may eq SuggestedRemedy Change "is allow	so add to 178.10 9 replace "using using an amplitud . The loss of the liant transmitter u re "using a channe imal loss channe <i>Respons</i> 3.9.3.3 <i>Comme</i> word "may" shous s used to indicate quals is permitted wed to" to "may".	 "The recomme g a channel with the de tolerance test of amplitude tolerand used in the test is el with the minimu el" se Status O P366 Alphawave So ent Status X uld be used instead a course of action 	ended minimum c e minimum insern hannel" Add a ce test channel ir equal to the Test im insertion loss s <i>L</i> 32 emi d of "is allowed to n permissible with	tion loss specified in sentence to the end ncluding the package 1 loss in table 178-10 specified in 178.9.3.4" # 311	Change " noise, an transmitte To "The o non-equa Proposed Re C/ 178 Brown, Matt Comment Typ It is not c use a das SuggestedRe Identify th	d any other no er or channel." channel noise ilizable signal sponse SC 178.9.3.4 . De ER lear which text shed list to anr emedy ne relevant exc	on-equalizable signal source emulates cro perturbations that ma <i>Response Status</i> .2 P3 Alpha <i>Comment Status</i> t below this table are notate the exceptions ceptions within a das	distortions that ma sstalk, alien and int ay be introduced by 0 67 <i>L</i> 17 wave Semi X exceptions vs addi s. hed list.	rinsic noise, and any othe a transmitter or channel." # <mark>[313]</mark>

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 178 SC 178.9.3.4.2 Page 71 of 149 6/16/2025 2:13:38 PM

C/ 178 SC 178.9.3.4.2 P367 L21 # 314	C/ 178 SC 178.9.3.4.3 P368 L44 # 317
Brown, Matt Alphawave Semi	Brown, Matt Alphawave Semi
Comment Type E Comment Status X	Comment Type E Comment Status X
This is not an ordered list so should be formatted as dashed list.	The noise is RMS so not defined by amplitude. Also, "higher noise" here is compound
SuggestedRemedy	adjective so should be hyphenated.
Reformat as dashed list.	SuggestedRemedy
Proposed Response Response Status O	Change "higher amplitude" to "higher voltage" or "higher noise" or similar. If the current wording is desired, then add a hyphen "higher-amplitude".
	Proposed Response Response Status O
CI 178 SC 178.9.3.4.2 P367 L35 # 315	
Brown, Matt Alphawave Semi	Cl 178 SC 178.9.3.5 P369 L4 # 496
Comment Type E Comment Status X	Dudek, Mike Marvell
This is not an ordered list so should be formatted as dashed list. Further, it is not permitte to use the same list values (e.g., a), b), c)), for two separate lists within the same	ed Comment Type TR Comment Status X
subclause.	Not stressing the jitter tolerance signal with noise in addition to the jitter under-stresses receivers.
SuggestedRemedy	
Reformat as dashed list.	SuggestedRemedy
Reformat as dashed list.	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3
Reformat as dashed list.Proposed ResponseResponse StatusO	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The
Reformat as dashed list. Proposed Response Response Status O Cl 178 SC 178.9.3.4.3 P 368 L 21 # 316	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3 dB." Make the similar change for C2C on page 730.
Reformat as dashed list. Proposed Response Response Status CI 178 SC 178.9.3.4.3 P 368 L 21 # 316 Brown, Matt Alphawave Semi Comment Type T Comment Status X	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3 dB." Make the similar change for C2C on page 730.
Reformat as dashed list. Proposed Response Response Status Cl 178 SC 178.9.3.4.3 P 368 L 21 # 316 Brown, Matt Alphawave Semi Comment Type T Comment Status X Per style guide this should be lettered list, not numbered list.	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3 dB." Make the similar change for C2C on page 730. Proposed Response Response Status
Reformat as dashed list. Proposed Response Response Status Cl 178 SC 178.9.3.4.3 P 368 L 21 # 316 Brown, Matt Alphawave Semi Comment Type T Comment Status X	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3 dB." Make the similar change for C2C on page 730. Proposed Response Response Status O Cl 178 SC 178.9.3.5 P 369 L7 # 318 Brown, Matt Alphawave Semi Comment Type TR Comment Status X
Reformat as dashed list. Proposed Response Response Status O Cl 178 SC 178.9.3.4.3 P 368 L 21 # 316 Brown, Matt Alphawave Semi Comment Type T Comment Status X Per style guide this should be lettered list, not numbered list. SuggestedRemedy	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3 dB." Make the similar change for C2C on page 730. Proposed Response Response Status O C/ 178 SC 178.9.3.5 P 369 L7 # 318 Brown, Matt Alphawave Semi
Reformat as dashed list. Proposed Response Response Status O Cl 178 SC 178.9.3.4.3 P 368 L 21 # 316 Brown, Matt Alphawave Semi Comment Type T Comment Status X Per style guide this should be lettered list, not numbered list. SuggestedRemedy Reformat as lettered list.	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3 dB." Make the similar change for C2C on page 730. Proposed Response Response Status O Cl 178 SC 178.9.3.5 P 369 L7 # 318 Brown, Matt Alphawave Semi Comment Type TR Comment Status X This phrase is hard to parse: "and both JRMS and J4u03 are measured with the jitter frequency and amplitude set according to Case F from Table 179–12." I think it means that J_RMS and J4u_03 are measured after the sinusoidal jitter with frequency and amplitude for Table 179-12 is applied. Also, I think this can be broken into a pair of subbullets for clarity.
Reformat as dashed list. Proposed Response Response Status O Cl 178 SC 178.9.3.4.3 P 368 L 21 # 316 Brown, Matt Alphawave Semi Comment Type T Comment Status X Per style guide this should be lettered list, not numbered list. SuggestedRemedy Reformat as lettered list.	Delete the exception "No broadband noise is added". Change the following exception from "The test channel COM, calculated per the method in 178.9.3.4.2, is at least 3 dB." to "The test channel COM with the jitter included, calculated per the method in 178.9.3.4.2, is 3 dB." Make the similar change for C2C on page 730. Proposed Response Response Status O Cl 178 SC 178.9.3.5 P 369 L7 # 318 Brown, Matt Alphawave Semi Comment Type TR Comment Status X This phrase is hard to parse: "and both JRMS and J4u03 are measured with the jitter frequency and amplitude set according to Case F from Table 179–12." I think it means that J_RMS and J4u_03 are measured after the sinusoidal jitter with frequency and amplitude for Table 179-12 is applied. Also, I think this can be broken into a pair of subbullets for

TYPE: TR/technical required ER/editorial required GR/gene	ral required T/technical E/editorial G/general	C/ 178	Page 72 of 149
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	SC 178.9.3.5	6/16/2025 2:13:38 PM
SORT ORDER: Clause, Subclause, page, line			

		,	,	, ,			5 1		
C/178 SC 1	78.9.3.7	P 369	L13	# 348	C/ 178	SC 178.10	P 370	L 44	# 49
Shiasi, Ali		Ghiasi Qunatu	um/Marvell		Mellitz, Ri	chard	Samtec		
Comment Type	TR Comme	ent Status X			Comment	Type TR	Comment Status X		
In 802.3ck the	limit for RLcd was	50 GHz, going up t	to 50 GHz is not	adequte			w has not been considered		
SuggestedRemedy	/						led in s-parameters passed ot been specified. Channel		
Suggest to inc	rease to 67 GHz					ance interoperal			
Proposed Respons	se Respons	se Status O			Suggeste	dRemedy			
							-11-Channel characterist		
2/ 470 50 4	70.40	D270	1.00	# 319			mmon mode ratio (SCMR_ slides 12 and 14	CH) min 20 dB	
	78.10	P370	L 26	# 319			org/3/dj/public/adhoc/elect	rical/23_1207/mellitz	_3dj_elec_01_231207
Brown, Matt		Alphawave Se	emi		df				
Comment Type		ent Status X		··· · · ·			vith sigma_tn^2 from equa og10(sigma_ts^2 / VCM_0		=1 (no IXFFE)
				cifications are for two s die to die (or TP0d		Response	Response Status 0		
	former is prevalent,				Toposeu	Response			
178.10.2 and /	AC-coupling in 178.	10.6.							
SuggestedRemedy	/				C/ 178	SC 178.10.	1 P 370	L 50	# 480
	paragraph in 178.1			nilar. "Unless	Healey, A	dam	Broadcor	n, Inc.	
	ated, the channel is 1 change "Maximur			cy" to "Maximum AC-	Comment	Туре Т	Comment Status X		
coupling 3 dB	corner frequency be	etween TP0d and 1	TP5d"	-			graph states that COM is o		
				e Channel Operating			n line length parameters ar		
	for the channel bet			loss, ILDD," to "The			gth parameters. However, t ductory paragraph does no		
recommended	maximum insertior	loss, ILdd, for the	e channel betwee	n TP0d and TP5d"			on how Class A and Class		
	hanges in 176C.7 t	o clarify the bound	laries of the char	nels for each	Suggeste	dRemedy			
parameter.	_					-	COM is calculated with the	parameters for the t	ransmitter and receive
Proposed Respons	se Respons	se Status O			packa 176C		the channel under test is i	intended to support.	Add similar text in
C/ 178 SC 1	78.10	P370	L34	# 618	Proposed	Response	Response Status O		
Palkert, Thomas		Samtec, Maco	om						
Comment Type	TR Comme	ent Status X							
The KR specif	ication should use 9	2.5 ohm impedan	ce for KR channe	el impedance					
SuggestedRemedy	/								
	ble 178-11 to specify	y 92.5 ohm impeda	ance						
Proposed Respons		se Status O							
	•								

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 178 SC 178.10.1 Page 73 of 149 6/16/2025 2:13:38 PM

C/ 178 SC 178.10	0.1 <i>P</i> 371	L 1	# 479	C/ 178 S	SC 178.10.1	P 371	L 25	# 713
ealey, Adam	Broadcom, Inc.			Dawe, Piers		Nvidia		
omment Type E	Comment Status X			Comment Type	e ER	Comment Status X		
	ihood sequence detection (MLSD			Confusion	between z ar	nd Z		
	f COM." Now that Table 178-12 in imum likelihood sequence detection			SuggestedRer	nedy			
become redundant.						ery strongly established, use	e something othe	er than z for length,
uggestedRemedy				such as L				
Remove this senten 176D.7.2.	nce. Also remove similar sentence	es in 179.11.7,	176C.7.1, and	Proposed Res	ponse	Response Status O		
roposed Response	Response Status 0			C/ 178 S	SC 178.10.1	P 372	L1	# 255
				Shakiba, Hoss	sein	Huawei Tech	nologies Canada	l
178 SC 178.10	0.1 <i>P</i> 371	L12	# 378	Comment Type	e TR	Comment Status X		
hiasi, Ali	Ghiasi Qunatur	m/Marvell		Following	first comment	, quantization noise parame	ters should be a	ded to Table 178-1
				5		,		
omment Type ER	Comment Status X			SuggestedRer		,		
21	Comment Status X s Cd(1) or Ls(1) the "(1)" seems like		pt	SuggestedRen Add two qu	<i>nedy</i> uantization no	ise parameters with sugges	ted values to the	
All symbols such as			pt	SuggestedRer Add two qu slide 15 of	<i>nedy</i> uantization no ^t the accompa	ise parameters with sugges nying document for the prop	ted values to the	
21	s Cd(1) or Ls(1) the "(1)" seems lik		pt	SuggestedRen Add two qu slide 15 of Also, see	nedy uantization no the accompa shakiba_3dj_e	ise parameters with sugges nying document for the prop elec_01_250626.pdf.	ted values to the	
All symbols such as uggestedRemedy Please make it inline	s Cd(1) or Ls(1) the "(1)" seems lik		pt	SuggestedRer Add two qu slide 15 of	nedy uantization no the accompa shakiba_3dj_e	ise parameters with sugges nying document for the prop	ted values to the	
All symbols such as uggestedRemedy Please make it inline oposed Response	e Response Status 0	ke is superscri		SuggestedRer Add two qu slide 15 of Also, see Proposed Res	nedy uantization no the accompa shakiba_3dj_e	ise parameters with sugges nying document for the prop elec_01_250626.pdf.	ted values to the	
All symbols such as uggestedRemedy Please make it inline roposed Response	e Response Status O		pt # [712	SuggestedRer Add two qu slide 15 of Also, see Proposed Res	nedy uantization no the accompa shakiba_3dj_o ponse	ise parameters with sugges nying document for the prop elec_01_250626.pdf. <i>Response Status</i> 0	ted values to the bosed change.	table. Please refer t
All symbols such as loggestedRemedy Please make it inline oposed Response 178 SC 178.10 awe, Piers	e <i>Response Status</i> O 0.1 <i>P</i> 371 Nvidia	ke is superscri		SuggestedRer Add two q slide 15 of Also, see Proposed Res Cl 178	nedy uantization no the accompa shakiba_3dj_(ponse SC 178.10.1	ise parameters with sugges nying document for the prop elec_01_250626.pdf. <i>Response Status</i> O <i>P</i> 372	ted values to the bosed change.	table. Please refer
All symbols such as uggestedRemedy Please make it inline roposed Response 178 SC 178.10 awe, Piers omment Type ER	e Response Status O 0.1 P 371 Nvidia Comment Status X	ke is superscrip		SuggestedRer Add two qu slide 15 of Also, see Proposed Res C/ 178 S Ghiasi, Ali Comment Type	nedy uantization no the accompa shakiba_3dj_d ponse SC 178.10.1 e ER	ise parameters with sugges nying document for the prop elec_01_250626.pdf. <i>Response Status</i> 0 <i>P</i> 372 Ghiasi Qunat	ted values to the bosed change.	table. Please refer
All symbols such as uggestedRemedy Please make it inline roposed Response 178 SC 178.10 awe, Piers pomment Type ER Indices that look like	e <i>Response Status</i> O 0.1 <i>P</i> 371 Nvidia	ke is superscrip		SuggestedRer Add two qu slide 15 of Also, see Proposed Res C/ 178 S Ghiasi, Ali Comment Type	nedy uantization nc the accompa shakiba_3dj_o ponse SC 178.10.1 e ER p1 and fp2 se	ise parameters with sugges nying document for the prop elec_01_250626.pdf. <i>Response Status</i> 0 <i>P</i> 372 Ghiasi Qunat <i>Comment Status</i> X	ted values to the bosed change.	table. Please refer
All symbols such as uggestedRemedy Please make it inline roposed Response 178 SC 178.10 awe, Piers omment Type ER Indices that look like uggestedRemedy	e <i>Response Status</i> O D.1 <i>P</i> 371 Nvidia <i>Comment Status</i> X e exponents, should be subscripts	ke is superscrip		SuggestedRer Add two qu slide 15 of Also, see s Proposed Res Cl 178 S Ghiasi, Ali Comment Type Symbols fu	nedy uantization nc the accompa shakiba_3dj_ ponse 5C 178.10.1 e ER p1 and fp2 se nedy	ise parameters with sugges nying document for the prop elec_01_250626.pdf. <i>Response Status</i> 0 <i>P</i> 372 Ghiasi Qunat <i>Comment Status</i> X	ted values to the bosed change.	table. Please refer
All symbols such as uggestedRemedy Please make it inline roposed Response / 178 SC 178.10 awe, Piers omment Type ER Indices that look like	e Response Status O 0.1 P 371 Nvidia Comment Status X	ke is superscrip		SuggestedRer Add two qu slide 15 of Also, see s Proposed Res Cl 178 S Ghiasi, Ali Comment Type Symbols fu	nedy uantization no the accompa shakiba_3dj_o ponse 5C 178.10.1 e ER p1 and fp2 se nedy to adjsut or ir	ise parameters with sugges nying document for the prop elec_01_250626.pdf. <i>Response Status</i> O <i>P</i> 372 Ghiasi Qunat <i>Comment Status</i> X em connected	ted values to the bosed change.	table. Please refer

C/ 178 SC 178.10.1

C/ 178 SC 178.10.	1 P 372	L43	# 254	C/ 178 SC 178.10.3	B P 373	L 33	# 596
Shakiba, Hossein	Huawei Techr	nologies Canada		Kocsis, Sam	Amphenol		
Comment Type TR	Comment Status X			Comment Type TR	Comment Status X		
Following first comme 178-13 is needed.	ent, an updated value for One-s	sided noise spectr	al density in Table	implied reference imp	el atTP0 and TP5 is defined w edance is inferred from 178.9 for ERL is not consistent thro	.1, 100-ohm. The	
SuggestedRemedy				•	IOI ERL IS NOT CONSISTENT UNIO	iughout D2P0.	
refer to slide 15 of the	oise spectral density parameter e accompanying document for dj_elec_01_250626.pdf.			SuggestedRemedy Add definition of a 92. Annex179B.	5-ohm reference impedance	for the ERL com	putation, consistent with
Proposed Response	Response Status O			Proposed Response	Response Status O		
C/ 178 SC 178.10.	1 P372	L 46	# 714	C/ 178 SC 178.10.3	3 P 373	L 51	# 716
Dawe, Piers	Nvidia			Dawe, Piers	Nvidia		
Comment Type TR	Comment Status X			Comment Type TR	Comment Status X		
With a new COM we				Tukov window: it's not	a flag (status bit) it's a switch	h (control hit)	
this years ago.	e can break away from old mista	akes from the 8B/	10B days. OIF did		a hay (status bit) it's a switch		
this years ago. SuggestedRemedy	,			SuggestedRemedy	w flag to Tukey window		
this years ago. SuggestedRemedy	e can break away from old mista er" to "Gaussian jitter", and sign <i>Response Status</i> O			SuggestedRemedy			
this years ago. SuggestedRemedy Change "Random jitte Proposed Response	er" to "Gaussian jitter", and sign Response Status O	ma_RJ to sigma_	GJ	SuggestedRemedy Change Tukey windo Proposed Response Cl 178 SC 178.10.6	w flag to Tukey window Response Status O	L 50	# 543
this years ago. SuggestedRemedy Change "Random jitte Proposed Response Cl 178 SC 178.10.	er" to "Gaussian jitter", and sign Response Status O 1 P372			SuggestedRemedy Change Tukey windo Proposed Response Cl 178 SC 178.10.6 Levin, Itamar	w flag to Tukey window <i>Response Status</i> O <i>P</i> 375 Altera corp.	````	# <u>543</u>
this years ago. SuggestedRemedy Change "Random jitte Proposed Response C/ 178 SC 178.10. Dawe, Piers	er" to "Gaussian jitter", and sign <i>Response Status</i> O 1 <i>P</i> 372 Nvidia	ma_RJ to sigma_	GJ	SuggestedRemedy Change Tukey windo Proposed Response Cl 178 SC 178.10.6 Levin, Itamar Comment Type TR	w flag to Tukey window Response Status O P 375 Altera corp. Comment Status X	L 50	
this years ago. SuggestedRemedy Change "Random jitte Proposed Response Cl 178 SC 178.10. Dawe, Piers Comment Type TR Unrealistic jitter value SuggestedRemedy	er" to "Gaussian jitter", and sign Response Status O 1 P372 Nvidia Comment Status X	ma_RJ to sigma_' <i>L</i> 46	GJ	SuggestedRemedy Change Tukey windo Proposed Response Cl 178 SC 178.10.6 Levin, Itamar Comment Type TR 100Khz 3dB cutoff fre poses two issues: 1. in the entire channel free	w flag to Tukey window <i>Response Status</i> O <i>P</i> 375 Altera corp.	L 50 capacitors of at l capacitor that wo 2. for on packag	least XXX nF. This build behave well across e or on die placement
this years ago. SuggestedRemedy Change "Random jitte Proposed Response Cl 178 SC 178.10. Dawe, Piers Comment Type TR Unrealistic jitter value SuggestedRemedy "RJ" should be increa	er" to "Gaussian jitter", and sign Response Status O 1 P372 Nvidia Comment Status X	ma_RJ to sigma_' <i>L</i> 46	GJ	SuggestedRemedy Change Tukey windo Proposed Response Cl 178 SC 178.10.6 Levin, Itamar Comment Type TR 100Khz 3dB cutoff fre poses two issues: 1. if the entire channel frec of the decoupling cap performance This corner frequency however - the impact of	w flag to Tukey window <i>Response Status</i> O P375 Altera corp. <i>Comment Status</i> X quency requires AC blocking t is hard to find a high quality quency band (low parasitics),	<i>L</i> 50 capacitors of at l capacitor that we 2. for on packag such a capacitor etter baseline wa c or even 3x corne	least XXX nF. This buld behave well across e or on die placement or degrade serdes under mitigation, er frequency would not
this years ago. SuggestedRemedy Change "Random jitte Proposed Response Cl 178 SC 178.10. Dawe, Piers Comment Type TR Unrealistic jitter value SuggestedRemedy "RJ" should be increa	er" to "Gaussian jitter", and sign <i>Response Status</i> O 1 <i>P</i> 372 Nvidia <i>Comment Status</i> X es ased and D-D jitter should be re	ma_RJ to sigma_' <i>L</i> 46	GJ	SuggestedRemedy Change Tukey windo Proposed Response Cl 178 SC 178.10.6 Levin, Itamar Comment Type TR 100Khz 3dB cutoff fre poses two issues: 1. if the entire channel frec of the decoupling cap performance This corner frequency however - the impact of	w flag to Tukey window Response Status O P375 Altera corp. Comment Status X quency requires AC blocking t is hard to find a high quality quency band (low parasitics), - the parasitics involved with trades off these factors for b on baseline wander from a 2x	<i>L</i> 50 capacitors of at l capacitor that we 2. for on packag such a capacitor etter baseline wa c or even 3x corne	least XXX nF. This ould behave well across e or on die placement o degrade serdes under mitigation, er frequency would not
this years ago. SuggestedRemedy Change "Random jitte Proposed Response C/ 178 SC 178.10. Dawe, Piers Comment Type TR Unrealistic jitter value SuggestedRemedy	er" to "Gaussian jitter", and sign <i>Response Status</i> O 1 <i>P</i> 372 Nvidia <i>Comment Status</i> X es ased and D-D jitter should be re	ma_RJ to sigma_' <i>L</i> 46	GJ	SuggestedRemedy Change Tukey windo Proposed Response Cl 178 SC 178.10.6 Levin, Itamar Comment Type TR 100Khz 3dB cutoff fre poses two issues: 1. it the entire channel fred of the decoupling cap performance This corner frequency however - the impact of be severe and may be	w flag to Tukey window Response Status O B P375 Altera corp. <i>Comment Status</i> X quency requires AC blocking t is hard to find a high quality quency band (low parasitics), - the parasitics involved with trades off these factors for b on baseline wander from a 2x a good sacrifice for the bene	<i>L</i> 50 capacitors of at l capacitor that we 2. for on packag such a capacitor etter baseline wa c or even 3x corne	least XXX nF. This ould behave well across e or on die placement o degrade serdes under mitigation, er frequency would not

C/ 178 SC 178.10.6

C/ 178 SC 178.19	P 372	L 7	# 236	C/ 178A	SC 178A.1.3	P 768	L 20	# 610
Mellitz, Richard	Samtec			Palkert, Thon	nas	Samtec, Mac	com	
Comment Type TR	Comment Status X			Comment Typ	oe TR	Comment Status X		
Adjust COM voltage	to 46.25 ohms measurement re	eference.		All imped	ance values she	ould be 92.5 ohms		
SuggestedRemedy				SuggestedRe	medy			
Change				Channel	can be measure	ed with 100 ohms but shou	Id be converted to	o 92.5 ohms
A_vto 0.415 A_feto 0.415 A_neto 0.608				Proposed Res	sponse	Response Status O		
roposed Response	Response Status O			C/ 178A	SC 178A.1.7	P 774	L 32	# 247
				Shakiba, Hos	sein	Huawei Tech	nologies Canada	<u> </u>
/ 178A SC 178A	P 777	L 26	# 243	Comment Typ	e TR	Comment Status X		
hakiba, Hossein	Huawei Tech	nologies Canada	a	Following	first comment,	"sampler" should be replace	ced with "quantiz	er".
Comment Type TR	Comment Status X			SuggestedRe	medy			
Add quantization noi	ise.			Change "	sampler" to "qu	antizer". Please refer to sli	de 9 of the accor	npanying document fo
uggestedRemedy				the propo	sed change.			
	178A.1.7.6 Quantization noise". ment for the proposed sub-sect			Proposed Res	sponse	Response Status O		
accompanying docu					sponse SC 178A.1.7	Response Status 0 P774	L 50	# 244
accompanying docu	ment for the proposed sub-sect				SC 178A.1.7	P 774	L 50 nnologies Canada	
accompanying docu roposed Response	ment for the proposed sub-sect			C/ 178A	SC 178A.1.7 sein	P 774		
accompanying docu roposed Response	ment for the proposed sub-sect Response Status O	tion content and	text.	C/ 178A Shakiba, Hos Comment Typ Following	SC 178A.1.7 sein be TR first comment,	P 774 Huawei Tech	nnologies Canada	
accompanying docu roposed Response / 178A SC 178A lellitz, Richard	ment for the proposed sub-sect Response Status 0 P785	tion content and	text.	Cl 178A Shakiba, Hos Comment Typ Following the samp	SC 178A.1.7 sein be TR first comment, ler.	P 774 Huawei Tech Comment Status X	nnologies Canada	
accompanying docu roposed Response / 178A SC 178A lellitz, Richard omment Type TR	ment for the proposed sub-sect Response Status O P785 Samtec	tion content and	text.	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe	SC 178A.1.7 sein De TR first comment, ler. <i>medy</i>	P 774 Huawei Tech <i>Comment Status</i> X Figure 178A-7 should sho	nnologies Canada	quantization noise afte
accompanying docu roposed Response / 178A SC 178A lellitz, Richard omment Type TR Re-normalization of	ment for the proposed sub-sect Response Status O P785 Samtec Comment Status X	tion content and	text.	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan	SC 178A.1.7 sein pe TR first comment, ler. <i>medy</i> tization noise to	P 774 Huawei Tech <i>Comment Status</i> X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu roposed Response 7 178A SC 178A Mellitz, Richard <i>Comment Type</i> TR Re-normalization of <i>uggestedRemedy</i> Add new section 178	ment for the proposed sub-sect Response Status O P785 Samtec Comment Status X s-parameter is not defined in th	tion content and	text. # 235	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu roposed Response 7 178A SC 178A Mellitz, Richard romment Type TR Re-normalization of uggestedRemedy Add new section 178 The conversion of S	ment for the proposed sub-sect Response Status O P785 Samtec Comment Status X s-parameter is not defined in the BA.2 s-parameter with reference Z_(tion content and	text. # 235	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P 774 Huawei Tech <i>Comment Status</i> X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu roposed Response / 178A SC 178A lellitz, Richard omment Type TR Re-normalization of uggestedRemedy Add new section 178 The conversion of S is computed as follo	ment for the proposed sub-sect Response Status O P785 Samtec Comment Status X s-parameter is not defined in the BA.2 s-parameter with reference Z_0 ws:	tion content and	text. # 235	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu roposed Response / 178A SC 178A lellitz, Richard omment Type TR Re-normalization of uggestedRemedy Add new section 178 The conversion of S is computed as follo S'= A^(-1) *(I-S*rho where:	ment for the proposed sub-sect Response Status O P785 Samtec Comment Status X s-parameter is not defined in the BA.2 s-parameter with reference Z_(ws:)^(-1)* (S-rho)*A	tion content and	text. # 235	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu roposed Response 7/ 178A SC 178A fellitz, Richard romment Type TR Re-normalization of uggestedRemedy Add new section 178 The conversion of S is computed as follo S'= A^(-1) *(I-S*rho where: rho= (Z_1-Z_0)/(Z_	ment for the proposed sub-sect Response Status O P785 Samtec Comment Status X s-parameter is not defined in the BA.2 s-parameter with reference Z_(ws:)/(-1)* (S-rho)*A ,1+Z_0)	tion content and	text. # 235	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu Proposed Response 2/ 178A SC 178A Mellitz, Richard Comment Type TR Re-normalization of PuggestedRemedy Add new section 178 The conversion of S is computed as follo S'= A^(-1) *(I-S*rho where: rho= (Z_1-Z_0)/(Z_ A= (Z_1+Z_0)/sqrt(2)	ment for the proposed sub-sect Response Status O P785 Samtec Comment Status X s-parameter is not defined in the BA.2 s-parameter with reference Z_(ws:)/(-1)* (S-rho)*A ,1+Z_0)	Lion content and L 19 de document 0 to S' s-parame	text. # 235	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu proposed Response (7) 178A SC 178A Aellitz, Richard comment Type TR Re-normalization of fuggestedRemedy Add new section 178 The conversion of S is computed as follo S' = A^(-1) * (I-S*rho where: rho= (Z_1+Z_0)/sqrt(2 S is the original s-pa where each diagona	ment for the proposed sub-sect <i>Response Status</i> O <i>P</i> 785 Samtec <i>Comment Status</i> X s-parameter is not defined in th <i>BA.2</i> s-parameter with reference Z_(ws:)/(-1)* (S-rho)*A .1+Z_0) Z_1*Z_0) rameter matrix with Z_0 as the I entry is the impedance of that	tion content and <i>L</i> 19 ne document 0 to S' s-parame original diagona port.	text. # 235 ter with reference Z_1	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu Proposed Response C/ 178A SC 178A Mellitz, Richard Comment Type TR Re-normalization of SuggestedRemedy Add new section 178 The conversion of S is computed as follor S'= A^(-1) *(I-S*rho where: rho= (Z_1-Z_0)/(Z_ A= (Z_1+Z_0)/grt(Z S is the original s-paran S' is the new s-paran	ment for the proposed sub-sect Response Status O P785 Samtec <i>Comment Status</i> X s-parameter is not defined in the BA.2 s-parameter with reference $Z_{-}(x)$ ws: $x^{-}(-1)^{*}(S-rho)^{*}A$ $x^{-}(-1)^{*$	tion content and <i>L</i> 19 ne document 0 to S' s-parame original diagona port.	text. # 235 ter with reference Z_1	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte
accompanying docu proposed Response 2/ 178A SC 178A Aellitz, Richard Comment Type TR Re-normalization of SuggestedRemedy Add new section 178 The conversion of S is computed as follor S'= A'(-1) *(I-S*rho where: rho= (Z_1+Z_0)/(Z_ A= (Z_1+Z_0)/(Z_ S is the original s-pa where each diagona S' is the new s-parar	ment for the proposed sub-sect <i>Response Status</i> O <i>P</i> 785 Samtec <i>Comment Status</i> X s-parameter is not defined in th <i>BA.2</i> s-parameter with reference Z_(ws:)/(-1)* (S-rho)*A .1+Z_0) Z_1*Z_0) rameter matrix with Z_0 as the I entry is the impedance of that	tion content and <i>L</i> 19 ne document 0 to S' s-parame original diagona port.	text. # 235 ter with reference Z_1	Cl 178A Shakiba, Hos Comment Typ Following the samp SuggestedRe Add quan for the pre	SC 178A.1.7 sein be TR first comment, ler. <i>medy</i> tization noise to oposed change.	P774 Huawei Tech Comment Status X Figure 178A-7 should sho the figure. Please refer to	nnologies Canada	quantization noise afte

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 178A SC 178A.1.7 Page 76 of 149 6/16/2025 2:13:38 PM

Cl 178A SC 178A.1.7 P775 L2 # 245 Shakiba, Hossein Huawei Technologies Canada	Cl 178A SC 178A.1.8.1 P777 L43 # 249 Shakiba, Hossein Huawei Technologies Canada Comment Type TR Comment Status X
Commant Time TD Commant Statue Y	Comment Type TR Comment Status X
Comment Type TR Comment Status X	
Following first comment, Table 178A-9 should include quantization noise parameters.	Following first comment, "sampler" should be replaced with "quantizer".
SuggestedRemedy	SuggestedRemedy
Add two quantization noise parameters to the table. Please refer to slide 7 of the accompanying document for the proposed change.	Change "sampler" to "quantizer". Please refer to slide 9 of the accompanying document for the proposed change.
Proposed Response Response Status O	Proposed Response Response Status O
C/ 178A SC 178A.1.7 P775 L15 # 248	C/ 178A SC 178A.1.8.1 P778 L18 # 250
Shakiba, Hossein Huawei Technologies Canada	Shakiba, Hossein Huawei Technologies Canada
Comment Type TR Comment Status X	Comment Type TR Comment Status X
Following first comment, "sampler" should be replaced with "quantizer".	Following first comment, quantization noise should be added before sampler output is applied to the feed-forward filter in Figure 178A-9.
SuggestedRemedy Change "sampler" to "quantizer". Please refer to slide 9 of the accompanying document for the proposed change.	SuggestedRemedy Add quantization noise to the figure. Please refer to slide 10 of the accompanying document for the proposed change.
Proposed Response Response Status O	Proposed Response Response Status O
C/ 178A SC 178A.1.7 P775 L19 # 246	C/ 178A SC 178A.1.9.3 P782 L17 # 251
Shakiba, Hossein Huawei Technologies Canada	
Comment Type TR Comment Status X	Shakiba, Hossein Huawei Technologies Canada
Following first comment, Equation (178A-14) should include quantization noise PSD.	Comment Type TR Comment Status X
SuggestedRemedy	Following first comment, more text should be added to describe the procedure for deriving the probability density function of the quantization noise.
Add quantization noise PSD to the equation and its description to the descriptions. Please refer to slide 8 of the accompanying document for the proposed change.	SuggestedRemedy
Proposed Response Response Status O	Add the suggested text in slides 11-12 of the accompanying document starting from line 1
	Proposed Response Response Status O

C/ 178A SC 178A.1.9.3

hakiba, Hossein Huawei Technologies Canada omment Type TR Comment Status X Following first comment, Equation (178A-36) should include quantization noise PSD. uggestedRemedy Add quantization noise PSD to the equation. Please refer to slide 13 of the accompanying document for the proposed change. roposed Response Response Status V 178A SC 178A.1.10 P783 L19 # 253 hakiba, Hossein Huawei Technologies Canada	training for the interfa Additionally, as this is training between AUI SuggestedRemedy	Comment Stat apability, and needs indicates "Inter-su r, it is the understan aces as well as the t s a new capability, it s and PMDs. B into 3 Annexes - c	to be cleared blayer link tr ding of the c otal path. is not clear	raining for electri commentor that	specified.
Following first comment, Equation (178A-36) should include quantization noise PSD. uggestedRemedy Add quantization noise PSD to the equation. Please refer to slide 13 of the accompanying document for the proposed change. roposed Response Response Status 0 1/178A SC 178A.1.10 P783 L19 # 253	ISL is a major new ca For example, the title interfaces". Howeve training for the interfa Additionally, as this is training between AUI SuggestedRemedy Separate Annex 178	apability, and needs indicates "Inter-su r, it is the understan aces as well as the t s a new capability, it s and PMDs. B into 3 Annexes - c	to be cleare blayer link tr ding of the c otal path. is not clear	raining for electri commentor that	cal and optical this clause covers line
Add quantization noise PSD to the equation. Please refer to slide 13 of the accompanying document for the proposed change. Toposed Response Response Status O T178A SC 178A.1.10 P783 L19 # 253	For example, the title interfaces". Howeve training for the interfa Additionally, as this is training between AUI SuggestedRemedy Separate Annex 178	indicates "Inter-su r, it is the understan aces as well as the t s a new capability, it s and PMDs. B into 3 Annexes - c	blayer link tr ding of the c otal path. is not clear	raining for electri commentor that	cal and optical this clause covers line
/ 178A SC 178A.1.10 P783 L19 # 253	Separate Annex 178	B into 3 Annexes - c			
	Separate Annex 178 PMDs. Clauses with	B into 3 Annexes - c			
hakiba, Hossein Huawei Technologies Canada	the correct clause	tables pointing to A	ne for the to nnex 178B	otal path, one for would need to be	r the AUIs, and one fo e updated to point to
	Proposed Response	Response Stat	us O		
omment Type TR Comment Status X Following first comment, quantization noise should be added before sampler output is					
applied to the feed-forward filter in Figure 178A-10.			0700	1.40	# 007
uggestedRemedy	C/ 178B SC 178B		P 786	L10	# 397
Add quantization noise to the figure. Please refer to slide 14 of the accompanying	Mi, Guangcan			nologies Co., Ltd	
document for the proposed change.	Comment Type TR	Comment Stat			
roposed Response Response Status O	ILT should be suppor 800GBASE-LR1 and				
	potentially interchang				
/ 178A SC 178A.1.10.1 P784 L36 # 262	link condition. By allo differentiate the optic				
hakiba, Hossein Huawei Technologies Canada	opex and firmware de				3
omment Type TR Comment Status X	This comment also re	equires undates to s	ub clause 1	60 2 10 in page?	190
Proper handling of negative MLSE delta_COM in the COM code was presented in COM ad	SuggestedRemedy			00.2.10 in page	
hoc and approved (shakiba_3dj_COM_02_250408.pdf).	Extend ILT capability	to I R1 at the minir	num hvi sur	oporting transmis	ssion of RTS RTS
Pointed out by Adee during the discussions, I took the action to look at the implication of this on the draft. This comment is to add a statement to this section to instruct the reader how a possible negative delta_COM should be handled.	condition of the ISL p LR1 inner FEC, when	ath between two LF	1 PMDs co	uld be derived fr	om the states of the
uggestedRemedy	will be provided.				
Add a new paragraph at the end of this section with the following content: "Due to the addition of this additional receiver noise when calculating the advantage of the MLSD-based receiver, there may be occasional cases where the DFE-based receiver performs better. In these cases, the MLSD function should be disabled. This can be done by ignoring the last term in Equation (178A-38) and setting it to zero and setting COM to COM_DFE. This process should also be applied if for any other reason, such as approximations in math and calculations, similar cases are encountered."	Proposed Response	Response Stat	us O		
roposed Response Response Status O					

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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C/ 178B SC 178B	P 786	L12	# 424	C/ 178B	SC 178B.2	P 786	L18	# 220
Ran, Adee	Cisco System	IS		Huber, Tho	omas	Nokia		
Comment Type T	Comment Status X			Comment 7	Туре Т	Comment Status X		
end-to-end (RS-to-RS) the former, but is syste	inction between "ILT", which i path bring-up procedure. The em-level result, while ILT is a may be helpful, e.g. "Physica	e latter is an abili local mechanism	ity that is enabled by n.	is the e overvie accurat	end-to-end path ew text. The "cor te - that may be	confusing. ILT has two aspec startup behavior. These need tinuous exchange of fixed-ler what happens during the trai ing is completed.	I to be more cleangth training frar	arly separated in the mes" is not entirely
SuggestedRemedy				Suggested	Remedy			
	ysical layer startup procedure LT" used over a single ISL. In			ILT des		processes that serve two purp		
Proposed Response	Response Status O			a smoo	oth path start-up	e on individual ISLs, and coor . The individual link training is between peer interfaces of ar	s performed via t	the exchange of fixed-
C/ 178B SC 178B.2	P 786	L18	# 374			ice of the ISL. Path start-up is set of ISLs that exist between		the exchange of status
	P 786 Ghiasi Qunati		# 374		ions across the s			the exchange of status
Ghiasi, Ali			# 374	indicati	ions across the s	set of ISLs that exist between		the exchange of status
Ghiasi, Ali <i>Comment Type</i> TR 3 major functions are in	Ghiasi Qunat	um/Marvell LT, Optical LT, a	nd inter-sublayer link	indicati	ions across the s	set of ISLs that exist between		the exchange of status
Ghiasi, Ali Comment Type TR 3 major functions are in signal or RTS. Design	Ghiasi Qunati Comment Status X ncluded in the ILT: Electrical I	um/Marvell LT, Optical LT, a	nd inter-sublayer link	indicati Proposed F	SC 178B.2	set of ISLs that exist betweer Response Status O	the path endpo	the exchange of status ints.
Ghiasi, Ali Comment Type TR 3 major functions are in signal or RTS. Design SuggestedRemedy I suggest the following All electrical link trainin	Ghiasi Qunati Comment Status X Included in the ILT: Electrical I ating everting as ILT is rather definition: Ing called "ELT"	um/Marvell LT, Optical LT, a	nd inter-sublayer link	Indicati Proposed F Cl 178B Dudek, Mik Comment T	SC 178B.2	set of ISLs that exist between Response Status 0 P 786	the path endpo	the exchange of status ints.
Ghiasi, Ali Comment Type TR 3 major functions are in signal or RTS. Design SuggestedRemedy I suggest the following All electrical link trainin All optical link training	Ghiasi Qunati Comment Status X Included in the ILT: Electrical I ating everting as ILT is rather definition: Ing called "ELT"	um/Marvell LT, Optical LT, a confusing throu	nd inter-sublayer link ghout the draft.	Indicati Proposed F Cl 178B Dudek, Mik Comment T The en Suggested	SC 178B.2 SC 178B.2 Ke Type E Inglish isn't good. Remedy	set of ISLs that exist between Response Status O P786 Marvell	u the path endpo	the exchange of status ints. # 498

C/ 178B SC 178B.2

C/ 178B SC	C 178B.2	P 786	L 20	# 553	C/ 178B	SC 178B.3	P 786	L33	# 52
Maki, Jeffery		Juniper Netwo	rks		D'Ambrosia	a, John	Futurewei	, U.S. Subsidiary c	
Comment Type	TR	Comment Status X			Comment	Туре Е	Comment Status X	-	
length traini	ng frames b	pports these functions through between peer interfaces in an	SL" indicates t	raining frames are			n of inter-sublayer link train r-sublayer link (ISL) was di		
		 d. The presumed purpose to b their equalization coeficients y 			Suggested	Remedy			
training suc	h as with re	covered clock while continuing training is occurring.			https://	nent figure on F www.ieee802.c with editorial lic	org/3/dj/public/adhoc/electr	cal/25_0605/damb	rosia_3dj_elec_02_25
SuggestedReme	edy				•				
		-Control field structure for E1 ing traffic and recovered clock		icator that updated	Proposed I	Response	Response Status O		
Proposed Resp	onse	Response Status 0			C/ 178B	SC 178B.3	P 786	L 34	# 222
					Huber, Tho	omas	Nokia		
C/ 178B SC	C 178B.3	P 786	L 25	# 124	Comment	Туре Е	Comment Status X		
Mascitto, Marco)	Nokia					s somewhat awkward. The		
Comment Type	Е	Comment Status X					e sense that a pair of PMA be consistent as to whether		
You define t	terms in this	s subclause but named the sul 022 and rename it "Definitions		entions". Why not be	ISL. As		gests that the ISL is either		
SuggestedReme	edy				Suggested	Remedy			
Rename sul	bclause "De	efinitions".			Chang	e the text to rea	ad:		
Proposed Resp	onse	Response Status O			The xA sublaye		a pair of adjacent PMA sub	layers, or the MDI	between a pair of PMD
					Proposed I	Response	Response Status O		
C/ 178B SC	C 178B.3	P 786	L 31	# 221					
Huber, Thomas		Nokia							
Comment Type	Е	Comment Status X							
'AUI bottom	componen	omponent in Annex 178B uses t', whlie related text in 45.2.1.2 The terms should be consist	269 uses 'uppe	r AUI component' and					
SuggestedReme	edy								
		better than upper and bottom nent' and 'lower AUI componer		definition in 178B.3 to					

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 178B SC 178B.3 Page 80 of 149 6/16/2025 2:13:38 PM

C/ 178B SC 178B.3 P786 L36 # 112	C/ 178B SC 178B.3 P786 L41 # 113
Mascitto, Marco Nokia	Mascitto, Marco Nokia
Comment Type E Comment Status X	Comment Type E Comment Status X
The ISL should be defined as the link between two adjacent sublayers and excludes the	The second sentence might be too short and risks causing confusion.
sublayers themselves. ISLs can be between two adjacent sublayers in the same Physical layer implementation (e.g., connecting PMAs in a single PHY) or between adjacent	SuggestedRemedy
sublayers in two autonomous systems (e.g., connecting the two PHY PMDs via a medium).	Replace "For a PMD this term is equivalent to link partner"
SuggestedRemedy	with
Replace "The ISL may be an xAUI-n between a pair of PMA sublayers within the same	WIGH
Physical Layer implementation or a pair of PMDs and the medium between"	"In the case where the ISL is an MDI between two PMDs, this term is equivalent to link partner".
with	Proposed Response Response Status O
"The ISL may be an xAUI-n between a pair of PMA sublayers within the same PHY. The	
ISL may be an MDI between a pair of PMD sublayers, each of which is instantiated in	
separate PHYs".	C/ 178B SC 178B.4 P786 L52 # 114
Proposed Response Response Status O	Mascitto, Marco Nokia
	Comment Type E Comment Status X
C/ 178B SC 178B.3 P786 L 38 # 115	It is unclear if "former" and "latter" refer to "one or two instantiated interfaces" or to "PMD or AUI components" in the next statements. Suggest removing text to improve clarity.
Mascitto, Marco Nokia	SuggestedRemedy
Comment Type E Comment Status X	Delete "[] specifically PMD or AUI components" from sentence.
Add single and multi-ISL definiton here to help with 178B.5.	Proposed Response Response Status O
SuggestedRemedy	
Add: "A single-ISL path comprises exactly two sublayers connected by a single ISL. A multi- ISL path comprises three or more sublayers connected in series by ISLs".	

Proposed Response

Response Status 0

C/ 178B SC 178B.4

-	SC 178B.4	P 786	L 52	# 458	C/ 178B SC 178B		L 5	# 224
Slavick, Jeff		Broadcom			Huber, Thomas	Nokia		
Comment Typ	e TR	Comment Status X			Comment Type T	Comment Status X		
	nterfaces. The	178B.4 talks about "device use of "former" and "latter"				here are "one or more per-lane ace there are exactly n per-lane		nguage is misleading.
W/hat aha	ut destinents suith :	e e e este elles in stantista el in				pre per-lane functions" to "one p	er-lane function f	or each physical lane"
medium.	ut devices with	no physically instantiated in	tenaces, it still	uses ILT on the	Ū.			or each physical lane
SuggestedRei	medv				Proposed Response	Response Status O		
00	ne 2nd paragrap	h from:						
Devices in	n a path may inc	clude one or two physically i			C/ 178B SC 178B	.4 P787	L 30	# 375
		An example of the former			Ghiasi, Ali	Ghiasi Quna	tum/Marvell	
interface v	with the PCS or	I-C2M (Annex 176D) or AUI PHY XS is never physically	instantiated).	An example of the latter	Comment Type TR	Comment Status X		
is a retime	er with an AUI C	2C (Annex 176C) interface	on one side an	d an AUI-C2M (Annex	Figure 178B-1 is tr	ving to convey two different mes	sages and comb	ining the two function
176D) on 1	the other side.				as shown is confus	ing		
To:					SuggestedRemedy			
the MAC a interfaces interface,	and the PMD. F . The left two si either a AUI-C2	clude zero, one or two physi Figure 176B-1 depicts a dev tacks in Figure 176B-2 depi M (Annex 176D) or AUI-C2 a device with two xAUI inter	ice with zero ph ct a device with C (Annex 176C	ysically instantiated a single xAUI	Figure 1B better to -Receive function of	and 1B I so it needs two ILT functions ir show as following: onnected to Transmit Function I	left-right (output S	0 /
Proposed Res	sponse	Response Status 0				o Transmit Function right-left (in ILT function one for Egress and		
					Proposed Response	Response Status 0		
C/ 178B	SC 178B.4	P 786	L 52	# 223				
Huber, Thoma	as	Nokia						
Comment Typ	e T	Comment Status X						
one or two However,	o physically insta an end-to-end p	confusing. The text begins antiated interfaces, specific path between two PCS coul plementation, plus the MDI	ally AUI or PMD d include as ma	o components." iny as 5 ISLs: two AUIs				

SuggestedRemedy

If this paragraph was not present, the information in the rest of the clause is still clear. Delete the paragraph.

Proposed Response	Response Status	0
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TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 178B SC 178B.4 Page 82 of 149 6/16/2025 2:13:38 PM

CI 178B SC 178B.5 P787 L 37 # 225	C/ 178B SC 178B.5 P787 L 37 # 290
Huber, Thomas Nokia	Brown, Matt Alphawave Semi
Comment Type E Comment Status X	Comment Type TR Comment Status X
The organization of subclauses 178B.5 through 178B.13 is suboptimal. The path start-up protocol depends on the per-ILS training protocol, so it would be better to introduce that first, and to have all the various pieces of that in one subclause rather than spread across 8 subclauses. Further, 178B.5.1 seems to be about the individual ISL training rather than the path startup process. and 178B.5.2 and 178B.5.3 are examples of individual ISL training <i>SuggestedRemedy</i> Rearrange the material as follows [comments relateive to current clauses in square]	
brackets and are not intended to be included in the text of the document]: 178B.5 ISL training [new heading]	SuggestedRemedy
178B.5.1 Interface behavior [curent 178B.5.1] 178B.5.1.1 Training retimers [current 178B.5.2] 178B.5.1.2 Training xMII Extenders [current 178B,5,3] 178B.5.2 Training frame structure [current 178B.6] 178B.5.3 Control field structure [current 178B.7] 178B.5.4 Status field structure [current 178B.8]	Within Annex 178B, clearly differentiate these two processes (inter-sublayer link training and path-start-up protocol) as being separate from each other, rather than ILT being a combination of these two. ILT would refer to the process with operates on a specific ISL and with PSP the process that links the states of all ISL on a path. Throughout the draft specify and references these two functions separately. A contribution will be provide to explore this further.
178B.5.5 Trainng frame lock [current 178B.9] 178B.5.6 Polarity detection and correction [current 178B.10] 178B.5.7 Equalization control [current 178B.11]	Proposed Response Response Status O
178B.5.8 Training pattren setting [current 178B.12] 178B.5.9 Handshake timing [current 178B.13]	C/ 178B SC 178B.5 P787 L39 # 116
178B.6 Path start-up protocol [current 178B.5, without the subclauses included above]	Mascitto, Marco Nokia
178B.7 State diagrams [current 178B.14] 178B.8 Management variables [current 178B.15] 178B.9 PICS [current 178B.16]	Comment Type E Comment Status X Improve clarity.
Proposed Response Response Status O	SuggestedRemedy Replace: "ILT enables independent ISL training in a multi-ISL path that includes AUI components and PMDs. It also supports operation over paths that include ISLs that do not implement ILT".
	With
	With "ILT supports independent training of ISLs in a multi-ISL path. ILT also operates over paths that include ISLs that do not support ILT".

C/ 178B SC 178B.5

C/ 178B	SC 178B.5	P 787	L 43	# 226
Huber, Thom	nas	Nokia		
Comment Ty	pe T	Comment Status X		

The bullet list that attempts to explain how path start-up works is not succeeding. It is not clear if "ready to send" is related to the local rts and remote rts indications or if it is something different. It seems like it must be something different, since the third bullet says you can only send local rts or remote rts across an ISL that is ready to send. The last two bullets seem to introduce a notion of "device" that is undefined. The concept of an ISL includes a physical instantiation of an AUI or a medium, so the intended meaning of 'device' is reasonably clear (i.e., the endpoint of an ISL), but it would be better to avoid using 'devices' in the description and focus on ISLs and their endpoints.

SuggestedRemedy

The intended behavior is not really clear, so it's hard to provide a specific remedy. It think the intention is that local rts originates at the A end PCS and traverses all sublavers and ISLs until it reaches the Z end PCS. Upon receiving local rts, the Z end PCS signals remote rts to the A end PCS. (and of course vice versa for Z-->A). So local rts makes its way down the stack in one system, across the medium, and up the stack in the peer system. In order for local rts (or remote rts) to go across an ISL, that ISL must be in a 'ready to send' condition that has nothing to do with the 'local rts' or 'remote rts' variables, but instead depends on ILT (for ISLs that support ILT) or some other mechanism (for those that don't support ILT) to determine if the ISL is 'ready to send'. If that is correct, write text accordingly to explain this, and modify the terminology or provide better definitions so that it's clear that "ISL ready to send" is not the same thing as local_rts or remote_rts. If the intended behavior is something else. rewrite the text to be more clear about what is intended.

Proposed Response	Response Status	0	
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C/ 178B SC 178B.5	P 788	L 3	# 465	
Slavick, Jeff	Broadcom			

Comment Status X Comment Type TR

The otherwise is not necessary as the heading says you use one or the other.

SuggestedRemedy

Remove the "otherwise".

Proposed Response Response Status 0

C/ 178B	SC 178B.5.1	P 788	L 9	# 227
Huber, Thom	nas	Nokia		
Comment Tv	pe E	Comment Status X		

"Interface" is vague. I think this clause is about lanes in an ISL.

SuggestedRemedy

Replace "interface" with something more specific and clear. "ISL endpoint" and "ISL lane" could be used as appropriate throughout the clause.

Proposed Response Response Status **O**

C/ 178B	SC [·]	178B.5.1	P 788	L13	# 117
Mascitto, M	larco		Nokia		
Comment T	Гуре	Е	Comment Status X		
Improve clarity.		v.			

SuagestedRemedv

Replace "Local variables are sent to the peer interface via the training frames. Remote variables are received from the peer interface"

with

"Peer interfaces send local variables and receive remote variables via the training frames".

Proposed Response	Response Status	Ο
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C/ 178B	SC 178B.5.1	P 788	L15	# 228
Huber, Thomas		Nokia		
Comment T	Туре Т	Comment Status X		

This clause appears to be about the process for training each lane of an ISL, so it's not clear why local rts or remote rts belong here (since they are about the end-to-end path although the state diagrams clause suggests that each ISL maybe has its own local rts and remote rts - but that would mean that local rts and remote rts are not signals that propagate from PCS to PCS). While the intended meaning of 'device' is clear, it would be better to describe the protocol in terms of ISLs and the endpoints of ISLs.

SuggestedRemedy

Clarify what condition it is that causes the propagation timer to be started... presumably it's not related to local rts and remote rts (or if it is, the definitions of local rts and remote rts need to be modified to make it clear that they apply to each lane of each ISL. not just to PCS-to-PCS communication).

Proposed Response Response Status **O**

TYPE: TR/technical required ER/editorial required GR/gene	C/ 178B	Page 84 of 149	
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	SC 178B.5.1	6/16/2025 2:13:38 PM
SORT ORDER: Clause, Subclause, page, line			

C/ 178B SC 178B.	5.1 P788	L16	# 118	C/ 178B	SC 1	78B.5.1	P 788	L 30	# 291
Mascitto, Marco	Nokia			Brown, Mat	tt		Alphawav	e Semi	
Comment Type E	Comment Status X			Comment 7	Гуре	TR	Comment Status X		
(ISLs) and not the b	assume we are describing the ir ehavior of the overall ILT path fi ct, use of the term "device" is co	rom PCS to PC		through implem	n 183 the ient, but	ere is ra with the	ne confusion around whet ther definitive text specific a ability to enable and disa	cation that indeed IS able. Text in 178B.5	SL is mandatory to 5.1 allows for a case
SuggestedRemedy							vailable with clarification "(n meaning that there is no		
Replace the word "d	levice" with "sublayer".			Howeve	er, it ma	Iy be hel	pful to circumvent any co	nfusing and add sor	me clear text at the
Proposed Response	Response Status O			the Cla	use or A	Annex th	tating that the requiremen le specifies the interface a s mandatory.		
C/ 178B SC 178B.	5.1 P788	L 21	# 587	Suggestedl	Remedy	,			
Shrikhande, Kapil	Marvell						ence or similar to the first		
Comment Type T	Comment Status X			optiona the inte		nentatio	n of the ILT function is spo	ecified in the clause	or annex that defines
	ined before this term is used. r. ly is receiver ready, which is def			Proposed F	Respons	e	Response Status O		
SuggestedRemedy									
Define rx_ready and 178B.8.1	I / or clarify that this variable is s	same as receive	r ready defined in	C/ 178B Jones, Cha		78B.5.2	P 789 Cisco Sys	L2	# 54
Proposed Response	Response Status O			Comment 7		Е	Comment Status X		
				Use of	the wore	d guarar v recom	ntee, in two places. This w mend this replaced with "l	<i>i</i> ill likely be flagged helps ensure".	during MEC. Staff
C/ 178B SC 178B.5	5.1 P788	L 21	# 466	Suggestedl					
Slavick, Jeff	Broadcom			00			o "helps ensure" in two pla	aces on lines 2 and	3.
Comment Type TR	Comment Status X			Proposed F	0		Response Status O		
makes for unpredica TRAIN_LOCAL is er	ed time limit for rx_ready assert atable link up behaviors. A time ntered to entry to TRAIN_REMC facilitate predicatble device beh	e limit from the p DTE will improve	point at which	ToposeuT	tespons				
SuggestedRemedy									
Presentation for a so	olution to be provided.								
Proposed Response	Response Status O								

C/ 178B SC 178B.5.2

CI 178B SC 178B	3.5.3	P 789	L 24	# 376	C/ 178B	SC	178B.5.3	P 789	L 47	# 119
Shiasi, Ali		Ghiasi Qunat	um/Marvell		Mascitto, N	<i>M</i> arco		Nokia		
omment Type TR	Commen	t Status X			Comment	Туре	Е	Comment Status X		
Figure can improv	e for better repres	sentation						es Path as the series o		
uggestedRemedy								path" or "main path" ma as thinking about sugg		
Suggest the follow								nd scope. Not sure if th		
 CDR ouput add r Connect Training 			ancode		Suggested	Remed	ły			
				en connect training	Replac	e "PC	S to PCS p	ath" and "main path" w	th "path".	
decode and encod	le to it.				Proposed I	Respor	nse	Response Status 0		
roposed Response	Response	Status O								
					C/ 178B	SC	178B.6.2	P 791	L7	# 450
178B SC 178E	3.5.3	P 789	L 44	# 421	He, Xiang	00	1700.0.2	Huawei	<i>L1</i>	# 450
an, Adee		Cisco System	ns		Comment	Tuno	TR	Comment Status X		
omment Type TR	Commen	t Status X						O1 is unclear.		
The text about trai	ning xMII extende	ers does not add	lress the commu	nication of the status				d for the control and sta	tus fields, E1 and	O1." So E1 and O1 are
			ces (PMD to AUI	and vice versa) when				ntrol and status fields. (
there is a PHY XS			the one defined i	n 178B.14.2.1 using				int in 178B, they were u in 178B.7. There are a		
				OTE that describes				in PMD clauses, like ir		пу туре стіпіспасе
what "adjacent" is					We sh	ould do	a better d	efinition for these terms		nd use clear reference
Cinco this hohovis	r io oposifio to DI	IVa attached to d	autondoro it oba	uld be encolfied in this	in othe	r claus	es.			
subclause, prefera			extenders, it shou	Ild be specified in this	Suggested	Remed	ły			
uggestedRemedy								fine two types of interfa		
,	8B 5 3 stating the	t for the nurner	se of adjacent ci	nal_ok, the adjacent	interfac	ce", an	d stick to t	nese terms all across 1	78B and the docum	ient.
				ice interface of the	Secon	d chan	ge: Change	e the reference from "1"	78B" to the subclau	se where they were
		of the AUI com	ponent above the	PHY XS is the service			178B.6.2".			2
interface of the PN					Proposed I	Respor	nse	Response Status O		

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

Add a figure to illustrate the communication of adjacent_signal_ok between the PMD and the AUI (across the PCS and PHY XS, and possibly other sublayers).

Response Status 0

Proposed Response

C/ 178B SC 178B.6.2 Page 86 of 149 6/16/2025 2:13:38 PM

C/ 178B	SC 178B.6.2	P 791	L 7	# 229
Huber, Thor	mas	Nokia		

Comment Type Comment Status X Е

While it is probably not likely that any reader of this annex would get confused, "E1" is of course the name of the European PDH frame structure, so it might be better to avoid using that name. Further, the last sentence "Each interface using ILT shall identify which format is relevant for it" reads too much like a requirement that would show up in a PICS, but that is clearly not what is intended here (the intent being that electrical PHYs use the E format and optical PHYs use the O format).

SuggestedRemedy

Pronosed Response

The formats E1 and O1 are really about electrical or optical 200G/lane signaling. Maybe it would be better to refer to them that way (i.e., replace "E1" with "electrical 200G/lane" and "O1" with "optical 200G/lane". With that change, the last sentence could be deleted. If the change is made, it should be applied throughout the annex, and potentially in other clauses in the document that may refer to the frame names...

r roposed Response	Response Status 0		
C/ 178B SC 178B.6.2	P791	L 7	# 634
Law, David	HPE		

Posponso Status

Comment Type Comment Status X т

Subclause 178B.6.2 'Control and status fields' says that 'Two formats are defined for the control and status fields, E1 and O1.'. Everywhere else in the draft, however, it seems that E1 and O1 are defined as types of interfaces. For example, subclause 178B.7 'Control field structure' says, 'The structure of the control field for E1 interfaces shall be as shown in Table 178B-2 and for O1 interfaces as shown in Table 178B-3.'.

SuggestedRemedy

Suggest that the text 'Two formats are defined for the control and status fields, E1 and O1.' is changed to read 'The type E1 interface and a type O1 interface use different formats for the control and status fields (see 178B.7).'.

Proposed Response

Response Status O

C/ 178B	SC 178B.7	P 795	L 4	# 230
Huber, Tho	mas	Nokia		

Comment Type E Comment Status X

It would be better to combine tables 178B-2 and 178B-3 into a single table, with one column for the electrical interfaces and one for the optical interfaces. That would make it easier for the reader to see that the formats are the same, except that on optical links some of the fields are not used. The same applies to tables 178B-4 and 178B-5 in clause 178B.8

SuggestedRemedy

Change the table title to 'Control field structure for 200G/lane interfaces' Change the heading of the 3rd column to "Electrical interfaces". Add a fourth column titled "Optical interfaces, and populate it with the information that is in Table 178B-3. Delete Table 178B-3

Make corresponding changes in clause 178B.8 for tables 178B-4 and 178B-5.

Response Status **O** Proposed Response

C/ 178B	SC 178B.7	P 796	L 5	# 377
Ghiasi, Ali		Ghiasi Qunatu	ım/Marvell	

Comment Type TR Comment Status X

https://www.ieee802.org/3/di/public/24 05/ghiasi 3di 01a 2405.pdf looked at number of options for OLT such as Presets, FFE adjustment, OMA control, chirp, inner-outer eve adjustments, but at the time the Task Force decdied to just enable the basic OLT with precoder control. A vendor selected Preset can provide set of Presets optimized for example shorter/longer reacehs, lower OMA more linear or higher OMA less linear, higher peaking or less peaking

SuggestedRemedy

The enhancement to OLT issomehting that Task Force should consider specially that MMF will require enabling Presets. Just like E1 O1 should have 6 Presets, with default Preset 1 only meeting TDECQ, Presets 2-6 may have +1 dB TDECQ penalty. Clasue 183 800GBASE-LR4 and possibly 800GBASE-FR4 are good candiate to have several presets to better mitigate dispersion penalties See ghiasi_3dj_01_2507

Proposed Response Response Status **O**

C/ 178B SC 178B.7 Page 87 of 149 6/16/2025 2:13:38 PM

C/ 178B	SC 178B.7.1	P 796	L 26	# 485	CI 178B SC 178	B.7.6	P 797	<i>L</i> 1	# 487
imber, Ma	ırk	Semtech			Kimber, Mark		Semtech		
omment T	ype TR	Comment Status X			Comment Type TI	R Coi	mment Status X		
in the A ignored uggestedF Change The init transmi To Only ap up to siz	UÍ and PMD cla l on receipt. It wo Remedy e ial condition req itter equalizer co oplies for E1 inte	s this only applies to E1 case uses. There is a comment in ould be better to also state in uest bits are used to select o onfigurations (presets) specifi- faces. The initial condition re nsmitter equalizer configurati- es.	the O1 table sta this text that it re one of the up to s ied in the AUI and equest bits are us	ting it should be efers only to E1. ix predefined nexes or PMD clauses. red to select one of the	coefficient select bits. To Only applies to E the coefficient sp bits.	1 interfaces. ecified by the	e used to change the The coefficient reque e coefficient select		
	Response	Response Status O			Proposed Response	Res	ponse Status O		
					C/ 178B SC 178	B.8	P 797	L 20	# 111
178B	SC 178B.7.5	P 796	L 50	# 486	Bruckman, Leon		Nvidia		
mber, Ma		Semtech			Comment Type TI	R Coi	mment Status X		
omment T		Comment Status X			The ILT bit is not	used anywa	y in Annex 178B.		
stating i		s this only applies to E1 case ored on receipt. It would be be			SuggestedRemedy Change bit 14 in	the status fie	eld in Tables 178B-4 a	nd 178B-5 to "Re	eserved"
uggestedF	Remedy				Proposed Response	Res	ponse Status O		
	efficient select b	its are used to identify the co	efficient that is th	ne target of a					
coefficie To	ent request.				C/ 178B SC 178	B.8.5	P 799	L1	# 120
		rfaces. The coefficient select	t bits are used to	identify the coefficient	Mascitto, Marco		Nokia		
that is t	-	pefficient request			Comment Type E		mment Status X		
	lesponse	Response Status O			Consistently use	"1" for boole	an true and "0" for boo	olean false.	
oposed R					SuggestedRemedy				
Proposed R					Replace "[] and	d is not set to	one" with "and is not	set to 1".	

C/ 178B SC 178B.8.5

C/ 178B SC 178B.10	P 799	L 44	# 467	C/ 178B SC 178B.11.4	P 802	L 25	# 325
Slavick, Jeff	Broadcom			Brown, Matt	Alphawave S	emi	
Comment Type TR Co	omment Status X			Comment Type T	Comment Status X		
The fact that polarity_invert p sub-clause.	persists after training co	mpletes should l	be the last part of this	Use of possesive gramr is unecessary here.	mar is inconsistent with simi	lar phrases used	through this draft and
SuggestedRemedy				SuggestedRemedy			
Move the 2nd paragraph in 1	178B.10 to be after the N	NOTE.			o "transmitter", three instan		808 line 17, 4 instances
Proposed Response Re	sponse Status O			1 0	4, change "interface's" to "o	ther interface"	
				Proposed Response	Response Status 0		
C/ 178B SC 178B.10	P 799	L 50	# 121				
Mascitto, Marco	Nokia			C/ 178B SC 178B.13	P 802	L 47	# 122
Comment Type T Co	omment Status X			Mascitto, Marco	Nokia		
If this note is making referen		,	,,,,	Comment Type E	Comment Status X boolean true and "0" for boo	oloon falso	
management, this should no	ot be allowed. See my co	omment regardin	g page 804, line 18.	Consistently use 1 for		Jiean laise.	
0	ot be allowed. See my co	omment regardin	g page 804, line 18.	SuggestedRemedy		Slean laise.	
SuggestedRemedy Do not allow management co		°,		SuggestedRemedy Replace "[] transmitte	ed training frames is set to o		itted training frames is
SuggestedRemedy Do not allow management co		°,		SuggestedRemedy			itted training frames is
SuggestedRemedy Do not allow management or Proposed Response Re	ontrol of ILT for ISLs req	°,		SuggestedRemedy Replace "[] transmitte set to 1". Proposed Response	ed training frames is set to o Response Status O	ne" with "transm	
SuggestedRemedy Do not allow management or Proposed Response Re	ontrol of ILT for ISLs req	quired to support	it.	SuggestedRemedy Replace "[] transmitte set to 1". Proposed Response Cl 178B SC 178B.14.2	ed training frames is set to o <i>Response Status</i> O 2.1 <i>P</i> 803		itted training frames is # <u>123</u>
SuggestedRemedy Do not allow management co Proposed Response Re Cl 178B SC 178B.11.2 Slavick, Jeff	ontrol of ILT for ISLs req esponse Status O P783	quired to support	it.	SuggestedRemedy Replace "[] transmitte set to 1". Proposed Response Cl 178B SC 178B.14.2 Mascitto, Marco	ed training frames is set to o Response Status O 2.1 P803 Nokia	ne" with "transm	
SuggestedRemedy Do not allow management co Proposed Response Re Cl 178B SC 178B.11.2 Slavick, Jeff	ontrol of ILT for ISLs req esponse Status O P783 Broadcom omment Status X	quired to support	it.	SuggestedRemedy Replace "[] transmitte set to 1". Proposed Response Cl 178B SC 178B.14.2 Mascitto, Marco Comment Type E	ed training frames is set to o Response Status O 2.1 P 803 Nokia Comment Status X	ne" with "transm <i>L</i> 46	# 123
SuggestedRemedy Do not allow management co Proposed Response Re Cl 178B SC 178B.11.2 Slavick, Jeff Comment Type TR Co No pointer to the CHECK_RI	ontrol of ILT for ISLs req esponse Status O P783 Broadcom omment Status X	quired to support	it.	SuggestedRemedy Replace "[] transmitte set to 1". Proposed Response Cl 178B SC 178B.14.2 Mascitto, Marco Comment Type E	ed training frames is set to o Response Status O 2.1 P803 Nokia	ne" with "transm <i>L</i> 46	# 123
SuggestedRemedy Do not allow management co Proposed Response Re Cl 178B SC 178B.11.2 Slavick, Jeff Comment Type TR Co No pointer to the CHECK_RI	ontrol of ILT for ISLs req esponse Status O P783 Broadcom omment Status X EQ function is provided. to the last paragraph of 1	guired to support	it. # <u>461</u>	SuggestedRemedy Replace "[] transmitte set to 1". Proposed Response Cl 178B SC 178B.14.2 Mascitto, Marco Comment Type E This is not very clear. In subclause 178B.3. SuggestedRemedy	ed training frames is set to o Response Status O 2.1 P 803 Nokia Comment Status X would suggest adding the de	ne" with "transm <i>L</i> 46 efinition of "adjac	# 123
SuggestedRemedy Do not allow management of Proposed Response Res Cl 178B SC 178B.11.2 Slavick, Jeff Comment Type TR Co No pointer to the CHECK_RI SuggestedRemedy Add the following sentence to CHECK_REQ is defined in 1	ontrol of ILT for ISLs req esponse Status O P783 Broadcom omment Status X EQ function is provided. to the last paragraph of 1	guired to support	it. # <u>461</u>	SuggestedRemedy Replace "[] transmitte set to 1". Proposed Response Cl 178B SC 178B.14.2 Mascitto, Marco Comment Type E This is not very clear. In subclause 178B.3. SuggestedRemedy I would suggest adding and referencing a diagra	ed training frames is set to o Response Status O 2.1 P 803 Nokia Comment Status X	ne" with "transm <i>L</i> 46 efinition of "adjac ervice interface" of "Making Sense	# [<u>123</u> cent service interface" in to subclause 178B.3
SuggestedRemedy Do not allow management co Proposed Response Re Cl 178B SC 178B.11.2 Slavick, Jeff Comment Type TR Co No pointer to the CHECK_RI SuggestedRemedy Add the following sentence to CHECK_REQ is defined in 1	ontrol of ILT for ISLs req esponse Status O P783 Broadcom omment Status X EQ function is provided. to the last paragraph of 1 178B.14.3.1."	guired to support	it. # <u>461</u>	SuggestedRemedy Replace "[] transmitter set to 1". Proposed Response Cl 178B SC 178B.14.2 Mascitto, Marco Comment Type E This is not very clear. I to subclause 178B.3. SuggestedRemedy I would suggest adding and referencing a diagra D'Ambrosia, M. Brown, Adjacent service interfa	ed training frames is set to o <i>Response Status</i> O 2.1 <i>P</i> 803 Nokia <i>Comment Status</i> X would suggest adding the definition of "adjacent se am, like the one on Slide 3 c 802.3dj Joint Ad hoc Mtg - 0	ne" with "transm <i>L</i> 46 efinition of "adjac ervice interface" of "Making Sense 5 Jun 2025).	# 123 cent service interface" in to subclause 178B.3 e out of ILT" (J.

C/ 178B SC 178B.14.2.1

C/ 178B SC 178B.14.2.1	P803	L 47	# 448	C/ 178B SC 178B.14.2.1 P804 L18 #	231
Ran, Adee	Cisco Systems	s		Huber, Thomas Nokia	
Comment Type T	Comment Status X			Comment Type T Comment Status X	
The second case in the No adjacent service interface service interface. It may be Also, a figure illustrating the SuggestedRemedy	is the interface below the A e easier to understand if it	AUI component" is stated.		It is not clear why the ability to enable/disable ILT (via the mr_training_enable provided. In what circumstance would it be necessary or desirable for ILT to the for any interface that can support it? Providing this ability complicates the fea are multiple places where the value of a variable depends on whether mr_train is true or false) and creates the possibility of misconfiguration between two sy between a host and a module, complicating the process of bringing up end-to-	be turned off ature (there ning_enable vstems, or
Change "the adjacent serv				SuggestedRemedy	ond pairor
adjacent service interface Add a figure, with editorial		ce (below the Al	UI component)".	Reconsider the ability to disable ILT via management configuration.	
0	Response Status O			Proposed Response Response Status O	
C/ 178B SC 178B.14.2.1	P 804	L15	# 125	C/ 178B SC 178B.14.2.1 P804 L18 #	126
Mascitto, Marco	Nokia			Mascitto, Marco Nokia	
Could be clearer.	Comment Status X			Comment Type T Comment Status X It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes	
Could be clearer. SuggestedRemedy Replace NOTE with the fo ILT should be restarted if t situation. The definition of	llowing text, "There is no s here is an indication of an unrecoverable fault is beyo	unrecoverable f	fault or a livelock	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri deployments, and reduces the plug-n-play value of 802.3 interfaces. It gets ev	s successfull system / to disable ing
Could be clearer. SuggestedRemedy Replace NOTE with the fo ILT should be restarted if t situation. The definition of	llowing text, "There is no s here is an indication of an	unrecoverable f	fault or a livelock	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri	s successfull system / to disable ing
Could be clearer. SuggestedRemedy Replace NOTE with the fo ILT should be restarted if t situation. The definition of Proposed Response	llowing text, "There is no s here is an indication of an unrecoverable fault is beyo Response Status O	unrecoverable f ond the scope o	fault or a livelock of this annex".	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri deployments, and reduces the plug-n-play value of 802.3 interfaces. It gets ev complicated if we consider the case of the multi-ISL path.	s successfull system / to disable ing
Could be clearer. SuggestedRemedy Replace NOTE with the fo ILT should be restarted if t situation. The definition of Proposed Response Cl 178B SC 178B.14.2.1 Jones, Chad	llowing text, "There is no s here is an indication of an unrecoverable fault is beyo Response Status O P804 Cisco Systems	unrecoverable f ond the scope o	fault or a livelock	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri deployments, and reduces the plug-n-play value of 802.3 interfaces. It gets ev complicated if we consider the case of the multi-ISL path. SuggestedRemedy	s successfull system / to disable ing
Could be clearer. SuggestedRemedy Replace NOTE with the for ILT should be restarted if the situation. The definition of Proposed Response Cl 178B SC 178B.14.2.1 Jones, Chad	llowing text, "There is no s here is an indication of an unrecoverable fault is beyo Response Status O P804 Cisco Systems Comment Status X s will likely be flagged durir	L15 s, Inc.	fault or a livelock of this annex". # 55	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri deployments, and reduces the plug-n-play value of 802.3 interfaces. It gets ever complicated if we consider the case of the multi-ISL path. SuggestedRemedy Do not allow management control of ILT for ISLs required to support it. Proposed Response Response Status O Cl 178B SC 178B.14.2.1 P804 L27 #	s successfull system / to disable ing
Could be clearer. SuggestedRemedy Replace NOTE with the for ILT should be restarted if the situation. The definition of Proposed Response Cl. 178B SC 178B.14.2.1 Jones, Chad Comment Type E Use of the work avoid. This recommend to replace with	llowing text, "There is no sp here is an indication of an unrecoverable fault is beyo Response Status O P804 Cisco Systems Comment Status X s will likely be flagged durir h "help reduce".	L15 s, Inc.	fault or a livelock of this annex". # 55	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri deployments, and reduces the plug-n-play value of 802.3 interfaces. It gets ev complicated if we consider the case of the multi-ISL path. SuggestedRemedy Do not allow management control of ILT for ISLs required to support it. Proposed Response Response Status O C/ 178B SC 178B.14.2.1 P804 L27 # Mascitto, Marco Nokia Comment Type E Comment Status X	s successfull system / to disable ing /en more
Could be clearer. SuggestedRemedy Replace NOTE with the for ILT should be restarted if the situation. The definition of Proposed Response Cl 178B SC 178B.14.2.1 Jones, Chad Comment Type E Use of the work avoid. This recommend to replace with SuggestedRemedy change "avoid" to "help response Could be clearer.	llowing text, "There is no sp here is an indication of an unrecoverable fault is beyo Response Status O P804 Cisco Systems Comment Status X s will likely be flagged durir h "help reduce".	L15 s, Inc.	fault or a livelock of this annex". # 55	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri deployments, and reduces the plug-n-play value of 802.3 interfaces. It gets ev complicated if we consider the case of the multi-ISL path. SuggestedRemedy Do not allow management control of ILT for ISLs required to support it. Proposed Response Response Status O C/ 178B SC 178B.14.2.1 P804 L27 # Mascitto, Marco Nokia Comment Type E Comment Status X Clarify "device".	s successfull system / to disable ing /en more
Could be clearer. SuggestedRemedy Replace NOTE with the for ILT should be restarted if the situation. The definition of Proposed Response Cl 178B SC 178B.14.2.1 Jones, Chad Comment Type E Use of the work avoid. This recommend to replace with SuggestedRemedy change "avoid" to "help response Could be clearer.	llowing text, "There is no s here is an indication of an unrecoverable fault is beyo Response Status O P804 Cisco Systems Comment Status X s will likely be flagged durir h "help reduce".	L15 s, Inc.	fault or a livelock of this annex". # 55	It is my understanding that ILT is mandatory for all ISLs that make use of one Gb/s lanes. These links will come up (i.e., tx_mode = data) IFF ILT completes I cannot envision a use case where ILT would be administratively disabled by management (but do see the need to mr_restart, of course). Having the ability ILT on these ISLs opens the door to operator misconfiguration, confusion duri deployments, and reduces the plug-n-play value of 802.3 interfaces. It gets ev complicated if we consider the case of the multi-ISL path. SuggestedRemedy Do not allow management control of ILT for ISLs required to support it. Proposed Response Response Status O C/ 178B SC 178B.14.2.1 P804 L27 # Mascitto, Marco Nokia Comment Type E Comment Status X	s successfull system / to disable ing /en more

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 178B SC 178B.14.2.1 Page 90 of 149 6/16/2025 2:13:38 PM

C/ 178B SC 178B.1		L 32	# 459	C/ 178B SC 178B.		5 <i>L</i> 1	# 129
Slavick, Jeff	Broadcom			Mascitto, Marco	Nokia		
Comment Type TR	Comment Status X			Comment Type E	Comment Status	•	
	not be both a AUI component valent status to it and is mappe			Replace instances of	of "state diagram" with "sta	te machine".	
SuggestedRemedy	alent status to it and is mappe	ed to a MDIO Tegi		SuggestedRemedy			
Move the definition of Remove the enumer	of training_status to 178B14.3. ation of "READY" from its def is <= READY from Figyre 178	inition.		diagram and its ass lanes. For O1 interfa used" with "E1 interf	ces also implement one in ociated variables and func aces, this diagram and its faces also implement one	tions independently tassociated variables instance of the Coef	or each of the n physica and functions are not ficient update state
Proposed Response	Response Status O				ociated variables and fund O1 interfaces, this state m ed".		
C/ 178B SC 178B.1	4.2.4 P 805	L1	# 633	Proposed Response	Response Status ()	
₋aw, David	HPE						
Comment Type E	Comment Status X			C/ 178B SC 178B.	14.3 P806	5 L1	# 499
	ubclause 178B.14.2.4 'State d			Dudek. Mike	Marvell		
figure' since there is update state diagran	only one state diagram figure	in this subclause	, Figure 178B–7 'RTS	Comment Type E	Comment Status	(
SuggestedRemedy					criptions apply to both E1 ere placed before the para		
See comment.				SuggestedRemedy			
Proposed Response	Response Status O			Move the first parag	raph to after the 3rd parag	jraph.	
				Proposed Response	Response Status)	
C/ 178B SC 178B.1	4.3 P805	L 51	# 128				
Aascitto, Marco	Nokia			C/ 178B SC 178B.	14.3.1 P807	L 36	# 632
Comment Type E	Comment Status X			Law, David	HPE	230	# 032
Missing "state mach	ines".			Comment Type T	Comment Status)	,	
SuggestedRemedy				51	e_mc_mode and remote_		in subclause
control and the Train component or PMD	mponent or PMD implements ning frame lock, and their asso implements one instance of ea	ciated variables[. ach of the Training]" with "An AUI g control and the	178B.14.3.1 'Variab 178B–8 'Training co	les' but are not used in an introl state diagram', Figur Coefficient update state di	y of the respective st e 178B–9 'Training fr	ate diagrams, Figure
e e	state machines, and their asso	ociated variables[.].	SuggestedRemedy			
Proposed Response	Response Status O			Remove the definition 178B.14.3.1 'Variab	ons of remote_mc_mode a les'.	and remote_tp_mode	from subclause
				Proposed Response	Response Status)	
					-		

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 178B SC 178B.14.3.1 Page 91 of 149 6/16/2025 2:13:38 PM

C/ 178B SC 178B.14.3.1 P807 L44 # 500	C/ 178B SC 178B.14.3.1 P808 L25 # 415
Dudek, Mike Marvell	Ran, Adee Cisco Systems
Comment Type E Comment Status X	Comment Type TR Comment Status X
"Correspondent" is strange. "Corresponding" is better, as used in the base document in multiple places e.g. 73.7.6 first paragraph	In order to bring up a link that includes multiple ISLs, the functionality of ILT as specified b Figure 178B–7 and Figure 178B–8 is required across ISLs.
SuggestedRemedy	In PMDs that don't have a training protocol, and in PMDs that have it but training is
Change "correspondent" to "corresponding" here and on line 48.	disabled, the "quiet" and "local pattern" modes are the method of communicating the RTS
Proposed Response Response Status O	to the peer.
	However, the specification for the transmitted local pattern is incomplete - it only says "transmits a pattern from a valid pattern generator".
C/ 178B SC 178B.14.3.1 P808 L2 # 631	transmits a patient nom a valid patient generator .
Law, David HPE	A local pattern for ILT should be specified in every PMD clause and AUI annex. This
Comment Type E Comment Status X Typo.	comment addresses the general requirements; additional comments are sumbitted for the PMD clauses (including 185 and 187 that currently do not have ILT as a requirement at a
	- For AUIs, the local pattern is PRBS31Q, which may be generated by the PMA to which
SuggestedRemedy Change ' variable that is set to TRUE when' to read ' variable that is set to true when	the AUI component is attached and fed into the AUI component.
	- For PMDs in clauses 178-182 (directly below an SM-PMA with no inner FEC), the local pattern is PRBS31Q, which may be generated by the SM-PMA and fed into the PMD
Proposed Response Response Status O	service interface.
	 For PMDs in clauses 183 and 185 (below a clause 177 or clause 184 Inner FEC, respectively), the local pattern is PRBS31 encoded by the Inner FEC, which may be
	generated by the Inner FEC and fed into the PMD service interface.
	- For the PMD in clause 187, the local pattern is the output of the test pattern generator defined in 186.2.3.12.
	SuggestedRemedy
	Add text in the definition of tx_mode (178B.14.3.1) stating that the pattern used as local_pattern is specified in each clause or annex that uses the ILT function.
	Proposed Response Rosponse Status

Proposed Response Response Status **0**

C/ 178B SC 178B.14.3.1

E P802.3dj D2.0 200 Gb/s	, 400 Gb/s, 800 Gb/s, and 1.6	6 Tb/s Ethernet Initial Working Group ballot comme

C/ 178B SC 178B.14	4.3.3 P 809	L14	# 420	C/ 178B	SC 178B.14	.3.5	P 810	L 2	# 627
Ran, Adee	Cisco System	ns		Law, David		Н	PE		
Comment Type T	Comment Status X			Comment T	уре Т	Comment Sta	tus X		
potential benefit in ha management when the	//www.ieee802.org/3/dj/public/ aving a timer to the ILT training ne adaptation exceeds the exp	g control state dia		diagram 'Coeffici	n', Figure 178E	art and reset are u 3–9 'Training frame ate diagram', but a s'.	e lock state	diagram', and Fig	gure 178B–10
SuggestedRemedy				SuggestedF	Remedy				
license.	es to clause 175 per slide 11 o	of ran_30j_02a_2	505, with editorial		•	entries in alphabe	tical order	to subclause 178	3.14.3.1:
Proposed Response	Response Status O			mr_rest See 2	art 178B.14.2.1.				
C/ 178B SC 178B.14	4.3.4 P809	L 4	# 460	Reset					
Slavick, Jeff	Broadcom			See ?	178B.14.2.1.				
Comment Type TR	Comment Status X			Proposed R	esponse	Response Sta	tus O		
The duration of the question o	uiet_timer breaks the time allo stream per 73.4.3.	ted during AN to	begin sending	C/ 178B	SC 178B.14	.3.5	P 810	L 7	# 626
Presentation of option	ns to be supplied			Law, David		Н	PE		
Proposed Response	Response Status O			Comment T	ype TR	Comment Sta	tus X		
C/ 178B SC 178B.14	, -	L 26	# 120	178B.14		agram figures' but i			igram' in subclause ted subclause
		L 20	# 130	In additi	ion it annears	that the training_s	tatus is a r	oer-interface varia	hle hased on the
Mascitto, Marco	Nokia			definitio	n found in 178	B.14.2.1 'Variable	s', yet it ap	pears to be driver	n by both the per-
	Comment Status X s inherit the variables, function build be a statement to that effe		viously defined in			state diagram' (Fi 178B–8). I'm not			ne 'Training control
SuggestedRemedy									an interface enters the
Replace the first sent defines the operation PMDs, and makes us	ence with, "The training contro of ILT for AUI components an se of the per-interface state dia efinitions (178B.14.3)".	nd	ç ,	control : immedia	state diagram	on another lane in ls, training_status	the same	interface enters th	owever, the Training ne PATH_UP state be set to OK. This
•	, ,			SuggestedF	Remedy				
Proposed Response	Response Status O			state dia	agram' in its as	ssociated subclaus	se 178B.14	.3.1 'Variables'. Ir	8B–8 'Training contro n addition, clarify the -interface 'RTS update

operation of training_status regarding it being driven by both the per-interface 'RTS update state diagram' (Figure 178B–7) and the per-lane 'Training control state diagram'.

Proposed Response Response Status **O**

 TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
 C

 COMMENT STATUS: D/dispatched A/accepted R/rejected
 RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
 S

 SORT ORDER: Clause, Subclause, page, line
 S

C/ 178B SC 178B.14.3.5 Page 93 of 149 6/16/2025 2:13:38 PM

Law, David HPE Comment Type T Comment Status X	
Comment Type T Comment Status X	Law, David HPE
	Comment Type E Comment Status X
The variables mr_training_enable, local_rts and remote_rts are used in Figure 178B–8 'Training control state diagram' but are not defined in the associated subclause 178B.14.3.1 'Variables'.	Subclause 178B.14.1 'State diagram conventions' says that 'The notation used in the sta diagrams follows the conventions of 21.5.'. Table 21–1 'State diagram operators' defines the [not equal sign] character as 'Not equals'.
uggestedRemedy	SuggestedRemedy
Add the following entry in alphabetical order to subclause 178B.14.3.1:	Change the text 'max_recovery_events !=0' to read 'max_recovery_events [not equal sig 0'.
local_rts See 178B.14.2.1.	Proposed Response Response Status O
mr_training_enable See 178B.14.2.1.	C/ 178B SC 178B.14.3.5 P810 L46 # 630
remote rts	Law, David HPE
See 178B.14.2.1.	Comment Type E Comment Status X
roposed Response Response Status O	Subclause 178B.14.1 'State diagram conventions' says that 'The notation used in the sta diagrams follows the conventions of 21.5.'. Table 21–1 'State diagram operators' defines the use of the [greater than or equal sign] character as 'Greater than or equal to'.
178B SC 178B.14.3.5 P810 L13 # 269	SuggestedRemedy
	Change the text 'recovery_event_count >= max_recovery_events' to read
-	'recovery_event_count [greater than or equal sign] max_recovery_events'.
<i>comment Type</i> T <i>Comment Status</i> X There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state	'recovery_event_count [greater than or equal sign] max_recovery_events'. Proposed Response Response Status O
omment Type T Comment Status X There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state SEND_TRAINING for long. A maximum time duration for this state should be set.	
There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state SEND_TRAINING for long. A maximum time duration for this state should be set.	Proposed Response Response Status O
omment Type T Comment Status X There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state SEND_TRAINING for long. A maximum time duration for this state should be set. uggestedRemedy A contribution to address this will be provided.	Proposed Response Response Status O Cl 178B SC 178B.15 P 813 L1 # 422
Type T Comment Status X There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state SEND_TRAINING for long. A maximum time duration for this state should be set. uggestedRemedy A contribution to address this will be provided.	Proposed Response Response Status O Cl 178B SC 178B.15 P813 L1 # 422 Ran, Adee Cisco Systems
Comment Type T Comment Status X There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state SEND_TRAINING for long. A maximum time duration for this state should be set. suggestedRemedy A contribution to address this will be provided.	Proposed Response Response Status O Cl 178B SC 178B.15 P 813 L 1 # 422 Ran, Adee Cisco Systems Comment Type T Comment Status X "If the MDIO Interface is not implemented, an alternate mechanism to access managem
omment Type T Comment Status X There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state SEND_TRAINING for long. A maximum time duration for this state should be set. uggestedRemedy A contribution to address this will be provided.	Proposed Response Response Status O Cl 178B SC 178B.15 P 813 L1 # 422 Ran, Adee Cisco Systems Comment Type T Comment Status X "If the MDIO Interface is not implemented, an alternate mechanism to access managem variables shall be provided" Specifically for AUI-C2M, the most prevalent management interface is expected to be CMIS rather than MDIO. We expect CMIS to provide access to these management
Comment Type T Comment Status X There is no time out for exiting the state SEND_TRAINING. If either local_tf_lock or remote_tf_lock is false for a long time, the whole state diagram will be trapped in the state SEND_TRAINING for long. A maximum time duration for this state should be set. SuggestedRemedy A contribution to address this will be provided.	Proposed Response Response Status O Cl 178B SC 178B.15 P 813 L1 # 422 Ran, Adee Cisco Systems Comment Type T Comment Status X "If the MDIO Interface is not implemented, an alternate mechanism to access managem variables shall be provided" Specifically for AUI-C2M, the most prevalent management interface is expected to be CMIS rather than MDIO. We expect CMIS to provide access to these management variables. CMIS should be referenced, at least informatively.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general	C/ 178B	Page
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	SC 178B.15	6/16/2
SORT ORDER: Clause, Subclause, page, line		

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	5 P813	L 50	# 635	C/ 178B SC 178B	.16.3 P816	L18	# 133
aw, David	HPE			Mascitto, Marco	Nokia		
omment Type E	Comment Status X			Comment Type E	Comment Status X		
	'Bit reference is provided for la	ne 0, bits for lan	es 1 to 3' is split into	Syntax error.			
two sentences.				SuggestedRemedy			
uggestedRemedy Change 'Bit reference provided for lane 0. B	e is provided for lane 0, bits for Bits for lanes 1 to 3'	lanes 1 to 3' t	to read 'Bit reference is	Replace "O<1>" wi IL16. Proposed Response	th "O.1" per C21. Apply change	to IL7 through IL1	10, and IL12 through
roposed Response	Response Status O			Proposed Response	Response Status O		
				C/ 179 SC 179.1	P 383	L 22	# 717
178B SC 178B.16		L 7	# 131	Dawe, Piers	Nvidia		
ascitto, Marco	Nokia			Comment Type E	Comment Status X		
omment Type E	Comment Status X			The electrical spec	ifications are separate for each	host class - awkw	vard
Include complete title	e of annex. Forgot "optical".			SuggestedRemedy			
uggestedRemedy					I specifications for each host cla	SS	
00							
Replace first sentence conform to Annex 178 training for electrical a	e with, "The supplier of a proto 8B, Inter-sublayer link and optical interfaces, shall cor ormance statement (PICS) prof	nplete the follow		Proposed Response	Response Status O		
Replace first sentence conform to Annex 178 training for electrical a implementation confo	8B, Inter-sublayer link and optical interfaces, shall cor prmance statement (PICS) prof	nplete the follow			Response Status O	L 35	# 718
Replace first sentence conform to Annex 178 training for electrical a implementation confo	8B, Inter-sublayer link and optical interfaces, shall cor	nplete the follow		Proposed Response	Response Status O		# <u>718</u>
Replace first sentence conform to Annex 178 training for electrical a implementation confo coposed Response	8B, Inter-sublayer link and optical interfaces, shall cor prmance statement (PICS) prof <i>Response Status</i> O	nplete the follow		Proposed Response Cl 179 SC 179.1 Dawe, Piers Comment Type ER	Response Status 0 P 384 Nvidia		# [<u>718</u>
Replace first sentence conform to Annex 178 training for electrical a implementation confo roposed Response	8B, Inter-sublayer link and optical interfaces, shall cor prmance statement (PICS) prof <i>Response Status</i> O	nplete the follow orma".	ving protocol	Proposed Response Cl 179 SC 179.1 Dawe, Piers Comment Type ER	Response Status O P384 Nvidia Comment Status X		# <u>718</u>
Replace first sentence conform to Annex 178 training for electrical a implementation confo roposed Response	 8B, Inter-sublayer link and optical interfaces, shall corporance statement (PICS) profection <i>Response Status</i> 0 6.2.2 P815 	nplete the follow orma".	ving protocol	Proposed Response Cl 179 SC 179.1 Dawe, Piers Comment Type ER Tables 1 and 2, an SuggestedRemedy	Response Status O P384 Nvidia Comment Status X d 3 and 4, can be combined	L 35	# [<u>718</u>
Replace first sentence conform to Annex 178 training for electrical a implementation confo roposed Response 178B SC 178B.16 ascitto, Marco comment Type E	 8B, Inter-sublayer link and optical interfaces, shall cor prmance statement (PICS) prof <i>Response Status</i> O 6.2.2 <i>P</i>815 Nokia 	nplete the follow orma".	ving protocol	Proposed Response Cl 179 SC 179.1 Dawe, Piers Comment Type ER Tables 1 and 2, an SuggestedRemedy Combine them into	Response Status O P384 Nvidia Comment Status X d 3 and 4, can be combined	L 35	# <mark>718</mark>
Replace first sentence conform to Annex 178 training for electrical a implementation confo roposed Response / 178B SC 178B.16 lascitto, Marco omment Type E Include complete title	 8B, Inter-sublayer link and optical interfaces, shall cor brmance statement (PICS) prof <i>Response Status</i> O 6.2.2 P815 Nokia <i>Comment Status</i> X 	nplete the follow orma".	ving protocol	Proposed Response Cl 179 SC 179.1 Dawe, Piers Comment Type ER Tables 1 and 2, an SuggestedRemedy	Response Status O P384 Nvidia Comment Status X d 3 and 4, can be combined	L 35	# [<u>718</u>
Replace first sentence conform to Annex 178 training for electrical a implementation confo roposed Response 1 178B SC 178B.16 fascitto, Marco comment Type E Include complete title uggestedRemedy	 8B, Inter-sublayer link and optical interfaces, shall corpormance statement (PICS) prof <i>Response Status</i> O 6.2.2 <i>P</i>815 Nokia <i>Comment Status</i> X e of annex. Forgot "optical". Std 802.3dj-202x, Annex 178B, 	nplete the follow orma". <i>L</i> 36	/ing protocol # 132	Proposed Response Cl 179 SC 179.1 Dawe, Piers Comment Type ER Tables 1 and 2, an SuggestedRemedy Combine them into	Response Status O P384 Nvidia Comment Status X d 3 and 4, can be combined	L 35	# <u>718</u>

C/ 179 SC 179.1

Li, Mike Altera (An Intel compnany) Comment Type T Comment Status X Refer to figure 174A-5. Secondary Status S 1) BERadded is the BER contribution outside of the measured sublayer link. TP is described as the cable assembly iset fixture that feeds the cable assembly test fixture that feeds the cable assembly input. 3) May the measured link have xMII extender outside this sublayer link (its BER budget is thout be be? Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. Secondary to C1-174.4. 4) with Table 174A-2, table 174A-3, xMII extender (if used) is not part of CER < 1.45e-11 agec. Secondary to C1-174.2. 5) Considering all of these, the BERsdded value for CL-179.2 should not be simple 8e-6. Instead, it should be 8e-6 to Xee-6 to Xee-6 to Xee-6 to C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. Proposed Response Response Status 0 Cl 179 SC 179.5 P 388 L41 Fed Sweenson, Norman Nokia, Point2 Sweenson, Norman Nokia, Point2 Comment Type TR Comment Status X TP2 to The output of the TP2 or TP3 test fixture that is fed by thost output. Vint T99	# 646	L 26		P 390		79.8.1	SC 1	C/ 179	# 639		L 46		P 387		79.2	SC	C/ 179
Comment Type T Comment Status X Refer to figure 174A-5, Comment Status X 1) BERAdded is the BER contribution outside of the measured sublayer link. 2.) Measured sublayer link is PCS-to-PCS including PMD and FEC. Both TX-FEC and RX-FEC and RA-based block error measurement). The 1 is described as the cable assembly test fixture that feeds the cable assembly test fixture that is feed by thost output. 3.) May the measured sublayer link betweent the two ends MACs			vint2					-	<i>"</i> 000			Intel c					-
Refer to figure 174A-5, 1.) BERadded is the BER contribution outside of the measured sublayer link. 2.) Measured sublayer link is PCS-to-PCS including PMD and FEC. Both TX-FEC and RX-FEC must be included in the PHY-based measurement. To use FEC decoder, the incoming signal must be encoded (compared with the incoming signal does not need to be encoded to use PMA-based block error measurement). May introduce a sublayer link is PCS-to-PCS including PMD and FEC. Both TX-FEC and RX-FEC must be included in the PHY-based measurement. The included in the PHY-based measurement. To use FEC decoder, the incoming signal must be encoded to use PMA-based block error measurement). May introduce in the PHY-based measurement. To use FEC decoder, the incoming signal must be encoded to use PMA-based block error measurement). May introduce in the PHY-based measurement. To use FEC decoder, the incoming signal does not need to be encoded to use PMA-based block error measurement). May introduce in the PHY-based measurement. To use FEC decoder, the incoming signal does not need to be encoded to use PMA-based block error measurement. Classed the description of TP1 to "The input of the cable assembly test fixture the table assembly input." Suggested/Remedy change the BERsdded value from 8e-6 to 8e-6 "Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. TP3 is described as the host output. I believe it is not the host output. Use link the inst the tost output. Cl 179 SC 179.5 P 388 L 41 # [845] May in the docs measement. Nokia, Point2					Comn	TR					omphany)			Comm	т	Tvpe	
FEC must be included in the PHY-based measurement. Suggested/Remedy 3.) May the measured link have xMII extender outside this sublayer link (its BER budget is not Be-6 according to CL-174A.4). Change the description of TP1 to "The input of the cable assembly test fixture the cable assembly input." 9.) Vint Table 174A-2, table 174A-3, xMII extender (if used) is not part of CER < 1.45e-11 spec.				assembly input. I b	e cable as	ed as the	describ	TP1 i							174A-5, is the BE	to figure	Refer 1.) BE
signal must be encoded (compared with the incoming signal does not need to be encoded to use PMA-based block error measurement). 3.) May the measured link have xMII extender outside this sublayer link (its BER budget is not 8e-6 according to CL-174A.4). 4.) with Table 174A-2, table 174A-3, xMII extender (if used) is not part of CER < 1.45e-11 spec. 5.) Considering all of these, the BERsded value for CL-179.2 should not be simple 8e-6. Instead, it should be 8e-6* Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. SuggestedRemedy change the BERsded value from 8e-6 to 8e-6* Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. Proposed Response Response Status O CI 179 SC 179.5 P388 L41 # 645 Swenson, Norman Nokia, Point2 Comment Type ER Comment Status X The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". Proposed Response Response Status O							IRemed	Suggeste									
3.) May the measured link have xMII extender outside this sublayer link (its BER budget is not 8e-6 according to CL-174A.4). Proposed Response Response Status 0 4.) with Table 174A-2, table 174A-3, xMII extender (if used) is not part of CER < 1.45e-11 spec.	re that feeds	e assembly tes	he cable	to "The input of the	of TP1 to ut."	scription mbly inp	e the de	Chan the ca					d with the incom	d (compar	e encoded	must b	signal
5.) Considering all of these, the BERsdded value for CL-179.2 should not be simple 8e-6. Instead, it should be 8e-6 * Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. C/ 179 SC 179.8.1 P 390 L 28 # E SuggestedRemedy change the BERsdded value from 8e-6 to 8e-6 * Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. Nokia, Point2 Proposed Response Response Status 0 O C/ 179 SC 179.5 P 388 L 41 # 645 Swenson, Norman Nokia, Point2 C/ 179 SC 179.8.1 P 390 L 28 # E Swenson, Norman Nokia, Point2 C/ 179 SC 179.5 P 388 L 41 # 645 Swenson, Norman Nokia, Point2 Comment Type ER Comment Status X The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. Swenson, Norman Nokia, Point2 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". P 390 L 30 # E E Proposed Response Response Status 0 Swenson, Norman Nokia, Point2 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". P 310 described as the host input. I believe it is not the host input. SuggestedRemedy Proposed Response Response Status				oonse Status O	Respo	е	Respon	Proposed		•				L-174A.4	ding to C	e-6 acco	not 8e
Solution of the set of Number of C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. Swenson, Norman Nokia, Point2 SuggestedRemedy change the BERsdded value from 8e-6 to 8e-6 * Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. Swenson, Norman Nokia, Point2 Proposed Response Response Status O SuggestedRemedy Change the description of TP2 to "The output of the TP2 or TP3 test fixture that is fed by thost output. C/ 179 SC 179.5 P 388 L 41 # 645 Swenson, Norman Nokia, Point2 Comment Type ER Comment Status X The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. SuggestedRemedy Ci 179 SC 179.8.1 P 390 L 30 # [6] SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". Proposed Response Response Status O SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". TP3 is described as the host input. SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Swenson, Norman Nokia, Point2 SuggestedRemedy Ci 179 SC 179.8.1 P	# 647	L 28		P 390		79.8.1	SC 1	C/ 179	at ha simple 80 6	uld not	, 1 170 2 shou	for CI	Pedded value f	oco tho F	a oll of th	neidorir	
sublayer link between the two ends MACs. SuggestedRemedy change the BERsdded value from 8e-6 to 8e-6 * Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. Proposed Response Response Status C/ 179 SC 179.5 P 388 L 41 # 645 Swenson, Norman Nokia, Point2 O C/ 179 SC 179.8.1 P 390 L 30 # 645 Swenson, Norman Nokia, Point2 C/ 179 SC 179.8.1 P 390 L 30 # 645 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". C/ 179 SC 179.8.1 P 390 L 30 # 645 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". SuggestedRemedy SuggestedRemedy SuggestedRemedy TP3 is described as the host input. I believe it is not the host input. I believe it is not the host input. Proposed Response Response Status O SuggestedRemedy SuggestedRemedy SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". P 30 L 30 # 645 SuggestedRemedy SuggestedRemedy SuggestedRemedy <t< td=""><td></td><td></td><td>oint2</td><td>Nokia. Poir</td><td></td><td></td><td></td><td>Swenson</td><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			oint2	Nokia. Poir				Swenson									
change the BERsdded value from 8e-6 to 8e-6 * Number_of_C2C_SubLayerLink outside of the measured sublayer link between the two ends MACs. In 12 SubSchool as the host output. The hos				nment Status X	Comn	TR	Туре	Comment					3 MACs.	he two en	etween th	yer link l	sublay
the measured sublayer link between the two ends MACs. Proposed Response Response Status O Cl 179 SC 179.5 P 388 L 41 # 645 Swenson, Norman Nokia, Point2 Proposed Response Response Status O Comment Type ER Comment Status X The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. SuggestedRemedy Swenson, Norman Nokia, Point2 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". Cl 179 SC 179.8.1 P 390 L 30 # [6] Proposed Response Response Status O Swenson, Norman Nokia, Point2 Comment Type ER Comment Status X TP3 is described as the host input. I believe it is not the host input, but rather the TP2 or TP3 test fixture that is feeds the host input. SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". SuggestedRemedy Proposed Response Response Status O SuggestedRemedy	ather the output								avort ink outside of	Suble	or of C2C	Numb	80 6 to 80 6 * N	voluo fron			
Proposed Response Response Status O Cl 179 SC 179.5 P 388 L 41 # 645 Swenson, Norman Nokia, Point2 Proposed Response Response Status O Comment Type ER Comment Status X Proposed Response Response Status O Swenson, Norman Nokia, Point2 C/ 179 SC 179.8.1 P 390 L 30 # 6 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". C/ 179 SC 179.8.1 P 390 L 30 # 6 Proposed Response Response Status O Swenson, Norman Nokia, Point2 Comment Type Ether drop the word "pervasive" or provide a definition of "pervasive management". P 31 is described as the host input. I believe it is not the host input. SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". SuggestedRemedy SuggestedRemedy Proposed Response Response Status O SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Proposed Response Response Status O SuggestedRemedy SuggestedReme			output.	nat is red by thost c	ixture that					JUDLa							
Cl 179 SC 179.5 P 388 L 41 # 645 Swenson, Norman Nokia, Point2 Comment Type ER Comment Status X The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. P 390 L 30 # 645 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". Cl 179 SC 179.8.1 P 390 L 30 # 645 Proposed Response Response Status O Cl 179 SC 179.8.1 P 390 L 30 # 645 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". TP3 is described as the host input. I believe it is not the host input. SuggestedRemedy Proposed Response Response Status O SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Bitter drop the word "pervasive" or provide a definition of "pervasive management". SuggestedRemedy Proposed Response Response Status O SuggestedRemedy	that is fad by	2 or TD2 toot f	the TD	to "The output of th			-						e Status O	Respor	se	Respor	Proposed
Cl 179 SC 179.5 P 388 L 41 # 1645 Swenson, Norman Nokia, Point2 Comment Type ER Comment Status X The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. Cl 179 SC 179.8.1 P 390 L 30 # 1645 SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". Nokia, Point2 Comment Type TR Comment Status X Proposed Response Response Status O SuggestedRemedy TP3 is described as the host input. I believe it is not the host input. SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Swenson, Norman Nokia, Point2 SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Proposed Response Response Status O SuggestedRemedy SuggestedRemedy	That is led by				011721												
Comment Type ER Comment Status X The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. CI 179 SC 179.8.1 P 390 L 30 # E SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". Norman Nokia, Point2 Proposed Response Response Status O SuggestedRemedy TP3 is described as the host input. I believe it is not the host input. SuggestedRemedy SuggestedRemedy SuggestedRemedy SuggestedRemedy Either drop the word "pervasive" or provide a definition of "pervasive management". SuggestedRemedy				oonse Status O	Respo	е	Respon	Proposed	# 645		L 41		P 388		79.5	SC	C/ 179
The term "pervasive management" does not have a plain and ordinary meaning, nor is it defined anywhere in the document. Swenson, Norman Nokia, Point2 SuggestedRemedy TR Comment Status X Either drop the word "pervasive" or provide a definition of "pervasive management". TP3 is described as the host input. I believe it is not the host input. Proposed Response Response Status O SuggestedRemedy												nt2	Nokia, Point		i	Norma	Swenson,
defined anywhere in the document. Interval of the content of the	# 648	L 30		P 390		79.8.1	SC 1	C/ 179					nt Status X	Comm	ER	Туре	Comment
SuggestedRemedy TP3 is described as the host input. I believe it is not the host input, but rather the TP2 or TP3 test fixture that is feeds the host input. Proposed Response Response Status O			oint2	Nokia, Poir			Normar	Swenson	neaning, nor is it	ary mo	ain and ordin	e a pla					
Either drop the word "pervasive" or provide a definition of "pervasive management". TP3 is described as the host input. There is described as the host input. Proposed Response Response Status O													•			,	
	er the input to) host input, bu	s not the t input.	nput. I believe it is i t is feeds the host in	host inp ure that is	ed as the test fixt	describ 2 or TP	TP3 i the T	nagement".	e man	of "pervasiv	nition	r provide a defin	ervasive"			00
							Remed	Suggeste					e Status O	Respor	se	Respon	Proposed
Change the description of TP3 to "The input of the TP2 or TP3 test fixture that f host input."	at feeds the	or TP3 test fix	he TP2	to "The input of the	of TP3 to	scription											
Proposed Response Response Status O				oonse Status O	Respo	е	Respon	Proposed									

C/ 179 SC 179.8.1

CI 179 SC 179.8.	1 P 390	L32	# 649	C/ 179	SC 179.8.9	P 379	L13	# 464
Swenson, Norman	Nokia, Point2			Slavick, J	eff	Broadcom		
Comment Type TR	Comment Status X			Comment	Type TR	Comment Status X		
	the cable assembly output. I be			Move	Table 179-8 and	I here. It's relevent only to the	ILT function.	
output, but rather the assembly output.	e output of the cable assembly to	est fixture that is	s fed by the cable	Suggestee	dRemedy			
SuggestedRemedy				Move	Table 179-8 to t	he end of 179.8.9 and delete 1	179.9.4.1.3	
,	tion of TP4 to "The output of the oby output."	cable assembly	test fixture that is fed	Proposed	Response	Response Status O		
Proposed Response	Response Status O			C/ 179	SC 179.8.9	P 393	L6	# 192
				Huber, Th	iomas	Nokia		
CI 179 SC 179.8.	1 P 390	L 37	# 650	Comment	Туре Т	Comment Status X		
Swenson, Norman	Nokia, Point2					DATA mode" is intended to m ning for 1000BASE-T PHYs th		,
TP0d and TP5d", or SuggestedRemedy	en TP0d to TP5d" is grammatica it should be "from TP0d to TP5d			state PATH	per figure 178B- I_UP state.	the value 'data', which is asso 3. As such, it would be more c		
Change to "betweer	TP0d and TP5d"			Suggestee				
Proposed Response	Response Status O				ge "coordinate th I_UP state (see I	e transition to DATA mode." to Figure 178B-8)."	o "coordinate the	e transition to the
				Proposed	Response	Response Status O		
C/ 179 SC 179.8.	2 P 391	L 31	# 191					
Huber, Thomas	Nokia			C/ 179	SC 179.9	P 393	L19	# 719
Comment Type T	Comment Status X			Dawe, Pie	ers	Nvidia		
term has specific me (see 1.4.278) Annex	t "DATA mode" is intended to me eaning for 1000BASE-T PHYs th (178B.5 indicates that in the cor	at differs from vitext of ILT, "dat	what is intended here a mode" means the	Comment		Comment Status X teristics		
	is the value 'data', which is asso B-8. As such, it would be more c			Suggestee PMD	dRemedy electrical specific	cations		
SuggestedRemedy				Proposed	Response	Response Status 0		
Change "When ope (see Figure 178B-8)	rating in DATA mode, …" to "Wh ,…"	en operating in	the PATH_UP state					

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general	C/ 179
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	SC 179.9
SORT ORDER: Clause, Subclause, page, line	

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C/ 179 SC 179.9	0.3 P 393	L 40	# 612	C/ 179	SC 179.9.4	P 394	L13	# 446
Palkert, Thomas	Samtec, Mac	om		Ran, Adee		Cisco System	IS	
Comment Type TR	Comment Status X			Comment	Type TR	Comment Status X		
All impedance valu	es should be 92.5 ohms					C common-mode voltage is s		
SuggestedRemedy						, it is specified as a range (0.2 2, and Table 176D–4.	2 to 1 V). See Ta	able 178–6, Table
Change reference	impedance to 92.5 ohms			1700-				
Proposed Response	Response Status O			which	could cause larg	nit would allow extremely low ge in-rush current through the s should be avoided.		
C/ 179 SC 179.9	0.3 P393	L 40	# 64	The sp	ecifications for	CR hosts should be aligned w	ith those of C2N	1 hosts.
Mellitz, Richard	Samtec			Suggested	Remedy			
Comment Type TR	Comment Status X			Chang	e the DC comm	on-mode voltage specificatior	n to a range, 0.2	to 1 V.
The reference impe	edance for measurement should	align with the tes	st fixture reference.	Proposed I	Response	Response Status 0		
SuggestedRemedy								
Change line to:				C/ 179	SC 179.9.4	P 394	L18	# 619
	edance for differential specification mon-mode specifications is 23.1		. The reference	Palkert, Th		Samtec, Mac Comment Status X	om	
Proposed Response	Response Status O			Comment T Improv	e ERL specifica			
				Suggested	Remedy			
C/ 179 SC 179.9	.4 P 393	L 43	# 734	Preser	tation to be pro	vided		
Dawe, Piers	Nvidia			Proposed I	Response	Response Status 0		
Comment Type TR Transmitter charac	Comment Status X teristics							
SuggestedRemedy Transmitter specific	cations							
Proposed Response	Response Status O							

CI 179 SC 179.9.4	P 394	L 22	# 668	C/ 179 SC 1	79.9.4	P 394	L 37	# 736
Ran, Adee	Cisco System	s		Dawe, Piers		Nvidia		
Comment Type TR	Comment Status X			Comment Type	TR Con	nment Status X		
0.5 volt would reduce generations the v_f li values at the upper h	t #263 against D1.4, limiting the the effective channel reach tha mit was 0.6 V (1.2 Vpp), and in alf of this range (output swings operate over longer cables and	at devices can o current 802.3ck above 1 Vpp) a	perate on. In previous compliant systems, re commonly used to	where the com SuggestedRemedy	npliance board is / DR, or delete an	properly defined and		and not justified for CR ts deviation is allowed
and the correspondin corresponding COM	sted changing the transmitter s g receiver amplitude tolerance, parameter (A_ne). In	but without cha	nging the	· ·				
	org/3/dj/public/25_03/ran_3dj_0 r CR) and "Change D" (also for		as referred to as		79.9.4	P 394	L 46	# 370
Change C (apply to	TORY and Change D (also for			Ghiasi, Ali		Ghiasi Qunat	um/Marvell	
	nce to apply change D, as recor 03_approved, page 17).	ded in straw pol	ls #TF-7 and #TF-8	Comment Type Reference to h	TR Con nost classes mis	nment Status X sing		
1. Change Tx maxim	are suggested for CR and KR um v_f to 0.6 V as proposed. A	(no change in C pply in Tx and F	2C and C2M): Ix specifications (no	SuggestedRemedy Please referen	/ ice table 179A-1			
change in COM A_ne 2. Change as in optic 3. Add a footnote in t	e). on 1 and addiitonally change A_ he transmitter specifications tal	ne accordingly bles (179.9.4 an	(increase by 20%). d 178.9.2) to allow	Proposed Respons	se Resp	onse Status O		
	operate above the specified v_ 6 (operating without AC-couplin			C/ 179 SC 1	79.9.4.1.1	P 395	L 47	# 651
	igh swing" mode. In a device th			Swenson, Norman	I	Nokia, Point2	2	
	Vhen it is enabled the transmitt sponsibilty of the system integra		0.5 to 0.6. Enabling this	Comment Type	ER Con	nment Status X		
SuggestedRemedy							not well defined,	as no list of required
Implement any of the	four options listed in the comm	ient. As a startir	ng point, option A is	-	has been mentio	oned.		
suggested.				SuggestedRemedy Clarify	/			
Proposed Response	Response Status O			,				
				Proposed Respons	se Resp	onse Status O		
C/ 179 SC 179.9.4	P 394	L 25	# 735					
Dawe, Piers	Nvidia							
Comment Type TR Bad names HL HN H Which loss?	Comment Status X H because H and L are ambigu	ious: loss or per	formance or length?					
SuggestedRemedy Change to A B C, wit	h A for best							
6								
Proposed Response	Response Status O							
	red ER/editorial required GR/					C/ 17		Page 99 of 149

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 179 SC 179.9.4.1.1 Page 99 of 149 6/16/2025 2:13:38 PM

nson, Norman Nokia, Point2		526
	Dudek, Mike Marvell	
ment Type ER Comment Status X	Comment Type T Comment Status X	
Compute the linear fit pulse response" using what setting for the equalizer? This is not lear.	The method used to determine transmitter linearity (reference to 120D.3.1.2) us measured waveform. It is unlikely to work with all the different initial conditions	
restedRemedy	high loss hosts, due to the amount of ISI that is likely to be present.	
Clarify	SuggestedRemedy	
osed Response Response Status O	Add after 120D.3.1.2 "except that the fitted waveform as defined in 120D.3.1.3 place of the measured waveform"	s is used in
	Proposed Response Response Status O	
79 SC 179.9.4.1.3 P397 L22 # 666		
Adee Cisco Systems	C/ 179 SC 179.9.4.5 P399 L1 #	737
ment Type TR Comment Status X	Dawe, Piers Nvidia	
As noted in comment #263 against D1.4, the different initialize value for CR vs. AUI-C2M	Comment Type TR Comment Status X	
reates an unnecessary burden for implementations. Firmware will need to have different		
, ,	Dittoronce clanal to noise and distortion ratio dSNLDD too areano and not justit	
nodes, and training/adaptation algorithms will need to account for the different starting	Difference signal-to-noise-and-distortion ratio, dSNDR too arcane and not justif	
point. This will likely create confusion and interoperability issues that overshadow any	where the compliance board is properly defined and adjustment for its deviation	
point. This will likely create confusion and interoperabilty issues that overshadow any potential benefit.	where the compliance board is properly defined and adjustment for its deviation	
point. This will likely create confusion and interoperability issues that overshadow any	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy	
point. This will likely create confusion and interoperability issues that overshadow any potential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use preset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ	
point. This will likely create confusion and interoperabilty issues that overshadow any potential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use preset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3).	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ	n is allowe
point. This will likely create confusion and interoperability issues that overshadow any potential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use preset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8 see minutes_3dj_2503_approved, page 17).	where the compliance board is properly defined and adjustment for its deviation <i>SuggestedRemedy</i> Change to SNDR, or delete and use EECQ <i>Proposed Response</i> Response Status O	n is allowe
point. This will likely create confusion and interoperability issues that overshadow any potential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use poreset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8 see minutes_3dj_2503_approved, page 17). Note that KR was not mentioned in "Change A" but it is assumed that the initialize value would be the same in KR and CR. Thus the intent is that this change would apply to KR as	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ Proposed Response Response Status O Cl 179 SC 179.9.4.5.1 P400 L4 # [7] Dawe, Piers Nvidia	n is allowe
point. This will likely create confusion and interoperability issues that overshadow any botential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use preset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8 see minutes_3dj_2503_approved, page 17). Note that KR was not mentioned in "Change A" but it is assumed that the initialize value would be the same in KR and CR. Thus the intent is that this change would apply to KR as well.	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ Proposed Response Response Status O CI 179 SC 179.9.4.5.1 P400 L4 # [2] Dawe, Piers Nvidia Comment Type T Comment Status X	n is allowe
point. This will likely create confusion and interoperability issues that overshadow any potential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use poreset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8 see minutes_3dj_2503_approved, page 17). Note that KR was not mentioned in "Change A" but it is assumed that the initialize value would be the same in KR and CR. Thus the intent is that this change would apply to KR as	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ Proposed Response Response Status O Cl 179 SC 179.9.4.5.1 P400 L4 # [Dawe, Piers Nvidia Comment Type T Comment Status X Downsampling for P_Signal in SNDR seems fussy and unecessary	n is allowe
point. This will likely create confusion and interoperability issues that overshadow any botential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use preset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8 see minutes_3dj_2503_approved, page 17). Note that KR was not mentioned in "Change A" but it is assumed that the initialize value would be the same in KR and CR. Thus the intent is that this change would apply to KR as well.	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ Proposed Response Response Status O Cl 179 SC 179.9.4.5.1 P400 L4 # [Dawe, Piers Nvidia Comment Type T Comment Status X Downsampling for P_Signal in SNDR seems fussy and unecessary SuggestedRemedy	n is allowe
point. This will likely create confusion and interoperability issues that overshadow any potential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use preset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8 see minutes_3dj_2503_approved, page 17). Note that KR was not mentioned in "Change A" but it is assumed that the initialize value would be the same in KR and CR. Thus the intent is that this change would apply to KR as well. InterstedRemedy	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ Proposed Response Response Status O Cl 179 SC 179.9.4.5.1 P400 L4 # [Dawe, Piers Nvidia Comment Type T Comment Status X Downsampling for P_Signal in SNDR seems fussy and unecessary	n is allowe
point. This will likely create confusion and interoperability issues that overshadow any potential benefit. In https://www.ieee802.org/3/dj/public/25_03/ran_3dj_03_2503.pdf it was proposed to use preset 6 as the "initialize" setting for CR. This was referred to as "Change A" (slide 3). There was consensus to apply this change, as recorded in straw polls #TF-7 and #TF-8 see minutes_3dj_2503_approved, page 17). Note that KR was not mentioned in "Change A" but it is assumed that the initialize value vould be the same in KR and CR. Thus the intent is that this change would apply to KR as vell. <i>TestedRemedy</i> mplement change A as shown on slide 3 in ran_3dj_03_2503, with editorial license.	where the compliance board is properly defined and adjustment for its deviation SuggestedRemedy Change to SNDR, or delete and use EECQ Proposed Response Response Status O Cl 179 SC 179.9.4.5.1 P400 L4 # [Dawe, Piers Nvidia Comment Type T Comment Status X Downsampling for P_Signal in SNDR seems fussy and unecessary SuggestedRemedy	n is allowe

C/ 179 SC 179.9.4.5.1

Cl 179 SC 179.9.4.5.3 P 400 L 30 # 481 Healey, Adam Broadcom, Inc. Broadcom, Inc. Broadcom, Inc.	C/ 179 SC 179.9.4.6.1 P402 L1 # 738 Dawe, Piers Nvidia
Comment Type T Comment Status X	Comment Type ER Comment Status X
It has been demonstrated that the reference SNDR is a weak function of the test fixture s- parameters. This suggests that the SNDR test can be greatly simplified by specifying a fixed set of reference values that are a function of the preset. The reference values should be derived from the equivalent SNDR produced by the COM transmitter model under similar conditions.	The standard should be written in English. The three-pronged magnet is pretentious, unfamiliar and unnecessary. SuggestedRemedy Change to: For each transition I in the set A:
SuggestedRemedy	Proposed Response Response Status O
Replace the dSNDR procedure with a comparison of the measured SNDR to a limit that is a function of the preset. Set the limits to the SNDR^(ref) values on slide 5 of https://www.ieee802.org/3/dj/public/24_11/healey_3dj_01_2411.pdf > for presets 1 to 5. Set the limit to 31 dB for preset 6. Add a note that the limits are consistent with parameter values in the corresponding COM table. If desired, the subclause defining reference SNDR can be retained as documentation of the procedure used to define the limits. Proposed Response Response Status O	Cl 179 SC 179.9.4.6.2 P 402 L 18 # 739 Dawe, Piers Nvidia Comment Type TR Comment Status X J4u03 can't be measured for CR because of the losses in the host SuggestedRemedy
C/ 179 SC 179.9.4.6 P401 L28 # 741	Delete, combine with other impairments into EECQ
Dawe, Piers Nvidia	Proposed Response Response Status O
Comment Type TR Comment Status X	
Dud jitter method. Turning off aggressor lanes is desperate	C/ 179 SC 179.9.4.6.3 P402 L43 # 742
SuggestedRemedy Don't attempt to isolate jitter Proposed Response Response Status O	Dawe, Piers Nvidia <i>Comment Type</i> TR <i>Comment Status</i> X EOJ03 should be included in SNDR or EECQ. It's not clear that we need a separate spec for it
C/ 179 SC 179.9.4.6 P 401 L 36 # <u>527</u> Dudek, Mike Marvell	 SuggestedRemedy Ensure that SNDR or EECQ include it (by telling the scope that the pattern is twice as long as it is), and delete
Comment Type E Comment Status X Poor wording. Obviously the transmitter output of the lane under test shouldn't be disabled but it would be better to be more precise.	Proposed Response Response Status O
SuggestedRemedy	
Change "transmitter output is" to transmitter outputs of the lanes not under test are"	
Proposed Response Response Status O	

C/ 179 SC 179.9.4.6.3

C/ 179 SC 179.9.4	.7 P403	L 2	# 597	C/ 179 SC 179.	9.4.7	P 403	L19	# 371
Kocsis, Sam	Amphenol			Ghiasi, Ali		Ghiasi Qunatu	um/Marvell	
Comment Type TR	Comment Status X			Comment Type TR	Comment	Status X		
	itter at TP2 is defined without a			Not clear why Nbx	is zero			
	e is inferred from 179.9.3, 100-o s not consistent throughout D2		a 100-ohm reference	SuggestedRemedy				
SuggestedRemedy		10.		Suggest to make	Nbx=15 which num	ber of fixed FFE	E taps	
,	2.5-ohm reference impedance f	or the ERL comp	putation, consistent with	Proposed Response	Response S	Status O		
Proposed Response	Response Status 0			C/ 179 SC 179.	9.4.7	P 403	L 23	# 60
				Mellitz, Richard		Samtec		
C/ 179 SC 179.9.4	.7 P403	L 5	# 743	Comment Type TR	Comment	Status X		
Dawe, Piers	Nvidia			ERL impedance s	hould be aligned to	Rd and 179B.		
Comment Type TR	Comment Status X			SuggestedRemedy				
51	Comment Status X continuity - ambiguous and not c	defined.		Add line:				
mating interface disc		defined.		Add line: The reference diff	erential impedance	for the test fixtu	ure ERL compute	ation shall be 92.5
mating interface disc	continuity - ambiguous and not o	defined.		Add line: The reference difference differenc			ure ERL compute	ation shall be 92.5
mating interface disc SuggestedRemedy Clarify what this mea	continuity - ambiguous and not o	defined.		Add line: The reference diff	erential impedance Response S		ure ERL computa	ation shall be 92.5
mating interface disc SuggestedRemedy Clarify what this mea Proposed Response	nns Response Status O		# [222]	Add line: The reference difference differenc	Response S		ure ERL computa	ation shall be 92.5 # <u>363</u>
mating interface disc SuggestedRemedy Clarify what this mea Proposed Response	nns Response Status O	L13	# 620	Add line: The reference difference ohms. Proposed Response	Response S	Status O	L 35	
mating interface disc SuggestedRemedy Clarify what this mea Proposed Response Cl 179 SC 179.9.4 Palkert, Thomas	continuity - ambiguous and not of ans <i>Response Status</i> O 1.7 <i>P</i> 403 Samtec, Mac	L13	# 620	Add line: The reference diff ohms. Proposed Response Cl 179 SC 179.	Response S	Status O P 403 Ghiasi Qunatu	L 35	
mating interface disc SuggestedRemedy Clarify what this mea Proposed Response Cl 179 SC 179.9.4 Palkert, Thomas Comment Type T R	nns Response Status O	L 13 om		Add line: The reference diffore ohms. Proposed Response Cl 179 SC 179. Ghiasi, Ali Comment Type TR 802.3ck common	Response S	Status O P 403 Ghiasi Qunatu Status X	L 35 um/Marvell	
mating interface disc SuggestedRemedy Clarify what this mea Proposed Response Cl 179 SC 179.9.4 Palkert, Thomas Comment Type TR The CR specification	Ans Response Status O .7 P403 Samtec, Mac Comment Status X	L 13 om		Add line: The reference diff ohms. Proposed Response Cl 179 SC 179. Ghiasi, Ali Comment Type TR 802.3ck common SuggestedRemedy	Response S 9.4.8 Comment mode return loss fr	Status O P 403 Ghiasi Qunatu Status X equency was uj	L 35 um/Marvell	
mating interface disc SuggestedRemedy Clarify what this mea Proposed Response Cl 179 SC 179.9.4 Palkert, Thomas Comment Type TR The CR specification SuggestedRemedy	Ans Response Status O .7 P403 Samtec, Mac Comment Status X	L13 om ace for transmitte		Add line: The reference diff ohms. Proposed Response Cl 179 SC 179. Ghiasi, Ali Comment Type TR 802.3ck common SuggestedRemedy	Response S 9.4.8 Comment	Status O P 403 Ghiasi Qunatu Status X requency was up to 67 GHz.	L 35 um/Marvell	

C/ 179 SC 179.9.4.8

179 SC 179.9.4.9	P 404	L 35	# 364	C/ 179	SC 179.9.5.3	P 40 6	6 L 26	# 623
hiasi, Ali	Ghiasi Qunat	um/Marvell		Palkert, Tl	homas	Samteo	c, Macom	
omment Type TR	Comment Status X			Comment	Type TR	Comment Status	(
802.3ck common mode to	o differential return loss fre	equency was up to	o 50 GHz	The C	R specification sh	ould use 92.5 ohm im	pedance for interfere	nce tolerance paramete
uggestedRemedy				Suggested	lRemedy			
We should at least extend	d the RLdc to 67 GHz.			add lir	ne in Table 179-1	I to specify 92.5 ohm i	mpedance	
roposed Response	Response Status O			Proposed	Response	Response Status)	
179 SC 179.9.5.2	P 406	L10	# 667	C/ 179	SC 179.9.5.3	P 406	6 L 26	# 534
an, Adee	Cisco System	าร		Dudek, Mi	ke	Marvell		
omment Type TR	Comment Status X			Comment	Type TR	Comment Status	(
	3 against D1.4, the amplit			It shou	uld be explicit that	t the test pattern for Ir	terference tolerance	for CR can be precode
	ing identical to the output of ital Tx equalization (which			Suggested	Remedy			
	at the tolerance is defined					31Q in table 179-11. would select using th		ith precoding enabled
readers. SImilar commen	adding an informative NO [*] ts exist in Amplitude tolera			Proposed	Response	Response Status	D	
				Proposed	Response SC 179.9.5.3	Response Status (# 744
readers. SImilar commen C2M. In https://www.ieee802.or		ince subclauses of	of AUIs, both C2C and	·	SC 179.9.5.3	·		
readers. SImilar commen C2M.	ts exist in Amplitude tolera	ince subclauses of	of AUIs, both C2C and	C/ 179	SC 179.9.5.3	P406	5 L 3 9	
readers. SImilar commen C2M. In https://www.ieee802.or "Change B" (slide 3).	ts exist in Amplitude tolera g/3/dj/public/25_03/ran_3c apply this change, as reco	nce subclauses (dj_03_2503.pdf it	of AUIs, both C2C and was referred to as	Cl 179 Dawe, Pie <i>Comment</i> See 1	SC 179.9.5.3 rs Type ER	, P 406 Nvidia	5 <i>L</i> 39	# [744
readers. SImilar commen C2M. In https://www.ieee802.or "Change B" (slide 3). There was consensus to a (see minutes_3dj_2503_a	ts exist in Amplitude tolera g/3/dj/public/25_03/ran_3c apply this change, as reco approved, page 17).	nce subclauses o dj_03_2503.pdf it rded in straw poll	of AUIs, both C2C and was referred to as	Cl 179 Dawe, Pie <i>Comment</i> See 1	SC 179.9.5.3 rs <i>Type</i> ER 79.2 for definition d in 174A.8."	P 400 Nvidia Comment Status	5 <i>L</i> 39	# [744
readers. SImilar commen C2M. In https://www.ieee802.or "Change B" (slide 3). There was consensus to a (see minutes_3dj_2503_a SImilar notes should be u	ts exist in Amplitude tolera g/3/dj/public/25_03/ran_3c apply this change, as reco	nce subclauses o dj_03_2503.pdf it rded in straw poll	of AUIs, both C2C and was referred to as	Cl 179 Dawe, Pie Comment See 1 define Suggested	SC 179.9.5.3 rrs Type ER 79.2 for definition d in 174A.8." IRemedy	P 400 Nvidia Comment Status	5 <i>L</i> 39 (ot. 179.9.5.3.5 says	# 744
readers. SImilar commen C2M. In https://www.ieee802.or "Change B" (slide 3). There was consensus to a (see minutes_3dj_2503_a SImilar notes should be u uggestedRemedy	ts exist in Amplitude tolera g/3/dj/public/25_03/ran_3c apply this change, as reco approved, page 17). Ise for all instances of amp	ince subclauses o dj_03_2503.pdf it rded in straw poll plitude tolerance.	of AUIs, both C2C and was referred to as Is #TF-7 and #TF-8	Cl 179 Dawe, Pie Comment See 1 define Suggested	SC 179.9.5.3 rs Type ER 79.2 for definition d in 174A.8." IRemedy ge "See 179.2 for	P 406 Nvidia Comment Status of block error ratio - n	<i>L</i> 39 t ot. 179.9.5.3.5 says r ratio." to "See 179.2	# <u>744</u> "Block error ratio is
readers. SImilar commen C2M. In https://www.ieee802.or "Change B" (slide 3). There was consensus to a (see minutes_3dj_2503_a SImilar notes should be u uggestedRemedy Implement change B as s	ts exist in Amplitude tolera g/3/dj/public/25_03/ran_3c apply this change, as reco approved, page 17). Ise for all instances of amp shown on slide 3 in ran_3dj	ince subclauses o dj_03_2503.pdf it rded in straw poll plitude tolerance.	of AUIs, both C2C and was referred to as Is #TF-7 and #TF-8	Cl 179 Dawe, Pie Comment See 1 define Suggested Chang	SC 179.9.5.3 rs Type ER 79.2 for definition d in 174A.8." IRemedy ge "See 179.2 for	P 406 Nvidia Comment Status of block error ratio - n definition of block erro	<i>L</i> 39 t ot. 179.9.5.3.5 says r ratio." to "See 179.2	# <u>744</u> "Block error ratio is
readers. SImilar commen C2M. In https://www.ieee802.or "Change B" (slide 3). There was consensus to a (see minutes_3dj_2503_a SImilar notes should be u uggestedRemedy Implement change B as s	ts exist in Amplitude tolera g/3/dj/public/25_03/ran_3c apply this change, as reco approved, page 17). Ise for all instances of amp	ince subclauses o dj_03_2503.pdf it rded in straw poll plitude tolerance.	of AUIs, both C2C and was referred to as Is #TF-7 and #TF-8	Cl 179 Dawe, Pie Comment See 1 define Suggested Chang	SC 179.9.5.3 rs Type ER 79.2 for definition d in 174A.8." IRemedy ge "See 179.2 for	P 406 Nvidia Comment Status of block error ratio - n definition of block erro	<i>L</i> 39 t ot. 179.9.5.3.5 says r ratio." to "See 179.2	# <u>744</u> "Block error ratio is
readers. SImilar commen C2M. In https://www.ieee802.or "Change B" (slide 3). There was consensus to a (see minutes_3dj_2503_a SImilar notes should be u uggestedRemedy Implement change B as s	ts exist in Amplitude tolera g/3/dj/public/25_03/ran_3c apply this change, as reco approved, page 17). Ise for all instances of amp shown on slide 3 in ran_3dj	ince subclauses o dj_03_2503.pdf it rded in straw poll plitude tolerance.	of AUIs, both C2C and was referred to as Is #TF-7 and #TF-8	Cl 179 Dawe, Pie Comment See 1 define Suggested Chang	SC 179.9.5.3 rs Type ER 79.2 for definition d in 174A.8." IRemedy ge "See 179.2 for	P 406 Nvidia Comment Status of block error ratio - n definition of block erro	<i>L</i> 39 (ot. 179.9.5.3.5 says r ratio." to "See 179.2	# 744

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 179 SC 179.9.5.3

C/ 179 SC	C 179.9.5.3.3	P 407	L11	# 501	C/ 179	SC 1	79.9.5.4.2	P 4	0	L3	# 497
Dudek, Mike		Marvell			Dudek, Mi	ike		Marve	ell		
Comment Type	T Comme	nt Status X			Comment	Туре	TR	Comment Status	Х		
host channe	annel as defined in 17 and package separa at this is called in Tabl	tely could lead to			Not st receiv		he jitter tol	erance signal with	noise in	addition to the j	itter under-stresses
SuggestedRem		le 179-10.			Suggested	,					
Change "us "using the re C2M on pag	ing the receiver host cleceiver partial host cha ge 757 line 34.	annel, package, a			excep jitter w jitter a	tion that vith the s mplitude	no noise is pecified fre is adjuste	equency and amplit	g in 179 ude is a <-to-pea	9.9.5.3.3 is not p pplied to the pa k jitter specified	berformed). Instead, ttern generator and the for that frequency in
Proposed Resp	onse Respons	e Status O			calcula the va	ated per		3 with the jitter-stre			shall not be lower than
C/ 179 SC	C 179.9.5.3.4	P 408	L16	# 745	to "The ji	itter toler	ance test	procedure is similar	to that	of 179.9.5.3, wit	th the exception that
Dawe, Piers		Nvidia									ttern generator and the
Comment Type	TR Comme	nt Status X						est reference (see l			l for that frequency in the transformed to the terminal to the terminal to the terminal terminal terminal termi
	p-peak voltage is define			ee sequence": this isn't ar in 178.9.3.4.1,	calcula	ated per	179.9.5.3.		ssed tra	insmitter output	and the broadband
SuggestedRem					Make	the equiv	valent cha	nge for C2M in sect	ion 176	D.8.13.2 on pag	e 759
00	en measured on an alte	ernating zero-three	e sequence", refe	er to 176D.8.1.	Proposed	Respons	se	Response Status	0		
Proposed Resp	onse Respons	e Status O									
					C/ 179	SC 1	79.9.5.5	P 4	0	L 29	# 598
					Kocsis, Sa	am		Amph	enol		
					Comment	Туре	TR	Comment Status	Х		
					refere	nce impe	edance is i	TP3 is defined with nferred from 179.9. t consistent through	3, 100-c	hm. The use of	nce. The implied a 100-ohm reference

SuggestedRemedy

Add definition of a 92.5-ohm reference impedance for the ERL computation, consistent with Annex179B.

Proposed Response Response Status **0**

C/ 179 SC 179.9.5.5

	SC 179.9.5.6	P 410	L 44	# 368	C/ 179 SC 179	9.11	P 412	L 29	# 138
Ghiasi, Ali		Ghiasi Qunatur	m/Marvell		Noujeim, Leesa	G	oogle		
Comment T	Type TR	Comment Status X			Comment Type T	R Comment Sta	tus X		
		loss is common mode to diffe	erential, but for s	some reason in clause	Ilddmin is unreas	sonably high.			
	tead RLcd is def	Ined			SuggestedRemedy				
SuggestedF	-	· · · · · · · · · · · · · · · · · · ·			Change 16dB to	13dB			
0	,	common mode to differential)			Proposed Response	Response Stat	tus O		
Proposed R	Response	Response Status O							
C/ 179	SC 179.9.5.6	P 410	L 47	# 260	C/ 179 SC 179	9.11	P 412	L 38	# 50
	30 179.9.3.0	-		# 369	Mellitz, Richard	S	amtec		
Ghiasi, Ali		Ghiasi Qunatur	m/iviarveli		Comment Type T	R Comment Sta	tus X		
Comment T	51	Comment Status X		50 CH7		r skew has not been co			
		to differential return loss frequ	uency was up to	0 00 GHZ		ncluded in s-parameters as not been specified. (
SuggestedF					imbalance intero				
		nd the RLdc to 67 GHz.			SuggestedRemedy				
Proposed R	Response	Response Status 0			add line to Table	179–13—Cable assem	bly character	istics summary	,
					8	o common mode ratio (SCMR_CH) r	nin 20 dB	
C/ 179	SC 179.10.1	P 415	L 45	# 380		ed on slides 12 and 14 802.org/3/dj/public/adho	c/electrical/2	3 1207/mellitz	3dj elec 01 231207
Ghiasi, Ali		Ghiasi Qunatur	m/Marvell		df	0 /1		_	_ ,
Comment T	Type ER	Comment Status X				k^2 with sigma_tn^2 fro 10*log10(sigma_ts^2 /			=1 (no IXFFE)
	51	(1) or Ls(1) the "(1)" seems lik	e is superscript	t	Proposed Response		,	/	
All Sym.					T Toposed Response	Response Star	us U		
-	Remedy								
SuggestedF	R <i>emedy</i> make it inline								<u> </u>
SuggestedF Please	make it inline	Response Status O			C/ 179 SC 179	9.11.1	P 412	L 47	# 613
SuggestedF Please	make it inline	Response Status O			C/ 179 SC 179 Palkert, Thomas		P 412 amtec, Maco		# 613
SuggestedF Please	make it inline				Palkert, Thomas Comment Type T	S R Comment Sta	amtec, Maco <i>tus</i> X		# 613
SuggestedF Please Proposed R	make it inline	Response Status 0 P412	L 23	# 621	Palkert, Thomas Comment Type T	S	amtec, Maco <i>tus</i> X		# 613
SuggestedF Please Proposed R Cl 179	make it inline Response SC 179.11			# 621	Palkert, Thomas Comment Type T	S R Comment Sta	amtec, Maco <i>tus</i> X		# <u>613</u>
SuggestedR Please Proposed R Cl 179 Palkert, Tho Comment T	make it inline Response SC 179.11 omas Type TR	P 412 Samtec, Macor Comment Status X	m		Palkert, Thomas Comment Type T All impedance va SuggestedRemedy	S R Comment Sta	amtec, Macon <i>tus</i> X ms		# <u>613</u>
SuggestedR Please Proposed R Cl 179 Palkert, Tho Comment T	make it inline Response SC 179.11 omas Type TR	P 412 Samtec, Macor	m		Palkert, Thomas Comment Type T All impedance va SuggestedRemedy	S R Comment Sta alues should be 92.5 of the impedance to 92.5 of	amtec, Macon tus X ms		# <u>613</u>
SuggestedF Please Proposed R Cl 179 Palkert, Tho Comment T, The CR	make it inline Response SC 179.11 omas Type TR R specification sh	P 412 Samtec, Macor Comment Status X	m		Palkert, Thomas Comment Type T All impedance va SuggestedRemedy Change referenc	S R Comment Sta alues should be 92.5 oh e impedance to 92.5 oh	amtec, Macon tus X ms		# <u>613</u>
SuggestedR Please P Proposed R C/ 179 Palkert, The Comment T The CR SuggestedR	make it inline Response SC 179.11 omas Type TR R specification sh Remedy	P 412 Samtec, Macor Comment Status X	m e for cable asse		Palkert, Thomas Comment Type T All impedance va SuggestedRemedy Change referenc	S R Comment Sta alues should be 92.5 oh e impedance to 92.5 oh	amtec, Macon tus X ms		# <u>613</u>

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

Cl	179
SC	179.11.1

C/ 179 SC 179.11.1	P 412	L 47	# 65	C/ 179 SC 17	79.11.3	P 413	L 6	# 653
Mellitz, Richard	Samtec			Swenson, Norman		Nokia, Point2		
Comment Type TR Co	mment Status X			Comment Type	TR	Comment Status X		
The reference impedance for	measurement should	align with the tes	t fixture reference.	93A.5 does not	t specify h	ow to terminate the far end o	of the cable wh	nen measuring ERL.
SuggestedRemedy				SuggestedRemedy	,			
Change line to:						nce and a termination imped	dance for the E	RL measurement.
The reference impedance for impedance for			. The reference	Proposed Response	e	Response Status O		
Proposed Response Res	sponse Status O			C/ 179 SC 17	79.11.3	P 413	L 6	# 599
				Kocsis, Sam		Amphenol		
7 179 SC 179.11.2	P 412	L 29	# 529	Comment Type	TR	Comment Status X		
Judek, Mike	Marvell					mbly at TP1 and TP4 is defi		
comment Type T Co	mment Status X					pedance is inferred from 179 te for ERL is not consistent t		
For CA-A the maximum loss				SuggestedRemedy				0.
range for guardbanding for m	easurement accuracy	and manufacturi	na tolerance	Suggesteurkenteuy				
lange ier gaarabanang ier n			ig tolerande.	Add definition a	of a 02 5 c	hm reference impedance fo	r the EPL com	putation consistent w
uggestedRemedy				Add definition o Annex179B.	of a 92.5-c	ohm reference impedance fo	r the ERL com	putation, consistent w
CuggestedRemedy Consider changing the cable reduction in the Test 1 test ch Table 179-11 from 15.5 Min a	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m	cable types) to 15 and Cable assen nin and 15.5 max	5dB with a consequent mbly insertion losses in . Also modifying			ohm reference impedance fo Response Status O	r the ERL com	putation, consistent wi
SuggestedRemedy Consider changing the cable reduction in the Test 1 test ch Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m vith 15 for ILddCA,min a footnotes from 13dB to	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 12dB for the min	5dB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss	Annex179B. Proposed Respons		·	r the ERL com	putation, consistent wi
uggestedRemedy Consider changing the cable reduction in the Test 1 test ch Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TP0d to TP5d and 15 in	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m rith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the fir	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 12dB for the min	5dB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss	Annex179B. Proposed Respons	e	Response Status O		
Consider changing the cable reduction in the Test 1 test of Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TP0d to TP5d and 15 in 4.1 in the second equation fo	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m rith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the fire otnote.	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 12dB for the min	5dB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss	Annex179B. Proposed Respons Cl 179 SC 17 Noujeim, Leesa	e	Response Status 0 P413		
Consider changing the cable reduction in the Test 1 test of Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TP0d to TP5d and 15 in 4.1 in the second equation fo	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m rith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the fir	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 12dB for the min	5dB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss	Annex179B. Proposed Response Cl 179 SC 1 7 Noujeim, Leesa Comment Type ERL calculatior	re 79.11.3 T n shouldn'	Response Status 0 P 413 Google Comment Status X t de-embed to just before ma	L 8 ating interface	# <u>139</u> ; this language was
uggestedRemedy Consider changing the cable reduction in the Test 1 test of Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TP0d to TP5d and 15 in 4.1 in the second equation fo	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m rith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the fire otnote.	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 12dB for the min	GdB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss ote and 3.1 instead of	Annex179B. Proposed Response Cl 179 SC 17 Noujeim, Leesa Comment Type ERL calculatior inherited from a	re 79.11.3 T n shouldn' adjustmen	Response Status O P 413 Google Comment Status X t de-embed to just before ma t of HCB, but doesn't apply to	L8 ating interface to CATF in the	# <u>139</u> this language was same way. CA ERL
uggestedRemedy Consider changing the cable reduction in the Test 1 test of Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TP0d to TP5d and 15 in 4.1 in the second equation fo roposed Response Res	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m rith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the fire otnote.	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 12dB for the min	5dB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss	Annex179B. Proposed Response Cl 179 SC 17 Noujeim, Leesa Comment Type ERL calculatior inherited from a	79.11.3 T n shouldn' adjustmen the conne	Response Status 0 P 413 Google Comment Status X t de-embed to just before ma	L8 ating interface to CATF in the	# <u>139</u> ; this language was same way. CA ERL
SuggestedRemedy Consider changing the cable reduction in the Test 1 test of Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TPOd to TP5d and 15 in 4.1 in the second equation fo Proposed Response Res	minimum loss (for all on nannel insertion losses and 16.5 max to 14.5 m vith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the first otnote.	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 0 12dB for the min st equation footn	GdB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss ote and 3.1 instead of	Annex179B. Proposed Response Cl 179 SC 17 Noujeim, Leesa Comment Type ERL calculation inherited from a should include	79.11.3 T n shouldn' adjustmen the conne the draft	Response Status O P 413 Google Comment Status X t de-embed to just before ma t of HCB, but doesn't apply to	L8 ating interface to CATF in the	# <u>139</u> this language was same way. CA ERL
uggestedRemedy Consider changing the cable reduction in the Test 1 test of Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TPOd to TP5d and 15 in 4.1 in the second equation fo proposed Response Res A 179 SC 179.11.3 Mellitz, Richard	minimum loss (for all c nannel insertion losses and 16.5 max to 14.5 m vith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the fir otnote. sponse Status O P 412 Samtec symment Status X	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo 0 12dB for the min st equation footn	GdB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss ote and 3.1 instead of	Annex179B. Proposed Response Cl 179 SC 17 Noujeim, Leesa Comment Type ERL calculation inherited from a should include to Tfx currently in SuggestedRemedy	79.11.3 T In shouldn' adjustmen the conne the draft , ove refere	Response Status O P 413 Google Comment Status X t de-embed to just before ma t of HCB, but doesn't apply to	L8 ating interface to CATF in the ild be removed	# <u>139</u> this language was same way. CA ERL with the definition of
SuggestedRemedy Consider changing the cable reduction in the Test 1 test of Table 179-11 from 15.5 Min a Table 179A-3 replacing 16 w Figure 179A-3 (including the from TP0d to TP5d and 15 in 4.1 in the second equation fo Proposed Response Res Cl 179 SC 179.11.3 Mellitz, Richard Comment Type TR Co	minimum loss (for all c hannel insertion losses and 16.5 max to 14.5 m vith 15 for ILddCA,min a footnotes from 13dB to stead of of 16 in the first otnote. sponse Status O P 412 Samtec summent Status X igned to Rd and 179B.	cable types) to 15 and Cable assen nin and 15.5 max and 13 with 12 fo o 12dB for the min st equation footn	5dB with a consequent mbly insertion losses in . Also modifying or ILddch,min. and nimum channel loss ote and 3.1 instead of # 61	Annex179B. Proposed Response Cl 179 SC 17 Noujeim, Leesa Comment Type ERL calculation inherited from a should include i Tfx currently in SuggestedRemedy Reword to remo	79.11.3 T n shouldn' adjustmen the conne the draft , ove refere ctor only.	Response Status 0 P 413 Google Comment Status X t de-embed to just before ma t of HCB, but doesn't apply to ector and launch but this would	L8 ating interface to CATF in the ild be removed	# <u>139</u> this language was same way. CA ERL with the definition of

C/ 179 SC 179.11.3

C/ 179 SC 179.11	.3 P413	L19	# 622	C/ 179 SC 179.11.7.	1 P 417	L 8	# 373
Palkert, Thomas	Samtec, Mac	om		Ghiasi, Ali	Ghiasi Qun	atum/Marvell	
Comment Type TR	Comment Status X			Comment Type TR	Comment Status X		
	n should use 92.5 ohm impedar	nce for cable ass	embly ERL	Table 179-17 provide p include the losses for the	partial channel for different l he 3 partial channels	nost classes, it wou	uld be helpful to also
SuggestedRemedy add line in Table 179	9-14 to specify 92.5 ohm imped	ance		SuggestedRemedy			
Proposed Response	Response Status O			Host Partial HL Class I Host partial NL Class I Host partial HH Class I If one adds the MCB I	oss = 9.4 dB	alue then that would	ld give best shannel
C/ 179 SC 179.11	.7 P415	L11	# 720	see below and similar t	o Table 179A-1		la give nost channel
Dawe, Piers	Nvidia			Host HL Class loss = 4 Host NL Class loss = 9			
Comment Type TR	Comment Status X			Host HH Class loss = 1			
Add 4th host class:				The above losses are t 17 are chossen would	he not max or min losses, s	some explanation w	vhy value in table 179-
SuggestedRemedy					go with Zp=140 mm will res	ult in loss of 18.3 d	B when MCB is
CA-A HL HL, HN HN HL, HN, HH HL or H HH2 HL	, or HH 3			included which inline to Proposed Response	o max loss in table 179A-1. <i>Response Status</i> O		
HH2 H∟ Proposed Response	Response Status O			C/ 179 SC 179.11.7.	1 P417	L 8	# 372
				Ghiasi, Ali		atum/Marvell	
C/ 179 SC 179.11	.7.1 P416 Samtec	L 27	# 237	Comment Type TR The only place that hos	Comment Status X st classes are defined is in	Table 179A-1	
Mellitz, Richard				SuggestedRemedy			
Comment Type TR	Comment Status X to 46.25 ohms measurement re	oference		00 ,	e 179A-1 or Host classes sl	hould be added to t	the glossary
	to 40.25 onins measurement re	elelelice.		Proposed Response	Response Status O		0 7
SuggestedRemedy Change							
A_vto 0.415						1.01	" 057
A_feto 0.415 A_neto 0.609				C/ 179 SC 179.11.7.		L21	# 257
Proposed Response	Response Status O			Shakiba, Hossein		hnologies Canada	
Froposed Response	Response Status 0			Comment Type TR Following first commer	Comment Status X	eters should be ad	ded to Table 179-18.
				SuggestedRemedy			
					oise parameters with sugge anying document for the pr _elec_01_250626.pdf.		table. Please refer to
				Proposed Response	Response Status 0		

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SC 179.11.7.1 6/16/2025 2:13:38 PM SORT ORDER: Clause, Subclause, page, line

C/ 179 SC 179.11	.7.1 P418	L18	# 256	C/ 179A SC 179A.4	P818	L 53	# 657
Shakiba, Hossein	Huawei Techr	ologies Canada		Swenson, Norman	Nokia, Point2	2	
Comment Type TR	Comment Status X			Comment Type TR	Comment Status X		
Following first comm 179-18 is needed.	ent, an updated value for One-s	ided noise spectr	al density in Table	The Range(dB) for H	lost-High (HH) should be 4.45 to	o 18.95.	
SuggestedRemedy				SuggestedRemedy Change 18.5 to 18.9	5		
Please refer to slide	oise spectral density parameter 16 of the accompanying docum dj_elec_01_250626.pdf.			Proposed Response	Response Status O		
Proposed Response	Response Status O			C/ 179A SC 179A.	6 P 819	L 8	# 509
				Dudek, Mike	Marvell		
C/ 179A SC 179A.4	P818	L37	# 656	Comment Type T	Comment Status X		
Swenson, Norman	Nokia, Point2				not show the maximum insertio		
Comment Type TR	Comment Status X			and maximum inser	ion loss of the cable. There is r	no illustration of	this as there are
	annel loss is to include the mate	d host/cable conr	nector. But the text	multiple combination simultaneously allow	is possible and the maximum va /ed.	alues of all the i	tems listed is not
says "host connector		d host/cable conr	nector. But the text			alues of all the i	tems listed is not
says "host connector SuggestedRemedy	annel loss is to include the mate		nector. But the text	simultaneously allov SuggestedRemedy			
says "host connector SuggestedRemedy Change "host conne	annel loss is to include the mate ", which is ambiguous.		nector. But the text	simuİtaneously allov S <i>uggestedRemedy</i> Change "and is illus	ved.		
says "host connector SuggestedRemedy Change "host conne Proposed Response	annel loss is to include the mate ", which is ambiguous. ctor" to "mated host/cable conne <i>Response Status</i> O		nector. But the text	simuİtaneously allov <i>SuggestedRemedy</i> Change "and is illus in Figure 179A-2"	red. trated in Figure 179A-3" to "and <i>Response Status</i> 0		
says "host connector SuggestedRemedy Change "host conne Proposed Response Cl 179A SC 179A.4	annel loss is to include the mate ", which is ambiguous. ctor" to "mated host/cable conne <i>Response Status</i> O	ector".		simuİtaneously allov SuggestedRemedy Change "and is illus in Figure 179A-2" Proposed Response	red. trated in Figure 179A-3" to "and <i>Response Status</i> 0	is illustrated for	r the HN to HN channel
says "host connector SuggestedRemedy Change "host conne Proposed Response C/ 179A SC 179A.4 Dudek, Mike	annel loss is to include the mate ", which is ambiguous. ctor" to "mated host/cable conne <i>Response Status</i> O <i>P</i> 818	ector".		simultaneously allow SuggestedRemedy Change "and is illus in Figure 179A-2" Proposed Response Cl 179A SC 179A.	red. rrated in Figure 179A-3" to "and <i>Response Status</i> O 5 P 819	is illustrated for	r the HN to HN channel
says "host connector SuggestedRemedy Change "host conne Proposed Response Cl 179A SC 179A.4 Dudek, Mike Comment Type T It is not helpful sayin	annel loss is to include the mate ", which is ambiguous. ctor" to "mated host/cable conne <i>Response Status</i> O <i>P</i> 818 Marvell	ector".	# 502	simultaneously allov SuggestedRemedy Change "and is illus in Figure 179A-2" Proposed Response C/ 179A SC 179A. Kocsis, Sam Comment Type TR	red. trated in Figure 179A-3" to "and <i>Response Status</i> 0 5 P819 Amphenol	is illustrated for	r the HN to HN channel # <u>594</u>
says "host connector SuggestedRemedy Change "host conne Proposed Response Cl 179A SC 179A.4 Dudek, Mike Comment Type T It is not helpful sayin vendors can trade co	annel loss is to include the mate ", which is ambiguous. ctor" to "mated host/cable conne <i>Response Status</i> O P818 Marvell <i>Comment Status</i> X g that the assumed mated conn	ector".	# 502	simultaneously allow SuggestedRemedy Change "and is illus in Figure 179A-2" Proposed Response Cl 179A SC 179A. Kocsis, Sam Comment Type TR The MTF illustration	red. trated in Figure 179A-3" to "and <i>Response Status</i> 0 5 <i>P</i> 819 Amphenol <i>Comment Status</i> X	is illustrated for	r the HN to HN channel # <u>594</u>
says "host connector SuggestedRemedy Change "host conne Proposed Response Cl 179A SC 179A.4 Dudek, Mike Comment Type T It is not helpful sayin vendors can trade cc SuggestedRemedy Delete the last sente TP2) or (TP3-to-TP5	annel loss is to include the mate ", which is ambiguous. ctor" to "mated host/cable conne <i>Response Status</i> O P818 Marvell <i>Comment Status</i> X g that the assumed mated connonnector losses for cable/pcb/pa nce. "The recommended maxir d) are consistent with the host of	ector". <i>L</i> 40 ector insertion los ckage losses. num differential ir hannels and an a	# <u>502</u> ss is 2.45dB. Host insertion loss (TP0d-to- assumed mated	simultaneously allov SuggestedRemedy Change "and is illus in Figure 179A-2" Proposed Response Cl 179A SC 179A. Kocsis, Sam Comment Type TR The MTF illustration hard to validate. SuggestedRemedy	red. trated in Figure 179A-3" to "and <i>Response Status</i> 0 5 <i>P</i> 819 Amphenol <i>Comment Status</i> X	is illustrated for <i>L</i> 38	r the HN to HN channel # <u>594</u> ence of the MCB that is
says "host connector SuggestedRemedy Change "host conne Proposed Response Cl 179A SC 179A.4 Dudek, Mike Comment Type T It is not helpful sayin vendors can trade cc SuggestedRemedy Delete the last sente TP2) or (TP3-to-TP5	annel loss is to include the mate ", which is ambiguous. ctor" to "mated host/cable conne <i>Response Status</i> O P818 Marvell <i>Comment Status</i> X g that the assumed mated connonnector losses for cable/pcb/pa	ector". <i>L</i> 40 ector insertion los ckage losses. num differential ir hannels and an a	# <u>502</u> ss is 2.45dB. Host insertion loss (TP0d-to- assumed mated	simultaneously allov SuggestedRemedy Change "and is illus in Figure 179A-2" Proposed Response Cl 179A SC 179A. Kocsis, Sam Comment Type TR The MTF illustration hard to validate. SuggestedRemedy Move the allocation	red. trated in Figure 179A-3" to "and <i>Response Status</i> O P819 Amphenol <i>Comment Status</i> X in Figure 179A-1 allocates an ir	is illustrated for <i>L</i> 38	r the HN to HN channel # <u>594</u> ence of the MCB that is

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 179A SC 179A.5 Page 108 of 149 6/16/2025 2:13:38 PM

C/ 179A SC 179A.5	P820	L 39	# 289	C/ 179B SC 179B	P 823	L 39	# 602
Heck, Howard	TE Connectivi	ty		Kocsis, Sam	Amphenol		
Comment Type TR	Comment Status X			Comment Type ER	Comment Status X		
currently specified. In	n the lower left of Figure 179A-1 ndirect measurement methods d	o not provide the	e necessary accuracy.	Flip the order of polyr clauses.	nomial from decreasing to incre	easing to align fo	rmatting with older
	gure in D1.4 was measureable a 79B-2 requires modification to m			SuggestedRemedy			
	red with the 2Xthru method			Impacted equations:	179B-1, -2, -3, -4, -5		
SuggestedRemedy				Proposed Response	Response Status O		
specified as 2.7dB to 0.0067*f^1.5+0.0309 to match the updated	h-1 back to the version that was it the MCB via. Change Equation *f-0.2523*sqrt(f)+0.0868. Change d equation. A supporting contribu- tion processing.	179B-2 to IL_ca the Ildd_catf c	atref = - :urve in Figure179B-1	C/ 179B SC 179B.1 Mellitz, Richard	P 823 Samtec	L 19	# 43
June 26 electrical ad	-			Comment Type TR	Comment Status X		
Proposed Response	Response Status O			Referring to the word set of coefficient pow	s "using the equation": The Ins ers (eq 179B-3, 4, and 5) whic ture design nor to compliance	h do not appear	to be tied to the
			# 050				
		L 4	# 658	particular frequency h	ad been demonstrated wande		
Swenson, Norman	P821 Nokia, Point2 Comment Status X	L 4	# 658	particular frequency h wanders considerably	ad been demonstrated wande		
Swenson, Norman Comment Type TR What is the extra rec not shown in the mat SuggestedRemedy Clarify	Nokia, Point2	nination shown i	n Fig. 179A-2 that is	particular frequency h wanders considerably SuggestedRemedy Replace line: "The reference insert Equation (179B–5)' With: "The reference fitted This resolution is tied 179B.3.1, 179B.4.1 In other sections and	ad been demonstrated wande	r considerably. res is 9.75 dB at t fixtures is 9.75 te removal of sec	A fitted insertion loss 53.125 GHz using dB at 53.125 GHz." ctions 17B.2.1,
Swenson, Norman Comment Type TR What is the extra rec not shown in the mat SuggestedRemedy Clarify Proposed Response	Nokia, Point2 Comment Status X stangle labeled Paddle/Wire Terr ted test fixtures in Fig 179A-1? Response Status O	nination shown i	n Fig. 179A-2 that is	particular frequency h wanders considerably SuggestedRemedy Replace line: "The reference insert Equation (179B–5)' With: "The reference fitted This resolution is tied 179B.3.1, 179B.4.1 In other sections and setups.	ad been demonstrated wande r less. on loss of the mated test fixtur nsertion loss of the mated test to the comment suggesting th appendixes, the fit loss at Nyo	r considerably. res is 9.75 dB at t fixtures is 9.75 te removal of sec	A fitted insertion loss 53.125 GHz using dB at 53.125 GHz." ctions 17B.2.1,
Swenson, Norman Comment Type TR What is the extra rec not shown in the mat SuggestedRemedy Clarify Proposed Response Cl 179A SC 179A.7	Nokia, Point2 Comment Status X stangle labeled Paddle/Wire Terr ted test fixtures in Fig 179A-1? Response Status O	nination shown i It is not explaine	n Fig. 179A-2 that is d in the text.	particular frequency h wanders considerably SuggestedRemedy Replace line: "The reference insert Equation (179B–5)' With: "The reference fitted This resolution is tied 179B.3.1, 179B.4.1 In other sections and	ad been demonstrated wande r less. on loss of the mated test fixtur nsertion loss of the mated test to the comment suggesting th	r considerably. res is 9.75 dB at t fixtures is 9.75 te removal of sec	A fitted insertion loss 53.125 GHz using dB at 53.125 GHz." ctions 17B.2.1,
Swenson, Norman Comment Type TR What is the extra rec not shown in the mat SuggestedRemedy Clarify Proposed Response Cl 179A SC 179A.7 Dudek, Mike	Nokia, Point2 Comment Status X etangle labeled Paddle/Wire Terr ted test fixtures in Fig 179A-1? Response Status O	nination shown i It is not explaine	n Fig. 179A-2 that is d in the text.	particular frequency h wanders considerably SuggestedRemedy Replace line: "The reference insert Equation (179B–5)' With: "The reference fitted This resolution is tied 179B.3.1, 179B.4.1 In other sections and setups.	ad been demonstrated wande r less. on loss of the mated test fixtur nsertion loss of the mated test to the comment suggesting th appendixes, the fit loss at Nyo	r considerably. res is 9.75 dB at t fixtures is 9.75 te removal of sec	A fitted insertion loss 53.125 GHz using dB at 53.125 GHz." ctions 17B.2.1,
Swenson, Norman <i>Comment Type</i> TR What is the extra rec not shown in the mat <i>SuggestedRemedy</i> Clarify <i>Proposed Response</i> <i>Cl</i> 179A <i>SC</i> 179A.7 Dudek, Mike <i>Comment Type</i> T Figure 179A-3 does	Nokia, Point2 Comment Status X stangle labeled Paddle/Wire Terr ted test fixtures in Fig 179A-1? Response Status 0 P822 Marvell	nination shown i It is not explaine <i>L</i> 13 nodels are includ	n Fig. 179A-2 that is d in the text. # <u>510</u>	particular frequency h wanders considerably SuggestedRemedy Replace line: "The reference insert Equation (179B–5)' With: "The reference fitted This resolution is tied 179B.3.1, 179B.4.1 In other sections and setups.	ad been demonstrated wande r less. on loss of the mated test fixtur nsertion loss of the mated test to the comment suggesting th appendixes, the fit loss at Nyo	r considerably. res is 9.75 dB at t fixtures is 9.75 te removal of sec	A fitted insertion loss 53.125 GHz using dB at 53.125 GHz." ctions 17B.2.1,
Swenson, Norman <i>Comment Type</i> TR What is the extra rec not shown in the mat <i>SuggestedRemedy</i> Clarify <i>Proposed Response</i> <i>Cl</i> 179A <i>SC</i> 179A.7 Dudek, Mike <i>Comment Type</i> T Figure 179A-3 does TP5d channels and t point.	Nokia, Point2 Comment Status X stangle labeled Paddle/Wire Terr ted test fixtures in Fig 179A-1? Response Status 0 P822 Marvell Comment Status X not show that Device package m	nination shown i It is not explaine <i>L</i> 13 nodels are includ	n Fig. 179A-2 that is d in the text. # <u>510</u>	particular frequency h wanders considerably SuggestedRemedy Replace line: "The reference insert Equation (179B–5)' With: "The reference fitted This resolution is tied 179B.3.1, 179B.4.1 In other sections and setups.	ad been demonstrated wande r less. on loss of the mated test fixtur nsertion loss of the mated test to the comment suggesting th appendixes, the fit loss at Nyo	r considerably. res is 9.75 dB at t fixtures is 9.75 te removal of sec	A fitted insertion loss 53.125 GHz using dB at 53.125 GHz." ctions 17B.2.1,
Swenson, Norman <i>Comment Type</i> TR What is the extra rec not shown in the mat <i>SuggestedRemedy</i> Clarify <i>Proposed Response</i> <i>Cl</i> 179A <i>SC</i> 179A.7 Dudek, Mike <i>Comment Type</i> T Figure 179A-3 does TP5d channels and t point. <i>SuggestedRemedy</i> Either delete the sen	Nokia, Point2 <i>Comment Status</i> X stangle labeled Paddle/Wire Terr ted test fixtures in Fig 179A-1? <i>Response Status</i> O <i>P</i> 822 Marvell <i>Comment Status</i> X not show that Device package m there are no such things as TPO stence "Device package models A-3);" or replace it with "Device	nination shown i It is not explaine <i>L</i> 13 nodels are includ d and TP5d char are included in t	n Fig. 179A-2 that is d in the text. # <u>510</u> Hed in the TP0d and nnels which are test	particular frequency h wanders considerably SuggestedRemedy Replace line: "The reference insert Equation (179B–5)' With: "The reference fitted This resolution is tied 179B.3.1, 179B.4.1 In other sections and setups.	ad been demonstrated wande r less. on loss of the mated test fixtur nsertion loss of the mated test to the comment suggesting th appendixes, the fit loss at Nyo	r considerably. res is 9.75 dB at t fixtures is 9.75 te removal of sec	A fitted insertion loss 53.125 GHz using dB at 53.125 GHz." ctions 17B.2.1,

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 179B SC 179B.1

	CI 179B SC 179B.2	P 823	L 29	# 511
Dudek, Mike Marvell	Dudek, Mike	Marvell		
Comment Type TR Comment Status X	Comment Type T Com	ment Status X		
The reference impedances for measuring the test fixtures is not listed except for the ERL (where it is 92.5 Ohm differential)	The TP2 and TP3 test points a show	re not well illustrated	in Figure 179-2 a	as it does not really
SuggestedRemedy	SuggestedRemedy			
Add the sentence (or a reference impedance subsection) stating "The reference	Add "and figure 179A-1" afte	r Figure 179-2		
impedance for differential specifications is 92.5 ohms and the reference impedance for common-mode specifications is 25 Ohms unless specified otherwise. Consider using 92.5 Ohm instead of 100 Ohm for the differential measurements	Proposed Response Resp	onse Status O		
Proposed Response Response Status O	C/ 179B SC 179B.2.1	P 823	L 34	# 600
	Kocsis, Sam	Amphenol		
C/ 179B SC 179B.2 P823 L27 # 44	Comment Type TR Com	ment Status X		
Mellitz, Richard Samtec	Text says "TP2 or TP3 test fixt			
Comment Type TR Comment Status X	implies only PCB material is us	ed in the HCB fixture	e reference. I his	is not always the ca
The Insertion loss equation uses a complicated set of coefficient powers (eq 179B-1) which	SuggestedRemedy			
do not appear to be tied to the physics of the test fixture design nor to compliance testing	Remove "printed circuit board (
SuggestedRemedy	reference in many ways. There		this section that	would be corrected.
Replace:	Proposed Response Resp	onse Status O		
"The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for measuring the transmitter and receiver specifications at TP2 and TP3. The TP2 and TP3				
test points are illustrated in Figure 170, 2."	C/ 179B SC 179B.2.1	P 823	L 34	# 512
test points are illustrated in Figure 179–2."	Dudala Miles	Marvell		
with:	Dudek, Mike	INIAI VCII		
with: The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for		ment Status X		
with: The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for measuring the transmitter and receiver specifications at TP2 and TP3. The TP2 and TP3 test points have a normalize signal power between 0.46 and 0.52 V^2. The fit insertion loss		ment Status X	etter defined not	left ambiguous.
with: The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for measuring the transmitter and receiver specifications at TP2 and TP3. The TP2 and TP3 test points have a normalize signal power between 0.46 and 0.52 V^2. The fit insertion loss is 3.8 dB.	Comment Type TR Com	ment Status X	etter defined not	left ambiguous.
with: The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for measuring the transmitter and receiver specifications at TP2 and TP3. The TP2 and TP3 test points have a normalize signal power between 0.46 and 0.52 V^2. The fit insertion loss	Comment Type TR Com The point at which the loss is d	ment Status X efined needs to be be		ũ
with: The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for measuring the transmitter and receiver specifications at TP2 and TP3. The TP2 and TP3 test points have a normalize signal power between 0.46 and 0.52 V^2. The fit insertion loss is 3.8 dB. The normalized signal power (P_signal) is calculated according to ### (slide 7 in mellitz_3dj_03_2505") with fb = 106.25 GHz, Tt = 6 ps, and fr = 0.55 × fb over the range fmin = 0.05 GHz to fmax = 67 GHz.	Comment Type TR Com The point at which the loss is d SuggestedRemedy Insert the sentence "The printe the reference plane of the RF t	ment Status X efined needs to be be d circuit board inserti est connector and the	on loss is define e end of the gold	d as the loss betwee fingers on the HCB'
with: The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for measuring the transmitter and receiver specifications at TP2 and TP3. The TP2 and TP3 test points have a normalize signal power between 0.46 and 0.52 V^2. The fit insertion loss is 3.8 dB. The normalized signal power (P_signal) is calculated according to ### (slide 7 in mellitz_3dj_03_2505") with fb = 106.25 GHz, Tt = 6 ps, and fr = 0.55 × fb over the range fmin = 0.05 GHz to fmax = 67 GHz. Remove section: 179B.2.1	Comment Type TR Com The point at which the loss is d SuggestedRemedy Insert the sentence "The printe the reference plane of the RF t between the 1st and 2nd sente	ment Status X efined needs to be be d circuit board inserti est connector and the nces. An alternative	on loss is define e end of the gold e (less desirable	d as the loss betwee fingers on the HCB' in my opinion)
with: The TP2 or TP3 test fixture (also known as Host Compliance Board) is required for measuring the transmitter and receiver specifications at TP2 and TP3. The TP2 and TP3 test points have a normalize signal power between 0.46 and 0.52 V^2. The fit insertion loss is 3.8 dB. The normalized signal power (P_signal) is calculated according to ### (slide 7 in mellitz_3dj_03_2505") with fb = 106.25 GHz, Tt = 6 ps, and fr = 0.55 × fb over the range fmin = 0.05 GHz to fmax = 67 GHz.	Comment Type TR Com The point at which the loss is d SuggestedRemedy Insert the sentence "The printe the reference plane of the RF t	ment Status X efined needs to be be d circuit board inserti est connector and the nces. An alternative d circuit board insertio	on loss is define e end of the gold e (less desirable on loss is defined	d as the loss betwee fingers on the HCB' in my opinion) d as the loss betwee

C/ 179B SC 179B.2.1

2/ 470D 00 470D 0									
C/ 179B SC 179B.2	2.1 P823	L34	# 513	C/ 179B	SC 179B.3	P 8	23	L 27	# 45
Dudek, Mike	Marvell			Mellitz, Richa	ď	Samt	ec		
Comment Type TR	Comment Status X			Comment Typ	e TR	Comment Status	Х		
The loss needs to be	e better defined to be less ambig	guous.				ation uses a complica			
SuggestedRemedy						ed to the physics of the	e test fixture	design nor t	o compliance testing.
Insert the sentence	The cable assembly tested fixtu	ure loss is equal	to the loss of the	SuggestedRe	nedy				
	inus the loss of the specific TP2 asuring the mated text fixture los		•	measuring	the cable a	est fixture (also known ssembly specification			
roposed Response	Response Status O			test points With:	are illustrate	ed in Figure 179–2.			
					or TP4 test fiz	xture (also known as	Host Compli	ance Board)	is required for
			"			tter and receiver spec			
/ 179B SC 179B.2		L 39	# 328	dB.	have a norn	nalize signal power be	etween 0.41	and 0.47 V/2	2. The fit loss is 5.95
rown, Matt	Alphawave Se	emi		•	alized signal	power (P_signal) is o	calculated ad	ccording to #	## (slide 7 in
Comment Type E	Comment Status X					with fb = 106.25 GH	z, Tt = 6 ps,	, and fr = 0.5	5 × fb over the range
•	should be normal font rather tha		•		5 GHz to fma ection: 179B	ax = 67 GHz.			
	/ariable, e.g. an index, f_i where	I IS and Index va	anable.	Proposed Res		Response Status	•		
JunnastadPamady				T TOPOSED Nes	ponse	Response Status	0		
00 ,									
,	oscripts to normal font where ap	propriate through	Annex 1796.						
Change variable sub	oscripts to normal font where ap <i>Response Status</i> 0	propriate through	II AIIIlex 179D.	C/ 179B	SC 179B.3.1	P8	24	L 32	# 660
Change variable sub		propriate through	in Annex 1796.	C/ 179B Swenson, No			24 I, Point2	L 32	# 660
Change variable sub Proposed Response	Response Status O	propriate through			man		, Point2	L 32	# 660
Change variable sub Proposed Response	Response Status O 2.1 P824	L12	# <u>659</u>	Swenson, No Comment Typ	man e TR	Nokia	i, Point2 X		
Change variable sub Proposed Response Cl 179B SC 179B.2 Swenson, Norman	Response Status O 2.1 P824 Nokia, Point2	L12		Swenson, No Comment Typ It is uncle fixture and	man e TR ar how "The I the reference	Nokia Comment Status effects of differences ce insertion loss" are	, Point2 X between the to be	e insertion los	ss of an actual test
Change variable sub roposed Response / 179B SC 179B.2 wenson, Norman omment Type ER	Response Status O 2.1 P824 Nokia, Point2 Comment Status X	L12		Swenson, No Comment Typ It is uncle fixture and determine	man e TR ar how "The I the reference d, given that	Nokia Comment Status effects of differences ce insertion loss" are the specification in 1	, Point2 X between the to be	e insertion los	ss of an actual test
Change variable sub Proposed Response Cl 179B SC 179B.2 Swenson, Norman Comment Type ER Curve label is incons	Response Status O 2.1 P824 Nokia, Point2 Comment Status X	L12		Swenson, No Comment Typ It is uncle fixture and determine Cable Ass	man e TR ar how "The I the reference d, given that embly Test I	Nokia Comment Status effects of differences ce insertion loss" are	, Point2 X between the to be	e insertion los	ss of an actual test
Change variable sub Proposed Response Cl 179B SC 179B.2 Swenson, Norman Comment Type ER Curve label is incons SuggestedRemedy	Response Status O 2.1 P 824 Nokia, Point2 Comment Status X sistent with the text.	L12		Swenson, No Comment Typ It is uncle fixture and determine Cable Ass SuggestedRe	man e TR ar how "The a l the reference d, given that embly Test l <i>nedy</i>	Nokia Comment Status effects of differences ce insertion loss" are the specification in 1 Fixture by itself.	a, Point2 X between the to be 79B.4 Is for	e insertion los	ss of an actual test
Proposed Response C/ 179B SC 179B.2 Swenson, Norman Comment Type ER	Response Status O 2.1 P 824 Nokia, Point2 Comment Status X sistent with the text.	L12		Swenson, No Comment Typ It is uncle fixture and determine Cable Ass SuggestedRe	man e TR ar how "The I the reference d, given that embly Test I medy we the differe	Nokia Comment Status effects of differences ce insertion loss" are the specification in 1	i, Point2 X between the to be 79B.4 Is for nined.	e insertion los	ss of an actual test

C/ 179B SC 179B.3.1

179B SC 179B.3.1 P824 L 33 # 601	C/ 179B SC 179B.4.1 P825 L11 # 136
csis, Sam Amphenol	Noujeim, Leesa Google
nment Type TR Comment Status X	Comment Type TR Comment Status X
Text says "cable assembly test fixture PCB, test point, ocnnector and any associated vias"	Spread between Ildd_MTFmin and Ildd_MTFmax curves is too large
has proven to be difficult to validate. Since the effects of the differences between an actual test fixture and the reference insertion loss are to be accounted for, the reference definition	SuggestedRemedy
should be more tangible.	shift the min curve down and the max curve up, especially in 40-60GHz region
ngestedRemedy	Proposed Response Response Status O
Replace "cable assembly test fixture PCB, test point, ocnnector and any associated vias"	
with "cable assembly test fixture, from the RF connector refrence plane to the MDI transition". Update Equation 179B-1 appropriately, and remove "PCB" from the other (2)	C/ 179B SC 179B.4.1 P826 L1 # 604
instance in this section.	Kocsis, Sam Amphenol
posed Response Response Status O	Comment Type TR Comment Status X
	The rise time used in the FOM ILD calculation is inconsisent with the rise time used on
179B SC 179B.4 P825 L3 # 46	ICN calculations
litz, Richard Samtec	SuggestedRemedy
nment Type TR Comment Status X	Converge to a single rise time setting for mated test fixture calculations and adjust criteria
The Insertion loss specification uses a complicated reference line (eq 179B-3, 4, and 5)	pass/fail limits appropriately.
which does not appear to be tied to the physics of the test fixture design nor to compliance	Proposed Response Response Status O
testing measurements. The reason for the 1.5 power term is not defined. The equation was developed as an average of measurements (kocsis_3dj_adhoc_01_250206). The	
normalized signal power is expected to track performance better than the specified	C/ 179B SC 179B.4.2 P826 L10 # 603
frequency masks and reference lines	Kocsis, Sam Amphenol
ngestedRemedy	Comment Type TR Comment Status X
Replace: "The TP2 or TP3 test fixture and the cable assembly test fixture are specified in a mated	There is no documented procedure for adjusting the reference reference impedance for a ERL computation, though one exists in the COM code.
state illustrated in Figure 92–18. The mated test fixtures specifications are given below."	
With:	SuggestedRemedy Add details to this Annex to document the procedure and provide a reference for other
The TP2 or TP3 test fixture and the cable assembly test fixture has a normalized signal power (P_signal) of the Insertion loss shall be between 0.31 and 0.34 V/2. The normalized	places where an ERL computation requires a reference impedance other than 100-ohm.
The TP2 or TP3 test fixture and the cable assembly test fixture has a normalized signal power (P_signal) of the Insertion loss shall be between 0.31 and 0.34 V/2. The normalized signal power (P_signal) is calculated according to ### (slide 7 in mellitz_3dj_03_2505")	places where an ERL computation requires a reference impedance other than 100-ohm. <i>Proposed Response</i> Response Status O
The TP2 or TP3 test fixture and the cable assembly test fixture has a normalized signal power (P_signal) of the Insertion loss shall be between 0.31 and 0.34 V/2. The normalized	
The TP2 or TP3 test fixture and the cable assembly test fixture has a normalized signal power (P_signal) of the Insertion loss shall be between 0.31 and 0.34 V^2. The normalized signal power (P_signal) is calculated according to ### (slide 7 in mellitz_3dj_03_2505") with fb = 106.25 GHz, Tt = 6 ps, and fr = $0.55 \times fb$ over the range fmin = 0.05 GHz to fmax = 67 GHz. Remove section: 179B.3.1 to line 1 on page 825.	
The TP2 or TP3 test fixture and the cable assembly test fixture has a normalized signal power (P_signal) of the Insertion loss shall be between 0.31 and 0.34 V^2. The normalized signal power (P_signal) is calculated according to $###$ (slide 7 in mellitz_3dj_03_2505") with fb = 106.25 GHz, Tt = 6 ps, and fr = 0.55 x fb over the range fmin = 0.05 GHz to fmax = 67 GHz.	

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 179B SC 179B.4.2 Page 112 of 149 6/16/2025 2:13:38 PM

X 179B SC 179B.4.2	P826	L19	# 624	C/ 179B	SC 179B.4.6	P8	29 L2	26 #	517
alkert, Thomas	Samtec, Mac	om		Dudek, Mike	e	Marv	ell		
Comment Type TR C	Comment Status X			Comment T	vpe E	Comment Status	х		
The CR specification should	d use 92.5 ohm impedan	ce for MTF ERL		Incompl	ete sentence (r	io verb)			
uggestedRemedy				SuggestedF	Remedy				
add line in Table 179B-1 to	specify 92.5 ohm imped	ance		Change	"voltage detern	nined" to "voltage is	determined"		
Proposed Response Re	esponse Status O			Proposed R	esponse	Response Status	0		
C 179B SC 179B.4.2	P826	L 34	# 515	C/ 179B	SC 179B.4.6	P8	29 L:	39 #	605
Dudek, Mike	Marvell			Kocsis, San	า	Amp	henol		
omment Type T C	Comment Status X			Comment T	vpe TR	Comment Status	х		
It has been stated that making test fixtures that are 92.5 Ohm differential impedance throughout their length is not feasible and sections of the fixtures near the RF connectors need to be 100 Ohm which degrades this ERL measurement resulting in a need for a more			ase maximum ti	tes in the ICN calcul ansmitter amplitude		onsistent with the	expected		
relaxed specification. How to the 92.5 Ohm value.	ever it is important that t	he mating interfa	ace to the DUT is close		he amplitudes r	natch the transmitte	swing and scale	e the criteria pass	/fail limits
Consider adding an addition with the length of the reflect	tion signal reduced and t	he Time gated p	ropagation delay set to	Proposed R	5	Response Status	0		
a non-zero value. It may a directions of the measurem		ferent settings fo	r the different	C/ 179B	SC 179B.4.6	P8	30 L [.]	14 #	544
roposed Response Re	esponse Status O			Schreiner, S	Stephan	Rose	nberger Hochfre	equenztechnik Gm	nbH & Co. KG
				Comment T	vpe E	Comment Status	х		
/ 179B SC 179B.4.3	P826	L 44	# 516	missing	"e" at the end o	of "the"			
udek, Mike	Marvell	244	# 510	SuggestedF	Remedy				
,	Comment Status X			change	"th" to "the"				
There isn't a specification for theorectically it will be similar specification in section 1791 specification would cause a specification in Table 176D- noise.	or the differential-mode to ar to the common mode B.4.3 is very weak and a module to fail the 60mV	to differential ins n MCB that only ' full band AC co	ertion loss. The just passes this mmon-mode	Proposed R	esponse	Response Status	0		
uggestedRemedy									
Change Equation 179B-6 (a from 40GHz to 67GHz whic									
roposed Response Re	esponse Status O								
YPE: TR/technical required E OMMENT STATUS: D/dispate	•	• •		0	U/unsatisfied 2	Z/withdrawn	C/ 179B SC 179B.4.6		Page 113 of 149 5/16/2025 2:13:3

C/ 179B SC 179B.4.6	P 830	L14	# 518	C/ 179C	SC 179C.1	P833	L 25	# 437
Dudek, Mike	Marvell			Ran, Adee		Cisco System	าร	
Comment Type E	Comment Status X			Comment T	Type TR	Comment Status X		
missing letter						specifications, neither final or	draft, of SFP22	4 and SFP-DD224 that
SuggestedRemedy				can be	referred to.			
change "th" to "the"				The am	nendment cann	ot be finalized with references	to undefined sp	ecifications.
Proposed Response	Response Status O					cide on a deadline for availabi adline, they will need to be re		cifications. If they are
C/ 179B SC 179B.4.6	P830	L23	# 47	Suggested	Remedy			
Mellitz, Richard	Samtec	-		Add editor's note at the beginning of Annex 179C stating that SFP224 and SI specifications are not available yet, and that all references to these connector				
Comment Type TR	Comment Status X					ins are not available by the first		
51	talk noise voltage" and "MDF	EXT integrated of	crosstalk noise voltage"		pear in D3.1).			
	pendent. Aft is not relevant.			T I				
SuggestedRemedy				I nese i	notes should re	place the notes in 179C.2.1 a	nd 1790.2.2.	
	ted crosstalk noise voltage" li			Add sin	nilar notes in 17	79.11.7.2.2 and 179.12 where	these connecto	rs are mentioned too.
	slide 7 on in "mellitz_3dj_03	_2505" for SNR	_MDFEXT.	Proposed R	Response	Response Status 0		
Replace: MDFEXT integrated cr	osstalk noise voltage (max)							
with:				01.4700	00 4700 4	Deed		# [540
SNR_MDFEXT (min) of (alida 10 in mallity 2di				C/ 179C	SC 179C.1	P 834	L 4	# 519
(slide 10 in mellitz_3dj	/			Dudek, Mik	ke	Marvell		
Proposed Response	Response Status O			Comment 7 For inte	51	Comment Status X e PMDs on both ends and the	cable pins have	e to match.
				Suggested	<i>Remedy</i> e "should be us			

Proposed Response Response Status **0**

C/ 179C SC 179C.1

C/ 179C	SC 179C.2.1	P 839	L 45	# 483	C/ 180	SC 180.2	P 432	L 33	# 395
D'Ambrosia	i, John	Futurewei, U.S	8. Subsidiary of	Huawei	Mi, Guang	can	Huawei Tech	nologies Co., Lto	t t
Editor's The refe expected It is not specific The cur The IEE Similar Suggested Two op 1. If dev specific be remo	comment Type TR Comment Status X Editor's Note states the following: The reference for SFP224 does not currently include 200G per lane specifications but it's expected to include before publication of this standard. It is not clear that the referenced SFP224 specification will include 200G per lane specifications. The current state of development in SFF-1031 or SFP-DD is unclear. The IEEE P802.3dj standard could not be approved in this state. Similar comment for 179C.2.2, 179C.2.3 uggestedRemedy Two options are offered, as the state of development in noted organizations is unclear. 1. If development is underway in noted organizations, modiffy the note to indicate that if the specification is not received for consideration by the Task Force by Jan 2026, the note will be removed and the MDI will be noted in a non-specific manner. 2. Remove any references to the SFF specification and make the section generic. roposed Response Response Status O		Comment Type TR Comment Status X The error ratio allocation provides reference to 174A.5, which defines the PHY to PHY The clause itself is focused on optical PMD. Table 174A-1 provide detailed error allocation of the components in the PHY link, and specifically addresses the optical PHYs as thic clause. It provides the full picture of error allocation. We should reference it more clear This comment applies to all IMDD opitcal PMDs. i.e. CL180~183, CL185. SuggestedRemedy change to "A complete PHY is expected to meet the frame loss ratio specifications in 174A.5, with each component in the PHY meeting the error ratio allocations specified Table 174A-1. " This comment applies to all applicable opitcal PMDs. i.e. CL180~183, CL185. Proposed Response Response Status O			letailed error allocation ptical PHYs as this erence it more clearly. CL185. o specifications in ocations specified in			
Proposed R	Response	Response Status O							
CI 179C	SC 179C.2.3	P 841	L 40	# 438					
Ran, Adee		Cisco Systems	6						
	itor's note is obs members.snia.or	Comment Status X olete - the recent version of S rg/document/dl/36947) does in	```						

Delete the note.

Proposed Response Response Status **0**

C/ 180 SC 180.2

C/ 180	SC 180.2	P 432	L 33	# 396	I
Mi, Guang	qcan	Huawei Techn	ologies Co., Ltd		

Comment Type TR Comment Status X

The receiver sensitivity and stressed receiver sensitivity, as the two most important opitcal parameter are defined as the input OMA at which the receiver hits the threshold of an error ratio metric. They will be tested for each module to be shipped, which currently has a volume in the million ports/year level now. That means the time spent on testing the receiver sensitivity is a huge factor in cost, both in terms of CAPEX and OPEX of the module vendor, system vendor and the end user.

While block error ratio maybe theoretically perfect, it is almost impossible to implement practically or cost effectively, reasons as following:

The expected measurement time of getting direct measurement result for each of the test_block_error_bin_i is impractical in both DVT and volume testing. An estimated of 10 days to observe 1 event in bin 15 in the cases of the upper limit Hmax. For practical products, performance are expected to be better than Hmax, making it even longer to observe. And to have statistical confidence, one would even require to observe over 10 times of the event to make it representative, or the data set to "be sufficiently large to reliably verify".

My previous contribution with 100G/L data and Michael He's 200G/L data have shown that a time span of several mins would be required to get reasonable result. Comparing what is being used today (a few seconds), that is ~10 times the length.

The data also showed that statistical projection can be very subjective approach, sometimes even impossible. This eliminates the block error histogram and the block error ratio (which is calculated using the histogram) being objective metric for link performance, especially when it comes to quantitative comparison. Whether or not a DUT passes the requirement can be dependent on an engineer's experience and judgement. This is not a economical feasible parameter to be used in mass volume production in modern industry, which typically employs automatic testing and validation.

This comment applies to all applicable opitcal PMDs. i.e. CL180~183, CL185.

SuggestedRemedy

Provide the information of BER threshold under random error assumption as previous generations of ethernet optical PMDs. Point out that for links that are prone to burst error, further evaluation of the PHY/link/PMD can be done based on the block error ratio method. Similar statement on leaving margin for not-so-random links has been use before. Leave it to the implementer and user of this standard to decide which method to use in their design, DVT and volume production stage,.

This comment applies to all applicable opitcal PMDs. i.e. CL180~183, CL185.

A contribution will be provided with detailed suggested remedy.

Proposed Response		Response Status O	Response Status O		
C/ 180	SC 180.5.12	P 437	L 28	# 193	
Huber, Th	omas	Nokia			

Comment Type T Comment Status X

While it is clear what "DATA mode" is intended to mean here in the context of ILT, that term has specific meaning for 1000BASE-T PHYs that differs from what is intended here (see 1.4.278) Annex 178B.5 indicates that in the context of ILT, "data mode" means the variable tx_mode has the value 'data', which is associated with being in the PATH_UP state per figure 178B-8. As such, it would be more clear if the text in 180.5.12 referred to the PATH_UP state.

SuggestedRemedy

Change "coordinate the transition to DATA mode." to "coordinate the transition to the PATH_UP state (see Figure 178B-8)."

Proposed Response	Response Status	0	
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C/ 180	SC 180.6	P 437	L 35	# 521
Dudek, M	ike	Marvell		
Comment	Type T	Comment Status X		

The positioning and ordering of the lanes at the MDI is not specified in 180.9.

SuggestedRemedy

Change the reference from 180.9 to 180A.4

Proposed Response Response Status **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 180 SC 180.6 Page 116 of 149 6/16/2025 2:13:38 PM

C/ 180 SC 180.7.1 P438 L33 # 16	C/ 180 SC 180.7.1 P 438 L 44 # 488
Johnson, John Broadcom	Kimber, Mark Semtech
Comment Type TR Comment Status X	Comment Type TR Comment Status X
The minimum TX launch power and OMA must be increased by 0.2dB to account for the changes in MPI+DGD penalty allocation in Table 180-9.	Over equalizing transmitters can cause BER floor issues as shown in kimber_3dj_01a_2505. Keeping Ceq > 1 (0dB) helps to prevent Tx peaking.
SuggestedRemedy	SuggestedRemedy
In Table 180-7, make the following changes: 1. Change Average launch power, each lane (min) from -3.3 dBm to -3.1 dBm.	Add additional specification line after TECQ specification. Noise Enhancement Factor, Ceq (min) 1
 Change Outer Optical Modulation Amplitude (OMAouter), each lane (min) from -0.3 dBm to -0.1 dBm, and from -1.2 + max(TECQ,TDECQ) to -1 + max(TECQ,TDECQ). Change footnote (b) to read: "An average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 dBm corresponds to average launch power of -3.1 d	Proposed Response Response Status O
OMA of –0.1 dBm with an infinite extinction ratio."	C/ 180 SC 180.7.1 P438 L51 # 425
Supporting editorial instructions are provided in johnson_3dj_01_2507	Ran, Adee Cisco Systems
Proposed Response Response Status O	Comment Type TR Comment Status X
C/ 180 SC 180.7.1 P 438 L 40 # 592 He, Michael TeraHop	Transmitter jitter specifications are required for optical PMDs. Clock jitter, especially at low frequencies, are not captured adequately by existing specifications, and should be limited by specifications to avoid correlated errors in receivers that would degrade link performance.
Comment Type T Comment Status X Tx OMAouter (min) equals -1.2 + max(TECQ, TDECQ) for 0.9 dB < max(TECQ, TDECQ) +	A presentation with more details is planned, but the suggested remedy contains a summary of the suggested changes.
3.4 dB. It means that Tx OMAouter shall increase to compensate TECQ/TDECQ induced penalty. However, the testing data show 1dB TECQ/TDECQ degradation will only cause	SuggestedRemedy
<1dB Rx sensitivity penalty, which means the TECQ/TDECQ penalty is overestimated. <i>cuggestedRemedy</i>	In Table 180-7, add an "Output jitter" row with parameters, values, and units as in Table 176D-3 (module output specifications at TP4).
The TDECQ test methodology needs to be optimized to make it more closely to reflect the	In Table 180-14, add an "Output jitter" row with pattern 4 or 6, and reference to 180.9.14
The TELOG test methodology needs to be optimized to make it more closely to reliect the	in Table 100-14, and an Output jitler 10% with pattern 4 010, and reference to 100.9.14

real TECQ/TDECQ induced penalty. The expected 1dB TECQ/TDECQ degradation vs it's induced penalty would be at least 0.75dB or above. Some new approaches, e.g. adding 1-tap DFE for the ref. equalizer, or narrowing histogram spacing of the eye diagram (referring to rodes_3dj_01_2411) may help. May submit one contribution with collected data to support feasibility.

Proposed Response Response Status O

Add a new subclause 180.9.14 for Output jitter. The content is to be taken from 176D.8.9, with additional exceptions:

- transmit equalizer is fixed

(new subclause).

- when the PHY includes an xAUI-n, the clock source for the test pattern is derived from the clock recovered from the xAUI-n input signal.

Implement with editorial license.

Proposed Response Response Status **0**

C/ 180 SC 180.7.1 Page 117 of 149 6/16/2025 2:13:38 PM

Cl 180 SC 180.7.1 P439 L28 # 17 Johnson, John Broadcom Comment Type TR Comment Status X Figure 180-3 must be updated to correspond to the 0.2 dB increase in OMAouter(min) in Table 180-7. SuggestedRemedy Update the OMAouter(min) curve in Figure 180-3 to correspond to the updated values -0.1 dBm and -1 + max(TECQ,TDECQ), with editorial license. Supporting editorial instructions are provided in johnson_3dj_01_2507 Proposed Response Response Status O O Cl 180 SC 180.7.2 P440 L4 # 1994 Mi, Guangcan Hawei Technologies Co., Ltd To footnote for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2. The footnote for receiver sensitivity show that it shall be measured with conformance tast specified in 180.2. The footnote for receiver sensitivity show that it shall be measured with conformance tast signal at TP3 (see 181.0.13) for the error ratio adlocation specified in 180.2. The source will submit a contribution to discuss the feasibility Proposed Response SuggestedRemedy Instable 180-6 to: "Neasured with conformance tast signal at TP3 (see 181.0.13) for the error ratio adlocation specified in 180.2. The source will submit a contribution to discuss the feasibility Proposed Response Response Status O SuggestedRemedy In Table 180-6 to: "Neasured with conforma		,	,				0		
Comment Type TR Comment Status X Figure 180-3 must be updated to correspond to the 0.2 dB increase in OMAouter(min) in Table 180-7. SuggestedRemedy Update the OMAouter(min) curve in Figure 180-3 to correspond to the updated values o.1 dB and 1 + max(TECQ,TDECQ), with editorial license. Supporting editorial instructions are provided in johnson_3dj_01_2507 Proposed Response Response Status O CI 180 SC 180.7.2 P 440 L 4 # 394 Mi, Guangcan Huawei Technologies Co., Ltd Comment Type TR Comment Status X In Table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. This comment to 180.2. Change footnote c in Table 180-6 to: * Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 80.2. This comment applies to all applicable optical PMD Clauses, i.e. CL180-183, CL185.	C/ 180 SC 180.7.1	P 439	L 28	# 17	C/ 180	SC 180.7.2	P 440	L17	# 18
Figure 180-3 must be updated to correspond to the 0.2 dB increase in OMAouter((min) in Table 180-7. SuggestedRemedy Update the OMAouter(min) curve in Figure 180-3 to correspond to the updated values -0.1 dBm and -1 + max(TECQ,TDECQ), with editorial license. Supporting editorial instructions are provided in johnson_3dj_01_2507 Proposed Response Response Status O C/ 180 SC 180.7.2 P 440 L4 # 394 Mi, Guangcan Huawei Technologies Co., Ltd TeraHop Comment Type TR Comment Status X In Table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2. is impractical to implement. Reason is the same as the comment to 180.2. This comment tapplies to all applicable optical PMD Clauses, i.e. CL180~183, CL185 SuggestedRemedy In table 180-6 to: *. Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2.* The somment tapplies to all applicable optical PMD Clauses, i.e. CL180~183, CL185.	Johnson, John	Broadcom			Johnson,	John	Broadcom		
Table 180-7. MPI+DGD penalty allocation in Table 180-9. Suggested/Remedy Update the OMAouter(min) curve in Figure 180-3 to correspond to the updated values -0.1 GBm and -1 + max[TECQ,TDECQ], with editorial license. Supporting editorial instructions are provided in johnson_3dj_01_2507 Proposed Response Response Status O C/ 180 SC 180.7.2 P440 L4 # 394 Mi, Guangcan Huawei Technologies Co., Ltd C/ 180 SC 180.7.2 P440 L33 # 593 C/ 180 SC 180.7.2 P440 L4 # 394 He, Michael TeraHop C/ 180 SC 180.7.2 P440 L33 # 593 Min Gaugean Huawei Technologies Co., Ltd Comment Type T comment Status X The footnote for receiver sensitivity show that it shall be measured with conformance as the comment to 180.2. The footnote for receiver sensitivity show that it shall be measured with conformance as the comment to 180.2. He, Michael TeraHop Suggested/Remedy In table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured in inflow and the stating time. Ven eed to find a way to shorten the testing time to make it acceptable either for compliance or for m production. Suggested/Remedy In table 180-6 to: * to possible to just accumulate	Comment Type TR	Comment Status X			Comment	Type TR	Comment Status X		
Update the OMAouter(min) curve in Figure 180-3 to correspond to the updated values -0.1 dBm and -1 + max(TECQ,TDECQ), with editorial license. In Table 180-8, change Average receive power, each lane (min) from -6.3 dBm to - Supporting editorial instructions are provided in johnson_3dj_01_2507 Proposed Response Response Status O C1 180 SC 180.7.2 P440 L4 # 394 Mi, Guangcan Huawei Technologies Co., Ltd Comment Type TR Comment Status X O In Table 180-8, footnote for stessed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. This comment applies to all applicable optical PMD Clauses, i.e. CL180–183. CL185 Suggested/Remedy instead of pointing to block error ratio. Point to the error allocation clause of 180.2. Change footnote c in Table 180-6 to: * Suggested/Remedy * Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio apecified in 180.2. Cl 180 SC ensore Status O * Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio apecified in 180.2. Cl 180 Response Status O * Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio apecified in 180.2. Cl 180 Response Status O * Measured with conformance test signal at TP3 (se		e updated to correspond to the	0.2 dB increase	in OMAouter(min) in				by 0.2dB to acc	ount for the changes in
dBm and -1 + max(TÉCQ,TDECQ), with editorial license. Supporting editorial instructions are provided in johnson_3dj_01_2507 Proposed Response Response Status O Cl 180 SC 180.7.2 P440 L4 # 394 Mi, Guangcan Huawei Technologies Co., Ltd TeraHop Comment Type TR Comment Status X The footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. This comment applies to all applicable optical PMD Clauses, i.e. CL180-183, CL185 SuggestedRemedy Instabel 180-6 to: * Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2.* CL180 - 183, CL185.	SuggestedRemedy				Suggested	Remedy			
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C/ 180 SC 180.7.2 P440 L4 # 394 Mi, Guangcan Huawei Technologies Co., Ltd Comment Type TR Comment Status X In Table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. The footnote for receiver sensitivity show that it shall be measured with conformance to specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. However, accumeasuring with block error ratio specified in 180.2. SuggestedRemedy Is it possible to just accumulate a limited codewords for FEC-bin and prediction via expropolating the FEC-bin curve. Will submit a contribution to discuss the feasibility Proposed Response Response Status O N			ison_3dj_01_250	57	Proposed	Response	Response Status 0		
Cl 180 SC 180.7.2 P 440 L4 # 394 Mi, Guangcan Huawei Technologies Co., Ltd Comment Type TR Comment Status X In Table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. He, Michael TeraHop This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185 SuggestedRemedy In Table 180-6 to: To production. Suggested of pointing to block error ratio. Point to the error allocation clause of 180.2. Change footnote c in Table 180-6 to: Nie proposed Response Response Status O Proposed Response Response Status O	^o roposed Response	Response Status O							
Mi, Guangcan Huawei Technologies Co., Ltd Comment Type TR Comment Status X In Table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185 SuggestedRemedy instead of pointing to block error ratio. Point to the error allocation clause of 180.2. Change footnote c in Table 180-6 to: " Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2." This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185.					C/ 180	SC 180.7.2	P 440	L33	# 593
Comment Type TR Comment Status X In Table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. The footnote for receiver sensitivity show that it shall be measured with conformance or for measuring with block error ratio method may need too long time. We need to find a way to shorten the testing time to make it acceptable either for compliance or for more production. SuggestedRemedy instead of pointing to block error ratio. Point to the error allocation clause of 180.2. Change footnote c in Table 180-6 to: " " Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2. " This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185.	C/ 180 SC 180.7.2	2 P 440	L 4	# 394	He, Micha	el	TeraHop		
In Table 180-8, footnote c for stressed receiver sensitivity. The requirement of measured for the block error ratio specified in 180.2 is impractical to implement. Reason is the same as the comment to 180.2. This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185 SuggestedRemedy instead of pointing to block error ratio. Point to the error allocation clause of 180.2. Change footnote c in Table 180-6 to: " Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2. " This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185.	∕li, Guangcan	Huawei Tech	nologies Co., Lto	ł	Comment	<i>Түре</i> т	Comment Status X		
SuggestedRemedy instead of pointing to block error ratio. Point to the error allocation clause of 180.2. Change footnote c in Table 180-6 to: " Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2." This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185.	In Table 180-8, footr for the block error ra as the comment to 1	note c for stressed receiver sensition specified in 180.2 is impract 80.2.	ical to implemen	t. Reason is the same	signal measu way to	at TP3 (see 18 uring with block shorten the tes	0.8) for the block error ratio spe error ratio method may need to	ecified in 180.2. oo long time. W	. However, accurately e need to find a proper
instead of pointing to block error ratio. Point to the error allocation clause of 180.2. Change footnote c in Table 180-6 to: " Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2. " This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185.		es to all applicable optical PMD	Clauses, i.e. C	L180~183, CL185	Suggested	Remedy			
Change footnote c in Table 180-6 to: " Measured with conformance test signal at TP3 (see 181.0.13) for the error ratio allocation specified in 180.2. " This comment applies to all applicable optical PMD Clauses, i.e. CL180~183, CL185.		block error ratio. Point to the e	error allocation cl	ause of 180.2.					
	" Measured with cor	nformance test signal at TP3 (se	ee 181.0.13) for ⁻	the error ratio	Proposed	Response	Response Status O		
Change the respective CL18x.			Clauses, i.e. C	L180~183, CL185.					
Proposed Response Response Status O	Proposed Response	Response Status O							

C/ 180 SC 180.7.2

C/ 180	SC 180.7.2	P 440	L33	# 391
Rodes, Ro	oberto	Coherent		
Comment	Type TR	Comment Status X		

The receiver sensitivity specification currently relies on a complex block error ratio calculation. However, the methodology is unclear regarding the required test duration to meet the specification, and it lacks guidance on how to perform a 'statistical projection'. As receiver sensitivity is a primary specification for a PMD receiver, its test and verification procedures should be clear and practical to execute, while ensuring a reasonable level of confidence. Supporting presentation will be provided

SuggestedRemedy

replace note c by:"Measured using the conformance test signal at TP3 (refer to Section 180.8), with an error ratio allocation one decade lower than specified in 174A.12 for PMD-to-PMD." Apply also to clauses 181, 182 and 183

Proposed Response Response Status O

C/ 180	SC 180.7.3	P 441	L 42	# 15
Johnson,	John	Broadcom		

Comment Type TR Comment Status X

The allocation for MPI and DGD penalties of 0.1 dB is too small. It should be increased to 0.1 dB for MPI and 0.2 dB for DGD per johnson_3dj_01-2505.

SuggestedRemedy

- In Table 180-9, make the following changes:
- 1. Change Allocation for penalties (for max TDECQ) from 3.5 dB to 3.7 dB
- 2. Change Power budget (for max TDECQ) from 6.5 dB to 6.7 dB
- 3. Change footnote (b) to read: "...This channel insertion loss may be reduced by up to 0.5 dB depending on ..."

4. Change footnote (c) to read: "...includes an allocation of 0.1 dB for MPI and 0.2 dB for DGD penalties. For cases with a channel insertion loss less than 3 dB, as shown in Table 180–12, the allocation for penalties should be "6.7 – channel insertion loss".

Supporting editorial instructions are provided in johnson_3dj_01_2507

Proposed Response Response Status **O**

C/ 180	SC 180.7.3	P 441	L 46	# 342
Ghiasi, Ali		Ghiasi Qunatu	m/Marvell	
Comment Ty	pe TR	Comment Status X		

MPI/DGP penalty of 0.1 dB would be too small for 200GBASE-DR1/400GBASE-DR2/800GBASE-DR4/1.6TBASE-DR8

SuggestedRemedy

The BS/CD MPI penalty were evaluated with ER of 5 dB which is too high for 200G Si MZM. Analysis need to be based on SER of 5.6E-4, with half the loss at mid-span, and ER=3.5, see https://www.ieee802.org/3/dj/public/25_05/ghiasi_3dj_01b_2505.pdf and https://www.ieee802.org/3/dj/public/25_05/johnson_3dj_01a_2505.pdf Given that Table 180-12 with 8 discrete reflectance -55 dB and -45 dB and zero discrete reflectacen of -45 dB and -35 dB has 0.15 dB of MPI penalty with addtion of ~0.18 dB, or with ~ 0.3 dB total penalty.

Require following adjustments:

Table 180-9 power budget increases from 6.5 dB to 6.7 dB

Table 180-7 average launch power increases from -3.3 dBm to -3.1 dBm, OMA(min) increases by +0.2 dB

Table 180-8 average receive power increases from -6.3 dBm to -6.1 dBm See ghiasi 3dj 02 2507

Proposed Response Response Status **O**

C/ 180	SC 180.7.3	P 442	L 6	# 19
Johnson,	John	Broadcom		

Comment Type TR Comment Status X

Figure 180-5 must be updated to correspond to the 0.2 dB increase in TX OMA outer in Table 180-7.

SuggestedRemedy

Update the Transmitter OMAouter(min) curve in Figure 180-5 to correspond to the updated values in Table 180-7, with editorial license.

Supporting editorial instructions are provided in johnson_3dj_01_2507

Proposed Response Response Status **0**

C/ 180 SC 180.7.3 Page 119 of 149 6/16/2025 2:13:38 PM

C/ 180	SC 180.8.1	P443	L 44	# 285
Maguire,	Valerie	Copperopolis;	aff'l w/ CME Co	onsulting and Cisco

Comment Type TR Comment Status X

The cabled optical fiber attenuation characteristics in Table 180-11, Table 181-9, Table 182-11, and Table 183-10 and associated intro text need a careful look... The current revision of the TIA Optical Fiber Cabling and Components Standard is ANSI/TIA-568.3-E. The document specifies B-652.D or B-657 as acceptable fiber for Outside Plant cables and specifies the maximum cabled attenuation as 0.4 dB/km at 1310nm, 1383nm, and 1550nm. While it's true that ANSI/TIA-568.3-E specifies the maximum cabled attenuation as 0.5 dB/km at 1310nm and 1550nm, this is not aligned with B-652.D or B-657 (OS2) as mentioned in the intro paragraph to each table. A dash is missing between "TIA" and "568" in the ANSI/TIA-568.3-C reference. Unecessary commas between 'or' statements. I think what the draft is trying to do is accomodate legacy installed OSP cabling, but calling out 'newer, higher peforming cables with exceptions' as the specification is a confusing way to do this.

SuggestedRemedy

Option A, in Table 180-11, Table 181-9, Table 182-11, and Table 183-10 and their corrsponding intro text:

Replace "The optical fiber cable requirements are satisfied by cables containing ITU-T type G.652.D (low water peak, dispersion unshifted), or type G.657.A1, or type G.657.A2 (bend insensitive) fibers, or the requirements in Table 18x–yy where they differ." with "The optical fiber cable requirements are satisfied by cables meeting the characteristics in Table 18x–yy. The use of optical fiber cables containing ITU-T type G.652.D (low water peak, dispersion unshifted), type G.657.A1, or type G.657.A2 (bend insensitive) fibers is recommended."

Replace "ANSI/TIA 568-C.3" with "ANSI/TIA-568-C.3"

Option B, in Table 180-11, Table 181-9, Table 182-11, and Table 183-10 and their corrsponding intro text:

Replace "The optical fiber cable requirements are satisfied by cables containing ITU-T type G.652.D (low water peak, dispersion unshifted), or type G.657.A1, or type G.657.A2 (bend insensitive) fibers, or the requirements in Table 18x–yy where they differ." with "The optical fiber cable requirements are satisfied by cables meeting the characteristics in Table 18x–yy. Optical fiber cables containing ITU-T type G.652.D (low water peak, dispersion unshifted), type G.657.A1, or type G.657.A2 (bend insensitive) fibers are examples of cables that exceed these requirements."

Replace "ANSI/TIA 568-C.3" with "ANSI/TIA-568-C.3"

Option C, in Table 180-11, Table 181-9, Table 182-11, and Table 183-10 and their corrsponding intro text:

Replace "0.5" with "0.4"

Replace "...ITU-T type G.652.D (low water peak, dispersion unshifted), or type G.657.A1, or type G.657.A2 (bend insensitive) fibers, or the requirements in Table 18x–yy where they differ." with "...ITU-T type G.652.D (low water peak, dispersion unshifted), type G.657.A1, type G.657.A2 (bend insensitive), or other fibers meeting the requirements in Table 18x–yy."

Replace " ANSI/TIA 568-C.3" with "ANSI/TIA-568-E.3"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

Proposed	Respo	nse	Response Status O		
C/ 180	SC	180.8.2	P 444	L10	# 20
Johnson,	John		Broadcom		
Comment	Туре	TR	Comment Status X		
			nannel insertion loss Table sentation johnson_3dj_01_		dated MPI penalties

SuggestedRemedy

Replace the values of maximum channel insertion loss in Table 180-12 with the new values included in supporting editorial presentation, johnson_3dj_01_2507, slide 7.

Proposed Response Response Status **O**

C/ 180	SC 180.8.3	P 444	L 47	# 194
Huber, Th	omas	Nokia		
Comment	Туре Т	Comment Status X		
DR M	DIs use pairs of	fibers		

SuggestedRemedy

Change "...besides the option to connect to a single fiber MDI, ..." to "...besides the option to connect to a single fiber-pair MDI, ..."

Proposed Response Response Status **0**

C/ 180 SC 180.8.3 Page 120 of 149 6/16/2025 2:13:38 PM

C/ 180 SC 180.8.3	P 444	L 47	# 134	C/ 180	SC 180.9.5	P 447	L1	# 1
Parsons, Earl	CommScope			El-Chayet	o, Ahmad	Keysight Tecl	hnologies (ahma	ad.el-chayeb@keysight.c
Comment Type T	Comment Status X			Comment	Type TR	Comment Status X		
The phrase "option to in that MDI.	o connect to a single fiber MDI	is incorrect sinc	e there are two fibers			DECQ points to clause 121.8 This definition is not a very goo		
SuggestedRemedy				Suggested	dRemedy			
	ASE-DR1, besides the option to ecified MDI optical receptacles terface."			with li	nk performance.	extend it to CER (codeword of CER TDECQ definition need t presentation will be provided	to be technically	y and economically
to				Proposed	Response	Response Status O		
	l, besides the option to connec ed MDI optical receptacles, a s ."			C/ 180 Rodes, Ro	SC 180.9.5	P 447 Coherent	L 21	# 393
Proposed Response	Response Status 0			Comment		Comment Status X		
Cl 180 SC 180.9.1 Dudek, Mike Comment Type TR	P 445 Marvell Comment Status X	L 31	# 530	The construction The construction Internat	urrent reference number of transr mance—from pa le than actual im num value to bet	receiver assumption used in T nitters—despite demonstrating assing the TDECQ test. The re oplemented receivers. It is pro ter reflect practical receiver pe	g excellent real- eference receive posed to add a	world receiver er is significantly less 1-tap DFE with a limited
better to reference th rather than the older SuggestedRemedy	oding should be listed as a pos e description of the 200G per li reference in precoding as an additional test	ane PRBS31Q t	est pattern in 176.7.4.2	Suggested replac combi period	dRemedy e with:" The refe ned with a 1-tap , with equalizer	erence equalizer is a 15-tap, T decision feedback equalizer (coefficient constraints as shov with max value 0.3. Apply als	(DFE), where T wn in Table 180-	is the symbol -15". In Table 180-15
pattern definition sho	rn as an option wherever patte uld be 176.7.4.2. Change the 5.11.2.2 to 176.7.4.2. Make e	test pattern gene	erator generator for	Proposed	Response	Response Status O		

Proposed Response

Response Status 0

C/ 180 SC 180.9.5

C/ 180 SC 180.9	5 P447	L 21	# 381	C/ 180	SC 180.9	9.5	P 448	L17	# 430
Ghiasi, Ali	Ghiasi Qunat	um/Marvell		Ran, Adee			Cisco System	S	
Comment Type TR	Comment Status X			Comment	Type TR		Comment Status X		
DSPs are 20-30 tap	erence equalizer is only 15 tap F s FFE with DFE and optional M nuch better than reference equa n for RX DSP.	LSE. Many have	raised that real	and po will be	stcursor (i = able to appl	: 1) co y sim	r currently allows a very large oefficients of the reference re illar equalization.	ceiver. This a	ssumes real receivers
SuggestedRemedy							fficient data was provided in t rg/3/dj/public/24_05/welch_3		
with 1T DFE. The S The reference equa feedback equalizer period, with equalizer	tep is to supplement the curren Scope can already support 1TDF lizer is a 15-tap feed-forward eq (DFE), where T is the symbol er coefficient constraints as sho limits for DFE min=-0.4 max=0	FE. Jualizer (FFE) and	d 1-tap decision-	points - https: are inc The re	have pre/po //www.ieeea luded with p ference reco	st coo 302.or ore/po eiver l	efficients within the range -0. rg/3/dj/public/24_09/welch_3 sst cursors that reach approxi limits were set with margin re able, and allowing transmitter	3 to +0.1. dj_01_2409.pc matley -0.4. lative to all pro	df - where new data sets ovided data sets, such
see ghiasi_3dj_04_							there was no evidence or ind		
Proposed Response	Response Status 0			transm	itters enable	e goo	d receiver performance.		
-> Qt = 3.846, 1 dB but that doesn't mat SuggestedRemedy Change Qt to 3.846	Nvidia <i>Comment Status</i> X e related Q t value (see 121.8.5. e better "SNR" (but doesn't cha ter). do this less for SRS and U , 1 dBe better "SNR" (but does at doesn't matter). Don't change	nge xECQ by tha RS. 10*log10(3.8 n't change xECQ	346/3.428) = 0.5 by that much).	shows differen degrac limited degrac better Requir and wo have s stresse See https://	that referent nece between lation in rea equalization les the perforn n future des ing such str pould likely cr uch impairm ed receiver to www.ieee80	ce rei p pre/ rece n capa orman signs. ong e eate n nents, esting	s://www.ieee802.org/3/dj/pub ceiver coefficients that have post coefficients (indicating p ivers. It is known fact that DS ability (especially for precurso nee (e.g. due to limited ADC r equalization settings indicates unexpectedly bad link perforr , a signal with such bad wave g; this should not be allowed. g/3/dj/public/adhoc/electrical// ested remedy has been upda	arge magnitu hase distortio P receiver im or) and that st ange). It is no poor transmi nance. Even i form shaping 25_0605/ran_:	des, and especially large n), create severe plementations have rong equalization t expected to be much tter waveform shaping f real transmitters will not might be used for 3dj_elec_01b_250605.pd
				Suggested	Remedy				
				to -0.3		0	e the Minimum value for i=-1 value for i=1 from 0.2 to 0.1.	from -0.5 to -0	0.3, and for i=1 from0.6
					atively, spec er does not o		at the difference between coe ed +/-0.3.	fficients -1 an	d +1 of the reference
				Apply 1	he same ch	ange	s in Table 181-13, Table 182	-15, and Table	- 183-14
									5 100 1 1.

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/ 180	SC 18	80.9.5	P 448	L18	# 343	C/ 180	SC	180.9.5	P 448	L23	# 392
Shiasi, Ali			Ghiasi Quna	tum/Marvell		Rodes, Ro	oberto		Coherent		
Comment	Туре '	TR	Comment Status X			Comment	Туре	т	Comment Status X		
that for degrac <i>Suggested</i>	r some w de with thi <i>Remedy</i>	veired FF his 100G	r.ieee802.org/3/dj/public/25 E setting still one may hav DSP likley due to timing re	e compliant TDÉC covery	Q but BER can	exces test. In and th	sive gro ntroduci ne first p	oup delay ing a limit precursor v	5, 100G module data showe can cause issues at the reco on the maximum absolute o would significantly increase venting their use and reducin	eiver, despite stil difference betwee the TDECQ pena	I passing the TDECQ on the first postcursor alty for such poorly
			v.ieee802.org/3/dj/public/24 as used to set the limits for			Suggested	dRemed	dy			
in man problei	ny good m m still exi	nodules a ist for we	and we are not sure given t ired transmitter FFE settig	hat we have link t ns. Any limit on T	raining if this type of DECQ FFE taps must				osolute difference between c 81, 182 and 183	c(-1) and c(1) sha	Il be less than 0.3.".
adjsutr transm	ments wil nitter FFE	II have m E casuing	moduels, looking at the da inimum impact on module receive BER floor:	yield and will add	ess the case of weired	Proposed	Respor	nse	Response Status O		
Other	improven	nents are	to 0.1 and add following r is to use Block TDECQ a	nd functional hard	ware receiver	C/ 180	SC	180.9.5	P 448	L 25	# 320
	tps://www niasi_3dj_		2.org/3/dj/public/25_05/ghia	isi_3dj_03a_2505	.pdf	Brown, Ma	att		Alphawave S	Semi	
-	Response		Response Status O			Comment	Туре	Е	Comment Status X		
/ 180	SC 18		P448	L 23	# 508	norma	alized, th	hus saying	a is out of sync with the tabl g they are relative to c(0) is e table already associates "r	redundant. Howe	ver, it is not stated what
udek, Mil		00.0.0	Marvell	- 20	<i>"</i> 300	Suggested	dRemed	dy			
comment		TR	Comment Status X						The normalized tap coefficie e 181-13, Table 182-15, and		to c(0)."
https:// that de	espite a p	assing T	groups/802/3/dj/public/25_ DECQ value, with non opti	mum Tx settings	hat require the	Proposed	Respor	nse	Response Status O		
			ive a large difference in va a receiver has excessive B			C/ 180	SC	180.9.5	P 448	L 27	# 321
expect	ted that w	vell tuned	transmitters will have this			Brown, Ma	att		Alphawave S	Semi	
•	zer tap va					Comment	Туре	т	Comment Status X		
uggested	-								5 footnote b The table spe		
	n extra re 32-15 and		nt to table 180.15 that Abs	C(-1)-C(+1))<0.3	. Also to tables 181-	and no the no	ormalize ormalize	ed values ed or non-r	for the other coeffecients. It normalized coeffecients.	is not immediate	ely clear whether to sum
roposed	Response	е	Response Status 0			Suggested	dRemed	dy			
						simila	r.		Equalizer gain is the sum of e 181-13, Table 182-15, and		zed coefficients." or
										1 1 ADIE 103-14.	
						Proposed	RESPOR	100	Response Status O		

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 180 SC 180.9.5 Page 123 of 149 6/16/2025 2:13:38 PM

C/ 180 SC 180.9.	.6 P449	L14	# 322	C/ 180A SC 180A	l l	P 850	L 9	# 520
Brown, Matt	Alphawave S	Semi		Dudek, Mike		Marvell		
Comment Type E	Comment Status X			Comment Type E	Comment S	Status X		
Use of possesive gi is unecessary here.	rammar is inconsistent with simi	ilar phrases used	through this draft and		nex seems over broa are the title of Annex			
SuggestedRemedy				SuggestedRemedy				
Change "transmitte Also page 472 line 3	r's" to "transmitter" 38, page 499 line 16, page 523 l	line 46.		8 1	HYs" to "Clause 18		181 optical PH	Ys"
Proposed Response	Response Status O			Proposed Response	Response S	tatus U		
	10 D 150	1.00	# 	C/ 180A SC 180A	.4.1	P 852	L17	# 523
C/ 180 SC 180.9.		L 38	# 531	Dudek, Mike		Marvell		
Dudek, Mike	Marvell			Comment Type T	Comment S	Status X		
Comment Type TR	Comment Status X			For inter-operabilit	y the PMDs on both	ends and the	fiber cable plan	t have to match.
Whether the precod	ling is used for Receiver sensitiv	vity and stressed	receiver sensitivity					
should be explicitly	stated.	,	Teoerver sensitivity	SuggestedRemedy	a used" to "shall be		n naga 952 lina	. 47
SuggestedRemedy			,	Change "should b	e used" to "shall be		on page 853 line	e 47
SuggestedRemedy On line 38 inset the precoding during IL	stated. setence . "A precoded patterr T." between " Table 180-14" 51. Make equivalent changes t	n shall be used if and "The" A	the receiver requests	,	e used" to "shall be <i>Response S</i>		on page 853 line	47
SuggestedRemedy On line 38 inset the precoding during IL on line 2 of page 45	setence . "A precoded patterr T." between " Table 180-14"	n shall be used if and "The" A	the receiver requests	Change "should b	Response S		on page 853 line <i>L</i> 24	# 47 # <u>195</u>
SuggestedRemedy On line 38 inset the precoding during IL on line 2 of page 45	setence . "A precoded patterr T." between " Table 180-14" 51. Make equivalent changes t	n shall be used if and "The" A	the receiver requests	Change "should b Proposed Response	Response S	tatus O		
SuggestedRemedy On line 38 inset the precoding during IL on line 2 of page 45 Proposed Response	setence . "A precoded patterr T." between " Table 180-14" 1. Make equivalent changes t <i>Response Status</i> O	n shall be used if and "The" A o Clause 181.	the receiver requests Also after Table 180-14	Change "should b Proposed Response Cl 181 SC 181.	Response S	<i>tatus</i> O P 460 Nokia		
SuggestedRemedy On line 38 inset the precoding during IL on line 2 of page 45 Proposed Response Cl 180A SC 180A D'Ambrosia, John Comment Type ER	setence . "A precoded patterr T." between " Table 180-14" 1. Make equivalent changes t <i>Response Status</i> O <i>P</i> 850	n shall be used if and "The" A to Clause 181. <i>L</i> 4 .S. Subsidiary of	the receiver requests Also after Table 180-14 # <u>51</u> Huawei	Change "should b Proposed Response Cl 181 SC 181. Huber, Thomas Comment Type T While it is clear wh term has specific (see 1.4.278) Ann variable tx_mode	<i>Response</i> S. 5.12 DATA mode" is meaning for 1000BA ex 178B.5 indicates has the value 'data', 8B-8. As such, it wo	P460 P460 Nokia Status X intended to m SE-T PHYs th that in the cor which is asso	L 24 Lean here in the nat differs from v ntext of ILT, "dat iciated with being	# <u>195</u> context of ILT, that what is intended here a mode" means the
SuggestedRemedy On line 38 inset the precoding during IL on line 2 of page 45 Proposed Response Cl 180A SC 180A D'Ambrosia, John Comment Type ER The title of the Anne optics. SuggestedRemedy	setence . "A precoded patterr T." between " Table 180-14" 51. Make equivalent changes t <i>Response Status</i> O <i>P</i> 850 Futurewei, U <i>Comment Status</i> X ex is incorrect. This annex only	n shall be used if and "The" A o Clause 181. <u>L4</u> .S. Subsidiary of addresses MDIs	the receiver requests Also after Table 180-14 # 51 Huawei for the DR family of	Change "should b Proposed Response Cl 181 SC 181. Huber, Thomas Comment Type T While it is clear wh term has specific it (see 1.4.278) Ann variable tx_model state per figure 17	<i>Response</i> S. 5.12 DATA mode" is meaning for 1000BA ex 178B.5 indicates has the value 'data', 8B-8. As such, it wo	P460 P460 Nokia Status X intended to m SE-T PHYs th that in the cor which is asso	L 24 Lean here in the nat differs from v ntext of ILT, "dat iciated with being	# <u>195</u> context of ILT, that what is intended here a mode" means the g in the PATH_UP
SuggestedRemedy On line 38 inset the precoding during IL on line 2 of page 45 Proposed Response Cl 180A SC 180A D'Ambrosia, John Comment Type ER The title of the Anne optics. SuggestedRemedy Change title to "MD	setence . "A precoded patterr T." between " Table 180-14" 51. Make equivalent changes t <i>Response Status</i> O <i>P</i> 850 Futurewei, U <i>Comment Status</i> X	n shall be used if and "The" A o Clause 181. <i>L</i> 4 .S. Subsidiary of addresses MDIs ASE-DR2, 800GB	the receiver requests Nso after Table 180-14 # 51 Huawei for the DR family of BASE-DR4, 1.6TBASE-	Change "should b Proposed Response Cl 181 SC 181. Huber, Thomas Comment Type T While it is clear wh term has specific to (see 1.4.278) Ann variable tx_model state per figure 17 the PATH_UP sta SuggestedRemedy Change "coordina	<i>Response</i> S. 5.12 DATA mode" is meaning for 1000BA ex 178B.5 indicates has the value 'data', 8B-8. As such, it wo	P460 Nokia Status X intended to m SE-T PHYs th that in the cor which is asso build be more c	L 24 Lean here in the nat differs from w ntext of ILT, "dat iciated with being clear if the text in	# 195 context of ILT, that what is intended here a mode" means the g in the PATH_UP 181.5.12 referred to

C/ 181 SC 181.5.12

	SC 181.7.1	P 462	L16	# 22	C/ 181	SC 181.7.1	P 462	L 39	# 426
Johnson, J	lohn	Broadcom			Ran, Adee		Cisco Syste	ms	
Comment	Type TR	Comment Status X			Comment Ty	/pe TR	Comment Status X		
		ch power and OMA must be in penalty allocation in Table 181		dB to account for the	frequenc	cies, are not ca	ications are required for opt ptured adequately by existing	ng specifications	and should be limited
Suggested In Tabl	-	the following changes:			by speci performa		oid correlated errors in recei	vers that would o	legrade link
2. Cha	ange Outer Opti	unch power, each lane (min) f cal Modulation Amplitude (OM 0.1 + max(TECQ,TDECQ) to (Aouter), each la	ane (min) from 0.8 dBm		ntation with mo y of the sugges	re details is planned, but the sted changes.	e suggested rem	edy contains a
) to read: "An average launch			SuggestedR	emedy			
OMA o	of 0.9 dBm with a	an infinite extinction ratio."				my similar cor 181, with editor	nment against 180.7.1, impl ial license.	ement the corres	ponding changes in
Suppo	rting editorial ins	structions are provided in johns	son_3dj_01_25	07	Proposed Re	esponse	Response Status 0		
Proposed I	Response	Response Status O							
					C/ 181	SC 181.7.1	P 463	L 4	# 23
C/ 181	SC 181.7.1	P 462	L19	# 429	Johnson, Jo	hn	Broadcom		
Ran, Adee		Cisco Systems	S		Comment Ty	/pe TR	Comment Status X		
Comment 1	Туре Т	Comment Status X			Figure 1	81-3 must be i	pdated to correspond to the	0 1 dB incrosed	in OMAcutor(min) in
	181-5 has a sub	-row of OMA_outer (min): "for	TDECQ<0.9 df	8"	Table 18				
Table ² Should		x(TECQ, TDECQ)<0.9 dB", as			Table 18 <i>SuggestedR</i> Update t	31-5. ? <i>emedy</i> the OMAouter(min) curve in Figure 181-3 t	o correspond to	
Table ² Should Table ²	In't it be "for ma 182-7, and Table	x(TECQ, TDECQ)<0.9 dB", as			Table 18 <i>SuggestedR</i> Update t	31-5. ? <i>emedy</i> the OMAouter(o correspond to	
Table ⁷ Should Table ⁷ Suggested	In't it be "for ma 182-7, and Table <i>Remedy</i>	x(TECQ, TDECQ)<0.9 dB", as			Table 18 <i>SuggestedR</i> Update t dBm and	31-5. <i>Cemedy</i> the OMAouter(d 0 + max(TEC	min) curve in Figure 181-3 t	o correspond to cense.	he updated values 0.9
Table ´ Should Table ´ Suggested Chang	In't it be "for ma 182-7, and Tabl <i>Remedy</i> e to "for max(TE	x(TECQ, TDECQ)<0.9 dB", as e 183-6?			Table 18 <i>SuggestedR</i> Update t dBm and	31-5. <i>Cemedy</i> the OMAouter(d 0 + max(TEC ing editorial ins	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li	o correspond to cense.	he updated values 0.9
Table ² Should Table ² Suggested Chang Proposed I	In't it be "for ma 182-7, and Tabl <i>Remedy</i> e to "for max(TE	x(TECQ, TDECQ)<0.9 dB", as e 183-6? ECQ, TDECQ)<0.9 dB".			Table 18 SuggestedR Update t dBm and Supporti	31-5. <i>Cemedy</i> the OMAouter(d 0 + max(TEC ing editorial ins	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li tructions are provided in joh	o correspond to cense.	he updated values 0.9
Table ² Should Table ² Suggested Chang Proposed I	In't it be "for ma 182-7, and Table <i>Remedy</i> e to "for max(TE Response SC 181.7.1	x(TECQ, TDECQ)<0.9 dB", as e 183-6? ECQ, TDECQ)<0.9 dB". <i>Response Status</i> O	in the similar r	ows in Table 180-7,	Table 18 SuggestedR Update 1 dBm and Supporti Proposed Re	31-5. Permedy the OMAouter(d 0 + max(TEC ing editorial ins esponse SC 181.7.2	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li tructions are provided in joh <i>Response Status</i> O	o correspond to cense. inson_3dj_01_25	the updated values 0.9
Table ⁷ Should Table ⁷ Suggested	In't it be "for ma 182-7, and Table Remedy e to "for max(TE Response SC 181.7.1 ark	x(TECQ, TDECQ)<0.9 dB", as e 183-6? ECQ, TDECQ)<0.9 dB". <i>Response Status</i> O <i>P</i> 462	in the similar r	ows in Table 180-7,	Table 18 SuggestedR Update t dBm and Supporti Proposed Re C/ 181	31-5. Remedy the OMAouter(d 0 + max(TEC ing editorial ins esponse SC 181.7.2 hhn	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li tructions are provided in joh <i>Response Status</i> O <i>P</i> 464	o correspond to cense. inson_3dj_01_25	he updated values 0.9
Table ^ Should Table ^ Suggested Chang Proposed I C/ 181 Kimber, Ma Comment 1 Over e	In't it be "for ma 182-7, and Table Remedy e to "for max(TE Response SC 181.7.1 ark Type TR qualizing transn	x(TECQ, TDECQ)<0.9 dB", as e 183-6? ECQ, TDECQ)<0.9 dB". <i>Response Status</i> O <i>P</i> 462 Semtech	in the similar r	ows in Table 180-7, # [<u>489</u>	Table 18 SuggestedR Update 1 dBm and Supporti Proposed Re C/ 181 Johnson, Jo Comment Ty The min	31-5. <i>Remedy</i> the OMAouter(d 0 + max(TEC ing editorial ins <i>esponse</i> SC 181.7.2 whn <i>ppe</i> TR imum RX rece	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li tructions are provided in joh <i>Response Status</i> O <i>P</i> 464 Broadcom	o correspond to cense. Inson_3dj_01_25	the updated values 0.9
Table ² Should Table ² Suggested Chang Proposed I C 181 Kimber, Ma Comment a Over e kimber	In't it be "for ma 182-7, and Table Remedy e to "for max(TE Response SC 181.7.1 ark Type TR qualizing transn _3dj_01a_2505	x(TECQ, TDECQ)<0.9 dB", as e 183-6? ECQ, TDECQ)<0.9 dB". <i>Response Status</i> O <i>P</i> 462 Semtech <i>Comment Status</i> X nitters can cause BER floor iss	in the similar r	ows in Table 180-7, # [<u>489</u>	Table 18 SuggestedR Update 1 dBm and Supporti Proposed Re C/ 181 Johnson, Jo Comment Ty The min	31-5. Permedy the OMAouter(d 0 + max(TEC ing editorial ins esponse SC 181.7.2 whn ype TR imum RX rece SD penalty allog	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li tructions are provided in joh <i>Response Status</i> O <i>P</i> 464 Broadcom <i>Comment Status</i> X ve power must be increased	o correspond to cense. Inson_3dj_01_25	the updated values 0.9 07 # 2 <u>4</u>
Table ² Should Table ² Suggested Chang Proposed I Cl 181 Kimber, Ma Comment ² Over e kimber Suggested Add ac	In't it be "for ma 182-7, and Table Remedy e to "for max(TE Response SC 181.7.1 ark Type TR qualizing transn _3dj_01a_2505 Remedy Iditional specific	x(TECQ, TDECQ)<0.9 dB", as e 183-6? ECQ, TDECQ)<0.9 dB". <i>Response Status</i> O <i>P</i> 462 Semtech <i>Comment Status</i> X nitters can cause BER floor iss	L 26	ows in Table 180-7, # [<u>489</u>	Table 18 SuggestedR Update 1 dBm and Supporti Proposed Re Cl 181 Johnson, Jo Comment Ty The min MPI+DG SuggestedR In Table	31-5. Permedy the OMAouter(d 0 + max(TEC ing editorial ins esponse SC 181.7.2 whn ype TR imum RX rece SD penalty allow permedy 181-6, change	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li tructions are provided in joh <i>Response Status</i> O <i>P</i> 464 Broadcom <i>Comment Status</i> X ve power must be increased cation in Table 181-7.	o correspond to cense. Inson_3dj_01_25 <i>L</i> 18 d by 0.1 dB to ac ich lane (min) fro	the updated values 0.9 07 # 24 count for the changes m -5.7 dBm to -5.6 dB
Table ² Should Table ² Suggested Chang Proposed I Cl 181 Kimber, Ma Comment ² Over e kimber Suggested Add ac	In't it be "for ma 182-7, and Table Remedy e to "for max(TE Response SC 181.7.1 ark Type TR qualizing transm _3dj_01a_2505 Remedy Iditional specific Enhancement F	x(TECQ, TDECQ)<0.9 dB", as e 183-6? ECQ, TDECQ)<0.9 dB". <i>Response Status</i> O <i>P</i> 462 Semtech <i>Comment Status</i> X nitters can cause BER floor iss . Keeping Ceq > 1 (0dB) helps	L 26	ows in Table 180-7, # [<u>489</u>	Table 18 SuggestedR Update 1 dBm and Supporti Proposed Re Cl 181 Johnson, Jo Comment Ty The min MPI+DG SuggestedR In Table	31-5. Permedy the OMAouter(d 0 + max(TEC ing editorial ins esponse SC 181.7.2 whn ype TR imum RX rece SD penalty allow permedy 181-6, change	min) curve in Figure 181-3 t CQ,TDECQ), with editorial li tructions are provided in joh <i>Response Status</i> O <i>P</i> 464 Broadcom <i>Comment Status</i> X ve power must be increased cation in Table 181-7.	o correspond to cense. Inson_3dj_01_25 <i>L</i> 18 d by 0.1 dB to ac ich lane (min) fro	the updated values 0.9 07 # 2 <u>4</u> count for the changes m -5.7 dBm to -5.6 dB

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/generalC/181Page 125 of 149COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawnSC 181.7.26/16/2025 2:13:38 PMSORT ORDER: Clause, Subclause, page, lineSC 181.7.2SC 181.7.25/16/2025 2:13:38 PM

181 SC 181.7.3 P465 L 32 # 21	C/ 181 SC 181.7.3 P465 L45 # 143
nnson, John Broadcom	Lambert, Angela Corning
mment Type TR Comment Status X	Comment Type E Comment Status X
The allocation for MPI and DGD penalties of 0.5 dB is too small. It should be increased to 0.4 dB for MPI and 0.2 dB for DGD per consensus presentation johnson_3dj_01_2505. ggestedRemedy	Cabled fiber attenuation and fiber attenuation are different. As noted at the footnote of other link power budget tables (i.e. Table 180-9 on p. 441 and Table 182-9 on p. 491) and in the respective Optical fiber and cable characteristics tables (in this case, Table 181-9 of page 467), this should be "Cabled optical fiber attenuation"
In Table 181-7, make the following changes:	SuggestedRemedy
 Change Allocation for penalties (for max TDECQ) from 3.9 dB to 4 dB Change Power budget (max TDECQ) from 7.4 dB to 7.5 dB 	Change "fiber attenuation" to "cabled optical fiber attenuation"
 Change Fower budget (max FDECG) non 7.4 db to 7.5 db Replace footnotes b, c and d with new footnotes b and c following the form of Table 180- 9, with changes appropriate to CL 181, as given in johnson_3dj_01_2507, slide 6. 	Proposed Response Response Status O
Supporting editorial instructions are provided in johnson_3dj_01_2507	C/ 181 SC 181.7.3 P466 L6 # 25
posed Response Response Status O	
	Johnson, John Broadcom - Comment Type TR Comment Status X
181 SC 181.7.3 P465 L35 # 344	- Comment Type TR Comment Status X Figure 181-5 must be updated to correspond to the 0.1 dB increase in TX OMAouter in
iasi. Ali Ghiasi Qunatum/Marvell	Table 181-5.
mment Type TR Comment Status X	SuggestedRemedy
MPI/DGP penalty of 0.5 dB would be too small for 800GBASE-FR4-500	Update the Transmitter OMAouter(min) curve in Figure 181-5 to correspond to the update
ggestedRemedy	values in Table 181-5, with editorial license.
The BS/CD MPI penalty were evaluated with ER of 5 dB which is too high for 200G Si	Supporting editorial instructions are provided in johnson_3di_01_2507
MZM. Analysis need to be based on SER of 5.6E-4, with half the loss at mid-span, and ER=3.5, see https://www.ieee802.org/3/dj/public/25_05/ghiasi_3dj_01b_2505.pdf and https://www.ieee802.org/3/dj/public/25_05/johnson_3dj_01a_2505.pdf	Proposed Response Response Status O
Given that double link has 4 discrete reflectance -55 dB and -45 dB and 4 discrete reflectacen of -45 dB and -35 dB has 0.5 dB of MPI penalty with addtion of ~0.18 dB, or	C/ 181 SC 181.8 P467 L4 # 27
with ~ 0.7 dB total penalty.	Johnson, John Broadcom
Require following adjsutments: Table 180-9 power budget increases from 7.4 dB to 7.6 dB	Comment Type TR Comment Status X
Table 181-5 average launch power increases from -2.2 dBm to -2 dBm, OMA(min)	Channel insertion loss (max) in Table 181-8 should point to new Table 181-xx.
increases by +0.2 dB	SuggestedRemedy
Table 181-6 average receive power increases from -5.7 dBm to -5.5 dBm See ghiasi_3dj_02_2507	In Table 181-8.
oposed Response Response Status O	 Replace Channel insertion loss(max) value 3.5dB with "See Table 181-xx". Add text in CL 181.8 similar to CL 180.8: "The maximum value of channel insertion lo is dependent on the number and maximum value of the discrete reflectances within the channel as given in Table 181–xx. Discrete reflectances below –55 dB may be ignored when determining the supported channel insertion loss." with editorial license.
	Supporting editorial instructions are provided in johnson_3dj_01_2507

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/generalC/181Page 126 of 149COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawnSC 181.86/16/2025 2:13:38 PMSORT ORDER: Clause, Subclause, page, lineSC 181.8SC 181.85/16/2025 2:13:38 PM

C/ 181 SC 181.8.2	P 467	L 48	# 26	C/ 181	SC 181.9.5	P 471	L 8	# 382
Johnson, John	Broadcom			Ghiasi, Ali		Ghiasi Qunatu	um/Marvell	
Comment Type TR	Comment Status X			Comment	Type TR	Comment Status X		
with editorial license,	rewritten to mirror the subclaus including a table of maximum c flections, as discussed in conse 5.	hannel insertior	n loss versus the	DSPs a receive	are 20-30 taps	nce equalizer is only 15 tap F FFE with DFE and optional ML h better than reference equali or RX DSP.	SE. Many have	raised that real
SuggestedRemedy				Suggested	Remedy			
 Delete old Table 1 Insert new Table 1 reflectances, with the 	anges to CL 181.8.2: .2 using the structure and text in 81-10, Maximum value of each 81-xx, Maximum channel inser values given in johnson_3dj_0 Istructions are provided in johns	discrete reflect tion loss versus 1_2507, slide 11	ance. number of discrete 1.	with 1T The rei feedba period, In table	DFE. The Sco ference equalizer ck equalizer (D with equalizer	to is to supplement the current ope can already support 1TDF er is a 15-tap feed-forward equ FE), where T is the symbol coefficient constraints as show hits for DFE min=-0.4 max=0 07	E. Jalizer (FFE) and	1-tap decision-
Proposed Response	Response Status O			Proposed I	Response	Response Status O		
C/ 181 SC 181.8.3	P 468	L 45	# 522	C/ 181	SC 181.9.5	P471	L 35	# 345
Dudek, Mike	Marvell			Ghiasi, Ali		Ghiasi Qunatu	um/Marvell	
Comment Type E	Comment Status X			Comment 7	Type TR	Comment Status X		
It would be good to particular to be sound be good to particular to be sound t	ovide a reference to Annex 180	A in this section	n.	that for	some weired F	w.ieee802.org/3/dj/public/25_ FE setting still one may have S DSP likley due to timing reco	compliant TDEC	
	lar to that in the equivalent sect f the MDIs for 200GBASE-DR1 2." <i>Response Status</i> 0			from se in man	oution https://ww everal suppliers y good modules	w.ieee802.org/3/dj/public/24_ was used to set the limits for and we are not sure given the veired transmitter FFE settigns	TDECQ. Limitir at we have link tr	ng the taps can result aining if this type of
				not res adjsutr	ult in failing goo nents will have	od moduels, looking at the data minimum impact on module yi	a in Chayeb the f	ollowing tap
C/ 181 SC 181.8.3	P 468	L 46	# 524			ng receive BER floor: to to 0.1 and add following res	striction Max C(1)	C(1) tops=0.4
Dudek, Mike	Marvell					re is to use Block TDECQ and		
Comment Type E Lines 47 to 54 on pag	Comment Status X e 444 in clause 180 provide de		that also apply to the	see htt see gh	ps://www.ieee8 iasi_3dj_03_25	02.org/3/dj/public/25_05/ghias 07		
clause 181 MDI's Sr	songing which connectors shot			Proposed F	response	Response Status 0		
clause 181 MDI's. Sp SuggestedRemedy								
SuggestedRemedy	ation in clause 181.8.3 or move	that informatio	n into Annex 180A 3					

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 181 SC 181.9.5 Page 127 of 149 6/16/2025 2:13:38 PM

C/ 182 SC 182.	5.12 P 487	L 41	# 196	C/ 182	SC 182.7.1	P 488	L 45	# 29
Huber, Thomas	Nokia			Johnson, Jo	hn	Broadcom		
Comment Type T	Comment Status X			Comment T	/pe TR	Comment Status X		
term has specific r (see 1.4.278) Anne	at "DATA mode" is intended to a neaning for 1000BASE-T PHYs ax 178B.5 indicates that in the co	that differs from wontext of ILT, "dat	hat is intended here a mode" means the	to align	DRn-2 TX lau	he minimum TX launch pow nch power with the new valu us presentation johnson_3dj	es for 500m DRn	
	has the value 'data', which is ass 3B-8. As such, it would be more			SuggestedF	emedy			
the PATH_UP stat						the following changes:		
SuggestedRemedy						unch power, each lane (mir cal Modulation Amplitude (0		
•	e the transition to DATA mode." ee Figure 178B-8)."	to "coordinate the	e transition to the	dBm to	-0.1 dBm, and	from -1.2 + max(TECQ,TD) to read: "An average laur	ECQ) to -1 + max	(TECQ,TDECQ).
Proposed Response	Response Status 0			OMA of	-0.1 dBm with	an infinite extinction ratio."		
				Support	ing editorial in	structions are provided in jo	hnson 3dj 01 25	07
	7.1 P 487	L9	# 490	Proposed R	-	Response Status 0		
Kimber, Mark	Semtech	23	# 490					
Comment Type TR	Comment Status X			C/ 182	SC 182.7.1	P489	L 25	# 407
	Insmitters can cause BER floor i	ssues as shown i	n		30 102.7.1		-	# 427
	505. Keeping Ceq > 1 (0dB) hel			Ran, Adee		Cisco Syste	ems	
SuggestedRemedy				Comment T		Comment Status X	tiant DMDa Clash	
	cification line after TECQ specif nt Factor, Ceq (min) 1	ication.		frequen	cies, are not c	fications are required for op aptured adequately by existi oid correlated errors in rece	ng specifications,	and should be limited
Proposed Response	Response Status O			perform	ance.			
						ore details is planned, but these standards in the standard standard standards in the standard stand Standard standard stand	e suggested reme	edy contains a
				SuggestedF	emedy			
					my similar co	mment against 180.7.1, imp	lement the corres	ponding changes in

Clause 182, with editorial license. Proposed Response Response Status **O**

C/ 182 SC 182.7.1

C/ 182	SC 182	.7.1	P 489	L 36	# 30	C/ 182	SC	182.7.2	P 491	L 3	# 32
Johnson,	John		Broadcom			Johnson,	John		Broadcom		
Comment	Туре Т	r (Comment Status X			Comment	Туре	TR	Comment Status X		
	e 182-3 mus 182-7.	st be upda	ted to correspond to the 0	0.2 dB increase	in OMAouter(min) in	Figure 182-8		must be u	pdated to correspond to the 0	.3 dB increase	es in OMAouter in Tabl
Suggestee	dRemedy					Suggestee	dRemed	dy			
			curve in Figure 182-3 to o DECQ), with editorial lice		ne updated values -0.1				ensitivity (OMAouter) curve in le 182-4, with editorial license.	Figure 182-4 to	o correspond to the
Suppo	orting editor	ial instruct	tions are provided in johns	son_3dj_01_250	07	Suppo	orting ed	ditorial ins	tructions are provided in johns	on_3dj_01_25	507
Proposed	Response	R	esponse Status O			Proposed	Respor	nse	Response Status O		
C/ 182	SC 182	.7.2	P 490	L 20	# 31	C/ 182	SC	182.7.3	P 491	L 30	# 28
Johnson,	John		Broadcom			Johnson,	John		Broadcom		
Comment	Туре Т	R (Comment Status X			Comment	Туре	TR	Comment Status X		
sensit	tivity) to acc	ount for th	ower must be increased b ne changes in MPI+DGD p	penalty allocatio					and DGD penalties of 0.4 dB is dB for DGD per consensus pr		
		sensus pre	esentation johnson_3dj_0	1_2505.		Suggestee	dRemed	dy			
1. Cl 2. Cl and fr	ble 182-8, m hange Avera hange Rece om -5.6 + T	age receiv eiver sensi ECQ to -5	ollowing changes: ve power, each lane (min) tivity (OMAouter), each la 5.3 + TECQ. ver sensitivity (OMAouter),	ane (max) from -	4.7 dBm to -4.4 dBm,	1. Cl 2. Cl 3. Re	hange A hange F eplace f	Allocation Power bud footnotes I	ne following changes: for penalties (for max TDECQ) get (max TDECQ) from 7.8 dE b, c and d with new footnotes I opropriate to CL 182, as given	to 7.7 dB and c followi	ng the form of Table
1.9 dE			er sensitivity (envirouter),			Suppo	orting ed	ditorial ins	tructions are provided in johns	on_3dj_01_25	507
Suppo	orting editor	ial instruct	tions are provided in johns	son_3dj_01_250	07	Proposed	Respor	nse	Response Status O		
	Response	P	esponse Status O								

C/ 182 SC 182.7.3

	SC 182.7.3	P 491	L33	# 346	C/ 182	SC 182.8	P 492	L 47	# 35
Ghiasi, Ali		Ghiasi Qunat	tum/Marvell		Johnson, Jol	n	Broadcom		
omment Ty	pe TR	Comment Status X			Comment Ty	be TR	Comment Status X		
		dB would be excessive for 5TBASE-DR8-2	200GBASE-DR1-	2/400GBASE-DR2-			(max) in Table 182-10 should	point to new Ta	able 182-xx.
uggestedRe The BS/C MZM. Ar ER=3.5, and https Given tha of MPI pe dB. Require f Table 182 Table 182 increases Table 182 sensitivity	emedy CD MPI penalty nalysis need to see https://ww s://www.ieee80 at double link w enalty with add following adjsut 2-9 power budg 2-7 average lat s by +0.2 dB 2-8 averge rec y becomes -1.5 sis_3dj_02_250	were evaluated with ER of be based on SER of 9.6E-3 w.ieee802.org/3/dj/public/25 2.org/3/dj/public/25_05/john ith 8 discrete reflectance -5 tion of ~0.18 dB, or with ~ 0 ments: get decreases from 7.8 dB to unch power increases from - eive power increases from - 0 dBm, and receive sensitivi	3, with half the los 5_05/ghiasi_3dj_0 son_3dj_01a_250 5 dB and -45 dB I .3 dB total penalty o 7.6 dB -3.3 dBm to -3.1 c 7.3 dBm to -7.1 dl	s at mid-span, and 1b_2505.pdf 5.pdf MPI penalty is 0.09 dB r instead of current 0.5 IBm, OMA(min) Bm, Stressed	2. Add to insertion within the ignored v Supportion Proposed Re Cl 182 Johnson, Joh Comment Ty CL 182.8	182-10, ce Channel in ext in CL 182 loss is deper channel as then determining editorial in sponse SC 182.8.2 in ce TR .2 should be	nsertion loss(max) value 4 dB v 8 similar to text in CL 180.8: " Ident on the number and maxir given in Table 182–xx. Discrete ning the supported channel ins structions are provided in johns <i>Response Status</i> O <i>P</i> 493 Broadcom <i>Comment Status</i> X rewritten to mirror the subclaus ncluding a table of maximum of	"The maximum v mum value of th e reflectances b sertion loss." with son_3dj_01_250 <i>L</i> 49 se structure and	value of channel e discrete reflectance elow –55 dB may be h editorial license. 07 # <u>34</u> d text in CL 180.8.2,
182	SC 182.7.3	P 492	L 3	# 33	number o		lections, as discussed in conse		
7 182 ohnson, Joh		P 492 Broadcom	L 3	# 33	number o	of discrete ref 3dj_01_2505	lections, as discussed in conse		
ohnson, Joh comment Typ Figure 18 and 182-t cuggestedRe Update th	hn pe TR 82-5 must be u 8. <i>emedy</i> he Transmitter		changes in OMA	outer in Tables 182-7) curves in Figure 182-	number of johnson_ SuggestedRe Make the 1. Re-wi 2. Delete 3. Insert reflectan Supportin	of discrete ref 3dj_01_2505 emedy following ch. ite CL 182.8. old Table 18 new Table 1 new Table 1 ces, with the	lections, as discussed in conse anges to CL 182.8.2: 2 using the structure and text i 32-12, maximum value of each 82-xx, Maximum channel inser values given in johnson_3dj_0 structions are provided in johns	ensus presentat in CL 180.8.2, w discrete reflect tion loss versus 1_2507, slide 15	tion vith editorial license. ance. number of discrete 5.
ohnson, Joh omment Typ Figure 18 and 182-t uggestedRe Update th 5 to corre license.	hn pe TR 82-5 must be u 8. <i>emedy</i> he Transmitter espond to the u	Broadcom Comment Status X odated to correspond to the OMAouter(min) and Receiv	changes in OMA er OMAouter(max -7 and Table 182-	outer in Tables 182-7) curves in Figure 182- 8, with editorial	number of johnson_ SuggestedRe Make the 1. Re-wi 2. Delete 3. Insert reflectan	of discrete ref 3dj_01_2505 emedy following ch. ite CL 182.8. old Table 18 new Table 1 new Table 1 ces, with the	lections, as discussed in conse anges to CL 182.8.2: 2 using the structure and text i 32-12, maximum value of each 82-xx, Maximum channel inser values given in johnson_3dj_0	ensus presentat in CL 180.8.2, w discrete reflect tion loss versus 1_2507, slide 15	tion vith editorial license. ance. number of discrete 5.

C/ 182 SC 182.8.2

C/ 182	SC 182.8.3	P 494	L 52	# 197	C/ 182	SC	182.9.5	P 497	L 41	# 383
Huber, Th	nomas	Nokia			Ghiasi, Ali			Ghiasi Qunat	um/Marvell	
Comment	Туре Т	Comment Status X			Comment	Гуре	TR	Comment Status X		
DRn-2	2 MDIs use pairs of	of fibers.						nce equalizer is only 15 tap F		
Suggestee	dRemedy							FE with DFE and optional ML better than reference equal		
Chang	ge "besides the	option to connect to a single	fiber MDI," to	o "besides the option		•		r RX DSP.	izer which is a g	ood tilling, but tills also
to con	nnect to a single fi	ber-pair MDI,"			Suggested	Remed	lv			
Proposed	Response	Response Status O			A reas with 11	onblae DFE.	next step The Scor	is to supplement the current be can already support 1TDF	E.	
C/ 182	SC 182.8.3	P 494	L 52	# 135				r is a 15-tap feed-forward equ E), where T is the symbol		
Parsons,	Earl	CommScope						oefficient constraints as show	vn in Table 180-	-15.
Comment	Туре Т	Comment Status X					5 add iimi lj_04_250	its for DFE min=-0.4 max=0 7		
The p in that	•	connect to a single fiber MDI"	is incorrect sind	ce there are two fibers	Proposed I	_		Response Status 0		
Suggestee	dRemedy									
	•	E-DR1, besides the option to		0	C/ 182	SC	182.9.5	P 498	L18	# 347
	vo additional spec e-row 16 fiber inter	ified MDI optical receptacles,	a single-row 12	2-fiber interface and a	Ghiasi, Ali			Ghiasi Qunat	um/Marvell	
Single		nace.			Comment	Гуре	TR	Comment Status X		
to								w.ieee802.org/3/dj/public/25_ E setting still one may have		
"For 2		besides the option to connect						DSP likley due to timing rec		

two additional specified MDI optical receptacles, a single-row 12-fiber interface and a singlerow 16 fiber interface."

Proposed Response Response Status 0

SuggestedRemedy

Contribution https://www.ieee802.org/3/dj/public/24 07/ghiasi 3dj 02a 2407.pdf with data from several suppliers was used to set the limits for TDECQ. Limiting the taps can result in many good modules and we are not sure given that we have link training if this type of problem still exist for weired transmitter FFE settigns. Any limit on TDECQ FFE taps must not result in failing good moduels, looking at the data in Chayeb the following tap adjsutments will have minimum impact on module yield and will address the case of weired transmitter FFE casuing receive BER floor:

Change C(1) from 0.2 to to 0.1 and add following restriction Max C(1)-C(-1) taps=0.4 Other improvements are is to use Block TDECQ and functional hardware receiver see https://www.ieee802.org/3/di/public/25 05/ghiasi 3di 03a 2505.pdf see ghiasi_3dj_03_2507

Proposed Response Response Status 0

C/ 182 SC 182.9.5

	P 505	L 48	# 93	C/ 183	SC 183.7.1	P 512	L 29	# 329
Bruckman, Leon	Nvidia			Landry, Ga	ary	Texas Instru	ments	
Comment Type ER	Comment Status X			Comment	Type E	Comment Status X		
Wrong singular in note	e c					her TECQ/TDECQ values are	e referenced to a	an equation outside th
uggestedRemedy					Eq 183-1).			
	ne or two 800GAUI-n is imple	mented"		Suggested	-			(
	GAUI-n are implemented"					number and maintain parallel structure and maintain parallel structure and a structure and	are to to other cla	auses (e.g., 180, 181,
Proposed Response	Response Status O			Proposed I	,	Response Status 0		
/ 183 SC 183.5.12	2 P 510	L33	# 417	01.400	<u> </u>			"
an, Adee	Cisco System	าร		C/ 183	SC 183.7.1	P 512	L 31	# 330
omment Type TR	Comment Status X			Landry, Ga	2	Texas Instru	ments	
	link that includes multiple ISLs			Comment	51	Comment Status X		
Annex 178B (specifica	ally Figure 178B–7 and Figure	178B–8) is requi	red across ISLs.		MA limits for hig Eq 183-2).	her TECQ/TDECQ values are	e referenced to a	an equation outside th
	raining protocol but it's disable			Suggested	Remedy			
currently not defined.	nmunicating the RTS to the pe	er. However, the	local pattern is			/ and maintain parallel structu al equation into the table	ure to to other cla	auses (e.g., 180, 181,
uggestedRemedy					,			
/				Pronosed I	zesnonse	Rasnonsa Status n		
Specify that PRBS31 generated by the inne	encoded by Inner FEC as defi r FEC sublayer) is the pattern	used when mr_tr		Proposed I	Response	Response Status O		
Specify that PRBS31 generated by the inne and tx_mode has the	r FEC sublayer) is the pattern value local_pattern (see 178B	used when mr_tr		Proposed I Cl 183	SC 183.7.1	Response Status 0	L 37	# 491
Specify that PRBS31 generated by the inne and tx_mode has the	r FEC sublayer) is the pattern	used when mr_tr		·	SC 183.7.1	,	L 37	# 491
Specify that PRBS31 generated by the inne and tx_mode has the	r FEC sublayer) is the pattern value local_pattern (see 178B	used when mr_tr		C/ 183	SC 183.7.1 ark	P 512	L 37	# 491
Specify that PRBS31 generated by the inne and tx_mode has the roposed Response	r FEC sublayer) is the pattern value local_pattern (see 178B <i>Response Status</i> O	used when mr_tr		C/ 183 Kimber, M Comment Over e	SC 183.7.1 ark <i>Type</i> TR qualizing transr	P 512 Semtech <i>Comment Status</i> X nitters can cause BER floor is	ssues as shown	in
Specify that PRBS31 generated by the inne and tx_mode has the oposed Response 183 SC 183.5.12	r FEC sublayer) is the pattern value local_pattern (see 178B <i>Response Status</i> O	used when mr_tr .14.3.1).	aining_enable is false	C/ 183 Kimber, M Comment Over e kimber	<i>SC</i> 183.7.1 ark <i>Type</i> TR qualizing transr _3dj_01a_2505	P 512 Semtech Comment Status X	ssues as shown	in
Specify that PRBS31 generated by the inne and tx_mode has the roposed Response	r FEC sublayer) is the pattern value local_pattern (see 178B <i>Response Status</i> O 2 P510	used when mr_tr .14.3.1).	aining_enable is false	Cl 183 Kimber, Ma Comment Over e kimber Suggested	SC 183.7.1 ark <i>Type</i> TR qualizing transr _3dj_01a_2505 <i>Remedy</i>	P 512 Semtech <i>Comment Status</i> X nitters can cause BER floor is . Keeping Ceq > 1 (0dB) help	ssues as shown s to prevent Tx p	in
Specify that PRBS31 generated by the inne and tx_mode has the roposed Response / 183 SC 183.5.12 luber, Thomas omment Type T While it is clear what "	r FEC sublayer) is the pattern value local_pattern (see 178B <i>Response Status</i> O 2 <i>P</i> 510 Nokia	used when mr_tr .14.3.1). <i>L</i> 33 nean here in the c	# 198	Cl 183 Kimber, Ma Comment Over e kimber Suggested Add ac	SC 183.7.1 ark Type TR qualizing transr _3dj_01a_2505 Remedy Iditional specific	P 512 Semtech <i>Comment Status</i> X nitters can cause BER floor is	ssues as shown s to prevent Tx p	in
Specify that PRBS31 generated by the inne and tx_mode has the Proposed Response 2/ 183 SC 183.5.12 Huber, Thomas Comment Type T While it is clear what " term has specific mea (see 1.4.278) Annex 1 variable tx_mode has	rr FEC sublayer) is the pattern value local_pattern (see 178B <i>Response Status</i> O 2 <i>P</i> 510 Nokia <i>Comment Status</i> X "DATA mode" is intended to m	L 33 L 33 L 33 L 33 L 33	# 198 # 198 context of ILT, that hat is intended here a mode" means the i in the PATH_UP	Cl 183 Kimber, Ma Comment Over e kimber Suggested Add ac	SC 183.7.1 ark Type TR qualizing transr _3dj_01a_2505 Remedy dditional specific Enhancement F	P 512 Semtech <i>Comment Status</i> X nitters can cause BER floor is . Keeping Ceq > 1 (0dB) help cation line after TECQ specific	ssues as shown s to prevent Tx p	in
Specify that PRBS31 generated by the inne and tx_mode has the Proposed Response 14 183 SC 183.5.12 Huber, Thomas Comment Type T While it is clear what " term has specific mea (see 1.4.278) Annex 1 variable tx_mode has state per figure 178B- the PATH_UP state.	rr FEC sublayer) is the pattern value local_pattern (see 178B <i>Response Status</i> O 2 P510 Nokia <i>Comment Status</i> X "DATA mode" is intended to m aning for 1000BASE-T PHYs th 178B.5 indicates that in the cor the value 'data', which is asso	L 33 L 33 L 33 L 33 L 33	# 198 # 198 context of ILT, that hat is intended here a mode" means the i in the PATH_UP	Cl 183 Kimber, Ma Comment Over e kimber Suggested Add ac Noise	SC 183.7.1 ark Type TR qualizing transr _3dj_01a_2505 Remedy dditional specific Enhancement F	P512 Semtech Comment Status X nitters can cause BER floor is . Keeping Ceq > 1 (0dB) help cation line after TECQ specific factor, Ceq (min) 1	ssues as shown s to prevent Tx p	in
Specify that PRBS31 generated by the inne and tx_mode has the Proposed Response Cl 183 SC 183.5.12 Huber, Thomas Comment Type T While it is clear what " term has specific mea (see 1.4.278) Annex 1 variable tx_mode has state per figure 178B- the PATH_UP state. SuggestedRemedy	rr FEC sublayer) is the pattern value local_pattern (see 178B <i>Response Status</i> O 2 P510 Nokia <i>Comment Status</i> X "DATA mode" is intended to m aning for 1000BASE-T PHYs th 178B.5 indicates that in the cor the value 'data', which is asso 8. As such, it would be more content	used when mr_tr .14.3.1). <i>L</i> 33 hean here in the c hat differs from w ntext of ILT, "data sciated with being clear if the text in	# 198 # 198 context of ILT, that hat is intended here a mode" means the in the PATH_UP 183.5.12 referred to	Cl 183 Kimber, Ma Comment Over e kimber Suggested Add ac Noise	SC 183.7.1 ark Type TR qualizing transr _3dj_01a_2505 Remedy dditional specific Enhancement F	P512 Semtech Comment Status X nitters can cause BER floor is . Keeping Ceq > 1 (0dB) help cation line after TECQ specific factor, Ceq (min) 1	ssues as shown s to prevent Tx p	in

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 183 SC 183.7.1 Page 132 of 149 6/16/2025 2:13:39 PM

C/ 183	SC 183.7.1	P 512	L50	# 428	C/ 183	SC 183.7.3	P 515	L 44	# 144
Ran, Adee	00 103.7.1	Cisco System		# 420	Lambert, A		Corning	L 44	# 144
Comment Ty	vpe TR	Comment Status X	5		Comment 7	0	Comment Status X		
Transmit frequenc	, tter jitter specif cies, are not ca fications to avo	ications are required for optic ptured adequately by existing id correlated errors in receive	specifications,	and should be limited	Cabled other lin in the re	l fiber attenuation nk power budge espective Option	on and fiber attenuation are di at tables (i.e. Table 180-9 on p al fiber and cable characterist ould be "Cabled optical fiber at	 441 and Table tics tables (in this 	e 182-9 on p. 491) and
	ntation with mo y of the sugges	re details is planned, but the steed changes.	suggested reme	dy contains a	Suggestedl Change	,	tion" to "cabled optical fiber at	tenuation"	
SuggestedRe	emedy				Proposed F	Response	Response Status 0		
	183, with editor	nment against 180.7.1, impler ial license. <i>Response Status</i> O	nent the corres	bonding changes in	C/ 183 Johnson, J	SC 183.8	P 517 Broadcom	L 24	# 287
Cl 183 Johnson, Jol	SC 183.7.3	P 515 Broadcom	L 32	# 288	Comment 7 Channe	Type TR	Comment Status X (max) in Table 183-9 should	point to new Tal	oles 183-xx for FR4 and
183.8.2. SuggestedRe In Table Replace as given	, notes in Table <i>emedy</i> 183-8, make t footnotes follo in johnson_3d	Comment Status X 183-8 must be updated to ref ne following changes: wing the form of Table 180- 9 j_01_2507, slide 16.	, with changes	appropriate to CL 183,	1. Rep with "So 2. Add insertio within t 800GB	e 183-9, blace Channel in ee Table 183-y I text in CL 183 on loss is deper the channel as y ASE-LR4. Disc	nsertion loss(max) value 4 dB y". 8 similar to text in CL 180.8: ident on the number and maxi given in Table 183–xx for 800/ rete reflectances below –55 d i insertion loss." with editorial	"The maximum imum value of th GBASE-FR4 and B may be ignore	value of channel ne discrete reflectances d Table 183-yy for
Supportin	ng editorial ins	tructions are provided in johns	son_3dj_01_25)7	Suppor	rting editorial in	structions are provided in john	nson_3dj_01_25	07
Proposed Re									

C/ 183 SC 183.8

	SC 183.8.2	P 518	L 26	# 286	C/ 183	SC 183.9.5	P 522	L18	# 349
Johnson,	John	Broadcom			Ghiasi, Ali		Ghiasi Qunat	um/Marvell	
Comment	Type TR	Comment Status X			Comment Typ	e TR	Comment Status X		
with e numbe	ditorial license, in	ewritten to mirror the subclaus cluding tables of maximum ch cctions, as discussed in conse	annel insertion	loss versus the	that for so degrade v	ome weired F vith this 1000	w.ieee802.org/3/dj/public/25_ FE setting still one may have S DSP likley due to timing rec	compliant TDEC	
, Suggested	- <i>-</i> -				SuggestedRe	2	/w.ieee802.org/3/dj/public/24_		0 0407 16 14 14
 De Ins reflect Ins reflect Suppo 	lete old Table 183 sert new Table 183 tances for 800GB sert new Table 183 tances for 800GB	using the structure and text ir 3-11, maximum value of each 3-xx, Maximum channel insert ASE-FR4, with the values give 3-yy, Maximum channel insert ASE-LR4, with the values give ructions are provided in johns Response Status O	discrete reflecta ion loss versus en in johnson_3 ion loss versus en in johnson_3	ance. number of discrete dj_01_2507, slide 17. number of discrete dj_01_2507, slide 18.	problem s not result adjsutmer transmitte Change C Other imp see https:	till exist for w in failing goo hts will have a r FFE casuir (1) from 0.2 rovements a //www.ieee80 i_3dj_03_250	and we are not sure given the veired transmitter FFE settigned d moduels, looking at the dat minimum impact on module y og receive BER floor: to to 0.1 and add following re- re is to use Block TDECQ and 02.org/3/dj/public/25_05/ghias 77 Response Status 0	s. Any limit on T a in Chayeb the ield and will add striction Max C(1 d functional hard	DECQ FFE taps must following tap ress the case of weired I)-C(-1) taps=0.4 lware receiver
C/ 183	SC 183.9.5	P 522	L10	# 384	C/ 184	SC 184.2	P533	L 4	# 199
			m/Marvell					-	
,		Ghiasi Qunatu			Huber, Ihom	35	Nokia		
Comment	Type TR	Comment Status X	· -		Huber, Thoma Comment Tyr		Nokia Comment Status X		
Comment Currer DSPs receive leaves	Type TR nt TDECQ referer are 20-30 taps F rers perform much s all the margin fo dRemedy	Comment Status X ice equalizer is only 15 tap FF FE with DFE and optional ML better than reference equaliz r RX DSP.	SE. Many have er which is a go	raised that real ood thing, but this also	Comment Typ It is misle required t boundary the PCS,	e T ading to pres o be in the tw . In an impler this may not	Comment Status X ent the reordering and desker to flow groups (0-15 and 16-3 nentation that happens to hav require any effort, because th	1) and deskewe ve the inner FEC ve PCS will have	d to a 2-symbol immediatley next ot created the lanes in
DSPs receive leaves Suggested A reas with 1	Type TR nt TDECQ referer are 20-30 taps F rers perform much s all the margin fo dRemedy sonblae next step T DFE. The Scop	Comment Status X ice equalizer is only 15 tap FF FE with DFE and optional MLS better than reference equaliz r RX DSP. is to supplement the current be can already support 1TDFE	SE. Many have er which is a go TDECQ equalize	raised that real bod thing, but this also er based on 15T FFE	Comment Type It is misle required t boundary the PCS, order and from a sta	e T ading to pres o be in the tw In an impler this may not there won't b andardization	Comment Status X ent the reordering and desker to flow groups (0-15 and 16-3 nentation that happens to have	1) and deskewe ve the inner FEC ve PCS will have at doesn't make	d to a 2-symbol immediatley next ot created the lanes in the process optional
Comment Currer DSPs receive leaves Suggested A reas with 1 The re	Type TR nt TDECQ referer are 20-30 taps F rers perform much s all the margin fo dRemedy sonblae next step T DFE. The Scop eference equalize	Comment Status X ice equalizer is only 15 tap FF FE with DFE and optional MLS better than reference equalizer RX DSP. is to supplement the current be can already support 1TDFE is a 15-tap feed-forward equ	SE. Many have er which is a go TDECQ equalize	raised that real bod thing, but this also er based on 15T FFE	Comment Type It is misle required t boundary the PCS, order and from a sta	e T ading to pres o be in the tw . In an impler this may not there won't b andardization t we don't spo	Comment Status X ent the reordering and desker to flow groups (0-15 and 16-3 nentation that happens to hav require any effort, because th be any skew to remove, but th perspective. There are alway	1) and deskewe ve the inner FEC ve PCS will have at doesn't make	d to a 2-symbol immediatley next ot created the lanes in the process optional
Comment Currer DSPs receive leaves Suggested A reas with 1 [°] The re feedba period In tabl	Type TR nt TDECQ referer are 20-30 taps F rers perform much s all the margin fo dRemedy sonblae next step T DFE. The Scop eference equalize ack equalizer (DF I, with equalizer c le 180-15 add lim	Comment Status X ince equalizer is only 15 tap FF FE with DFE and optional MLS better than reference equalizer RX DSP. is to supplement the current be can already support 1TDFE is a 15-tap feed-forward equ E), where T is the symbol pefficient constraints as show ts for DFE min=-0.4 max=0	SE. Many have er which is a go TDECQ equalize : alizer (FFE) and	raised that real bod thing, but this also er based on 15T FFE I 1-tap decision-	Comment Typ It is misle required t boundary the PCS, order and from a sta made tha SuggestedRe Replace	e T ading to press to be in the tw In an impler this may not there won't be andardization t we don't sper medy	Comment Status X ent the reordering and desker to flow groups (0-15 and 16-3 mentation that happens to hav require any effort, because the perspective. There are alware ell out as optional functions.	 and deskewer re the inner FEC re PCS will have at doesn't make ys design optimi 	d to a 2-symbol immediatley next ot created the lanes in the process optional zations that can be
Comment Currer DSPs receive leaves Suggested A reas with 1° The re feedba period In tabl see gh	Type TR nt TDECQ referer are 20-30 taps F rers perform much s all the margin fo dRemedy sonblae next step T DFE. The Scop eference equalize ack equalizer (DF I, with equalizer c	Comment Status X ince equalizer is only 15 tap FF FE with DFE and optional MLS better than reference equalizer RX DSP. is to supplement the current be can already support 1TDFE is a 15-tap feed-forward equ E), where T is the symbol pefficient constraints as show ts for DFE min=-0.4 max=0	SE. Many have er which is a go TDECQ equalize : alizer (FFE) and	raised that real bod thing, but this also er based on 15T FFE I 1-tap decision-	Comment Typ It is misle required t boundary the PCS, order and from a sta made tha SuggestedRe Replace	T ading to press o be in the tw In an impler this may not there won't b andardization t we don't spo medy If necessary, and deskew	Comment Status X ent the reordering and desker to flow groups (0-15 and 16-3 mentation that happens to hav require any effort, because the perspective. There are alware ell out as optional functions.	 and deskewer re the inner FEC re PCS will have at doesn't make ys design optimi 	d to a 2-symbol immediatley next ot created the lanes in the process optional zations that can be

sponse Status O	Proposed Response	Response Status O	

C/ 184 SC 184.2

C/ 184 S	SC 184.2	P 533	L 8	# 200	C/ 184	SC 184.4.3	P 535	L 2	# 203
Huber, Thomas	S	Nokia			Huber, The	omas	Nokia		
Comment Type	e E	Comment Status X			Comment	Туре Т	Comment Status X		
Missing a h	hyphen in the	e compound adjective 'BCH(1	126, 110) encod	ed'			e more clear. The labels "RS-F		
SuggestedRem	nedy						mod 4). The permutation isn't as 0 and 1; they stay where the		
Change to	"interleavi	ng the BCH(126,110)-encode	ed flows…"		and 3	that are changi	ng to create symbol quartets v		
Proposed Resp	ponse	Response Status 0			encode				
					Suggested	,			
2/ 184 S	SC 184.2	P533	L18	# 201			C in" and "RS-FEC out" labels ure to have one box around co		
Huber, Thomas		Nokia					around columns 2 and 3, rows		
Comment Type		Comment Status X				ure to show tha hanged positio	t the top and bottom boxes in	clumns 2 and 3	from the left hand side
21	grammar : "C	onvolutional interleaving and	permutation are	e undone to restore the	Proposed I	0 1	Response Status O		
SuggestedRem	nodu								
suggesteurren	neuy								
00	-	onal interleaving and permuta	ation are undone	to restore the original	C/ 184	SC 184.4.5	P 537	L 7	# 204
Reword as order of the	: "Convolutic e lanes".	onal interleaving and permuta	ation are undone	e to restore the original	C/ 184 Huber, The		Р 537 Nokia	L 7	# 204
Reword as	: "Convolutic e lanes".	onal interleaving and permuta Response Status O	ation are undone	e to restore the original	Huber, The Comment	omas	Nokia Comment Status X	L 7	# 204
Reword as order of the Proposed Resp	: "Convolutic e lanes".	0	tion are undone		Huber, The Comment	omas <i>Type</i> E hould have the	Nokia Comment Status X	L7	# 204
Reword as order of the Proposed Resp Cl 184 S	s: "Convolutio e lanes". ponse SC 184.4.1	Response Status O		e to restore the original # 202	Huber, The Comment m(x) sl Suggested	omas <i>Type</i> E hould have the	Nokia Comment Status X	L7	# <u>204</u>
Reword as order of the Proposed Resp	s: "Convolutio e lanes". ponse SC 184.4.1 s	Response Status O			Huber, The Comment m(x) sl Suggested	omas <i>Type</i> E hould have the <i>IRemedy</i> e the m	Nokia Comment Status X	L7	# 204
Cl 184 S Comment Type	s: "Convolutio e lanes". ponse SC 184.4.1 is e T	Response Status O P534 Nokia	L5	# 202	Huber, The Comment m(x) sl Suggested Italicize	omas <i>Type</i> E hould have the <i>IRemedy</i> e the m	Nokia <i>Comment Status</i> X m in italics	L7	# 204
Cl 184 S Comment Type It is require boundary. I	:: "Convolution e lanes". ponse CC 184.4.1 is e T ed that the la If the PCS a	Response Status O P534 Nokia Comment Status X nes be in the two flow groups nd Inner FEC happen to be a	L 5 s and deskewed adjacent, a desig	# 202	Huber, The Comment m(x) sl Suggested Italiciz Proposed i	omas <i>Type</i> E hould have the <i>IRemedy</i> e the m <i>Response</i>	Nokia Comment Status X m in italics Response Status O		·
Reword as order of the Proposed Resp 2/ 184 S Huber, Thomas Comment Type It is require boundary. I omit these	s: "Convolution e lanes". ponse C 184.4.1 is e T ed that the la lf the PCS an functions, bu	Response Status O P534 Nokia Comment Status X nes be in the two flow groups	L 5 s and deskewed adjacent, a desig	# 202	Huber, The Comment m(x) sl Suggested Italiciz Proposed I Cl 184	omas Type E hould have the IRemedy e the m Response SC 184.4.7	Nokia Comment Status X m in italics Response Status 0 P537	L 7 	# <u>204</u> # <u>205</u>
Cl 184 S Cl 184 S Comment Type It is require boundary. I omit these perspective	S: "Convolution e lanes". ponse SC 184.4.1 s e T ed that the la lf the PCS a functions, but e	Response Status O P534 Nokia Comment Status X nes be in the two flow groups nd Inner FEC happen to be a	L 5 s and deskewed adjacent, a desig	# 202	Huber, The Comment m(x) sl Suggested Italicize Proposed I C/ 184 Huber, The	omas <i>Type</i> E hould have the <i>IRemedy</i> e the m <i>Response</i> SC 184.4.7 omas	Nokia Comment Status X m in italics Response Status O P 537 Nokia		
Cl 184 S Comment Type It is require boundary. I omit these perspective SuggestedRem Change "Ti	:: "Convolution e lanes". ponse CC 184.4.1 s e T ed that the la lf the PCS an functions, but e medy The alignmen	Response Status O P534 Nokia Comment Status X nes be in the two flow groups nd Inner FEC happen to be a	L 5 s and deskewed adjacent, a desig otional from a sta	# 202	Huber, The Comment m(x) sl Suggested Italicize Proposed I Cl 184 Huber, The Comment Up unt	omas <i>Type</i> E hould have the <i>IRemedy</i> e the m <i>Response</i> <i>SC</i> 184.4.7 omas <i>Type</i> E til this point, the	Nokia Comment Status X m in italics Response Status 0 P537	<i>L</i> 50 e 32 flows within	# [<u>205</u>
Reword as order of the Proposed Resp Cl 184 S Huber, Thomas Comment Type It is require boundary. I omit these perspective SuggestedRem Change "Ti alignment I	s: "Convolution e lanes". ponse SC 184.4.1 is e T ed that the la If the PCS an functions, but e nedy The alignmen lock and des	Response Status O P534 Nokia Comment Status X nes be in the two flow groups nd Inner FEC happen to be a ut that doesn't make them op t lock and deskew functions,	L 5 s and deskewed adjacent, a desig otional from a sta	# 202	Huber, The Comment m(x) sl Suggested Italicize Proposed I Cl 184 Huber, The Comment Up unt	omas <i>Type</i> E hould have the <i>IRemedy</i> e the m <i>Response</i> <i>SC</i> 184.4.7 omas <i>Type</i> E til this point, the sing to use q he	Nokia <i>Comment Status</i> X m in italics <i>Response Status</i> O <i>P</i> 537 Nokia <i>Comment Status</i> X e index g has been used for the	<i>L</i> 50 e 32 flows within	# 205
Cl 184 S Huber, Thomas Comment Type It is require boundary. I omit these perspective SuggestedRem Change "Ti	s: "Convolution e lanes". ponse SC 184.4.1 is e T ed that the la If the PCS an functions, but e nedy The alignmen lock and des	Response Status O P534 Nokia Comment Status X nes be in the two flow groups nd Inner FEC happen to be a ut that doesn't make them op t lock and deskew functions, kew functions shall be"	L 5 s and deskewed adjacent, a desig otional from a sta	# 202	Huber, The Comment m(x) sl Suggested Italiciz Proposed I Cl 184 Huber, The Comment Up unt confus Suggested	omas <i>Type</i> E hould have the <i>IRemedy</i> e the m <i>Response</i> <i>SC</i> 184.4.7 omas <i>Type</i> E til this point, the ing to use q he <i>IRemedy</i>	Nokia <i>Comment Status</i> X m in italics <i>Response Status</i> O <i>P</i> 537 Nokia <i>Comment Status</i> X e index g has been used for the	<i>L</i> 50 e 32 flows within	# [<u>205</u>

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line C/ 184 SC 184.4.7 Page 135 of 149 6/16/2025 2:13:39 PM

C/ 184 SC 184.4	.7 P537	L 51	# 206	C/ 184	SC 184.7.2.2	2 P 547	L 2	# 637
Huber, Thomas	Nokia			Law, David	Ł	HPE		
Comment Type E	Comment Status X			Comment	Туре Т	Comment Status X		
The index I should	be avoided if at all possible, as i	it can be confused	d for the number 1.			P frame lock state diagram re		SLIP, not a SLIP (see
SuggestedRemedy					-	n Figure 184–9—DSP 'lock sta	ate diagram'.	
Pick a different lett	er to use for this index.			SuggestedRemedy Suggest that ' the SLIP requested by the DSP frame lock state' should be change				
Proposed Response	Response Status O					LIP requested by the DSP fram P requested by the DSP frame		should be changed to
				Proposed I	Response	Response Status O		
C/ 184 SC 184.5	.7 P 543	L 42	# 283					
Ren, Hao	Huawei			C/ 184	SC 184.10	P 551	L 47	# 572
Comment Type TR	Comment Status X			Nicholl, Sh	awn	AMD		
k = 0 should be ign	er_FEC_codeword_error_bin_k ored, because this counter valu 0 is not set for RS-FEC error bir	e can be calculate	ed from other counters.		"MDIO register/l	Comment Status X bit number" column of the Inne FEC status variables and MDIO		
SuggestedRemedy					essarily mentior		o mapping , the	
Change:				T 1		is an MDIO as sisters that late		
A SET OF K+1 32-DIT	counters where $k = 0$ to 4.					in an MDIO register, thus "15: er rows (eg. test_block_error_b		
A set of k 32-bit co	unters where k = 1 to 4.					so, Table 177-8 excludes the "	15:0" for the exa	act same MDIO
Proposed Response	Response Status 0			registe				
				Suggested				
C/ 184 SC 184.5	.8 <i>P</i> 544	L12	# 94	of "Tab	ole 184-5 Inne	er/bit number" column of the Ir er FEC status variables and MI		
Bruckman, Leon	Nvidia			"1.242	5" on two lines.			
Comment Type TR This section descri	Comment Status X bes the deinterleaver, not the int	terleaver			comment for In	ner_FEC_codeword_error_bin _error_bin_4.	_1 through	
SuggestedRemedy				Proposed I	Response	Response Status 0		
,	olutional interleaver process" to:	"the convolutions	al deinterleaver process"					
Proposed Response	Response Status O							
roposed nesponse	Nesponse Status U							

C/ 184 SC 184.10

C/ 184 SC 184.1	1.4.1	P 554	L18	# 207	C/ 185	SC 185.1	P 556	L 40	# 418
Huber, Thomas		Nokia			Ran, Adee	e	Cisco Syste	ems	
Comment Type T	Comment S	Status X			Comment	Type TR	Comment Status X		
The signal presente grouping and deske implementations ma SuggestedRemedy	w functions provid	de, so the fund	ctions are mandat	tory (even if some	In order to bring up a link that includes multiple ISLs, the functionality of ILT as specifie Annex 178B (specifically Figure 178B–7 and Figure 178B–8) is required across ISLs. T is true regardless of the PMD type, and even if the PMD does not use a training protoco such as 800GBASE-LR1.				
Change the status	of these items to N	Л			In PM	Ds that don't h	ave a training protocol, the "c	uiet" and "local pa	attern" modes are the
Proposed Response	Response S	Status O				od of communic	cating the RTS to the peer. H		
					Suggestee	dRemedy			
C/ 185 SC 185.1		P 556	L 40	# 547	Add 1	78B-ILT, Requ	ired as row in Table 185-1 (a	s in other PMD cla	iuses)
Maki, Jeffery Comment Type TR Associated clause ⁻ SuggestedRemedy	Comment S 178B—ILT is miss			E-LR1.	with m protoc may b	nr_training_ena col). Specify that be generated by	nder 185 defining the ILT func- able always set to false (since at Inner FEC encoded PRBS / the inner FEC sublayer) is t see 178B.14.3.1).	800GBASE-LR1 31 test pattern de	doesn't have a training fined in 184.6.1 (which
Add Associated cla	use 178B—ILT as	Required for	800GBASE-LR1.		Proposed	Response	Response Status 0		
Proposed Response	Response S	Status O							
					C/ 185	SC 185.1	P 556	L 45	# 95
					Bruckmar	n, Leon	Nvidia		
					Comment Wrong	<i>Type</i> ER g singular in no	Comment Status X		
						e c change: "If	one or two 800GAUI-n is imp 0GAUI-n are implemented"	lemented"	

To: "If one or two 800GAUI-n are implemented"

Proposed Response Response Status **O**

C/ 185 SC 185.1

	SC 185.3.1.3	.2	P 560	L 1	# 400	C/ 185	SC ·	185.5.1	P	561	L 7	# 549
li, Guang	can		Huawei Techr	nologies Co., Ltd		Maki, Jeff	fery		Jun	iper Netw	vorks	
omment	Type TR	Comment S	Status X			Comment	Туре	TR	Comment Statu	s X		
					etect, which is decided	SIGN	AL_OK -	> ILT an	d ILT> SIGNAL_	OK missi	ng from Figure 1	85-3.
					valid, decodable inition, the parameter	Suggested	dRemed	ly				
SIGNA	L_OK doesn't be	ear sufficient in	formation to he	elp bring up the	ink. While the IMDD							Add text in paragraph
					ved signal meets the	above	e stating,	, "The ILT	function indicated	in Figure	185–3 is defined	I in Annex 178B."
	not to do the sa			a meaningrui par	ameter. There is no	Proposed	Respon	ise	Response Status	s O		
ggestea	Remedy											
					or ILT state if allowed.	C/ 185	SC '	185.6	Р	563	L 51	# 96
	provided	d to the comme	ent regarding I	LT in coherent P	MDs. A contribution	Bruckman	n, Leon		Nvie	dia		
	Response	Response S				Comment	Туре	TR	Comment Statu	s X		
pood		Nesponse o				An 80 require		E-LR1 PM	1D that supports 10)Km is ob	viously complaint	t sinc ethis is the
185	SC 185.5		P 560	L 27	# 548	Suggested	dRemed	ly				
			P 560 Juniper Netwo		# 548	Chang	ge: "coul		e over 10 km would	meet the	operating range	requirement of 2 m t
aki, Jeffe	ery	Comment S	Juniper Netwo		# 548	Chang 10 km	ge: "coul າ"	ld operate				requirement of 2 m t
ki, Jeffe mment	ery	Comment S	Juniper Netwo Status X	orks	' 	Chang 10 km	ge: "coul າ"	ld operate				
ki, Jeffe mment "Inter-s	ery Type TR	Comment S	Juniper Netwo Status X	orks	' 	Chang 10 km To: "c	ge: "coul ו" could ope	ld operate erate over		t the oper		requirement of 2 m t
ki, Jeffe mment "Inter-s specifi ggested	ery Type TR sublayer link trair cations." IRemedy	Comment S ning (ILT) funct	Juniper Netwo Status X ion" is missting	orks g in "185.5 PMD	functional	Chang 10 km To: "c km"	ge: "coul ו" could ope	ld operate erate over	12 km would mee	t the oper		
ki, Jeffe mment "Inter-s specifi ggested Add to	ery Type TR sublayer link trair cations." <i>IRemedy</i> "185.5 PMD fun	Comment S hing (ILT) funct	Juniper Netwo Status X ion" is missting rations" a sub-s	g in "185.5 PMD subclause with a	functional pproprate numbering	Chang 10 km To: "c km"	ge: "coul "" could ope <i>Respon</i>	ld operate erate over	12 km would mee Response Status	t the oper		irement of 2 m to 10
ki, Jeffe mment "Inter-s specifi ggested Add to entitled functio	Type TR sublayer link trair cations." <i>IRemedy</i> "185.5 PMD fun d "Inter-sublayer n for a Type O1	Comment S ning (ILT) funct ctional specific link training (IL interface, spec	Juniper Netwo Status X ion" is missting cations" a sub-s .T) function" wi ified in Annex	g in "185.5 PMD subclause with a th text "A PMD s 178B. When the	functional pproprate numbering shall provide the ILT variable	Chang 10 km To: "c km" Proposed	ge: "coul n" could ope <i>Respon</i> SC ~	Id operate erate over ose	12 km would mee Response Status	t the oper s O 2564	ating range requi	
aki, Jeffe "Inter-s specifi ggested Add to entitled functio mr_tra	ery Type TR sublayer link trair cations." <i>IRemedy</i> "185.5 PMD fun d "Inter-sublayer n for a Type O1 ining_enable is t	Comment S ning (ILT) funct ctional specific link training (IL interface, spec rue, the ILT fur	Juniper Netwo Status X ion" is missting ations" a sub-a T) function" wi ified in Annex nction is used t	g in "185.5 PMD subclause with a th text "A PMD s 178B. When the o request chang	functional pproprate numbering shall provide the ILT variable les to the peer	Chang 10 km To: "c km" Proposed Cl 185 Maniloff, E	ge: "coul o" could ope <i>Respon</i> SC ~ Eric	Id operate erate over ose 185.6.1	12 km would mee Response Status P Cie	t the oper s O 2 564 na	ating range requi	irement of 2 m to 10
ki, Jeffe mment "Inter-s specifi ggested Add to entitled functio mr_tra transm	ery Type TR sublayer link trair cations." <i>IRemedy</i> "185.5 PMD fun d "Inter-sublayer n for a Type O1 ining_enable is t	Comment S hing (ILT) funct ctional specific link training (IL interface, spec rue, the ILT fur llation, training	Juniper Netwo Status X ion" is missting ations" a sub-s c.T) function" wi iffed in Annex nction is used t pattern, and p	g in "185.5 PMD subclause with a th text "A PMD s 178B. When the o request chang	functional pproprate numbering shall provide the ILT variable	Chang 10 km To: "c km" Proposed Cl 185 Maniloff, E Comment	ge: "coul could ope <i>Respon</i> SC · Eric Type	Id operate erate over ose 185.6.1 TR	12 km would mee Response Status P Cie Comment Statu	t the oper s O 7564 na rs X	ating range requi	# <u>386</u>
ki, Jeffe mment "Inter-s specifi ggestea Add to entitlea functio mr_tra transm state, s	ery Type TR sublayer link trair cations." <i>IRemedy</i> "185.5 PMD fun d "Inter-sublayer in for a Type O1 ining_enable is t hitter state (modu	Comment S hing (ILT) funct ctional specific link training (IL interface, spec rue, the ILT fur llation, training	Juniper Netwo Status X ion" is missting ations" a sub-s T) function" wi ified in Annex nction is used t pattern, and p DATA mode."	g in "185.5 PMD subclause with a th text "A PMD s 178B. When the o request chang	functional pproprate numbering shall provide the ILT variable les to the peer	Chang 10 km To: "c km" Proposed Cl 185 Maniloff, E Comment	ge: "coul could ope <i>Respon</i> SC · Eric Type	Id operate erate over ose 185.6.1 TR	12 km would mee Response Status P Cie Comment Statu	t the oper s O 7564 na rs X	ating range requi	irement of 2 m to 10
ki, Jeffe mment "Inter-s specifi ggestea Add to entitlea functio mr_tra transm state, s	Type TR sublayer link train cations." "185.5 PMD fun d "Inter-sublayer n for a Type O1 ining_enable is t hitter state (modu and coordinate th	Comment S ning (ILT) funct ctional specific link training (IL interface, spec rue, the ILT fur lation, training ne transition to	Juniper Netwo Status X ion" is missting ations" a sub-s T) function" wi ified in Annex nction is used t pattern, and p DATA mode."	g in "185.5 PMD subclause with a th text "A PMD s 178B. When the o request chang	functional pproprate numbering shall provide the ILT variable les to the peer	Chang 10 km To: "c km" Proposed Cl 185 Maniloff, E Comment The a	ge: "coul in" Respon SC Eric Type iverage l	Id operate erate over use 185.6.1 TR aunch por	12 km would mee Response Status P Cie Comment Statu	t the oper s O 7564 na rs X	ating range requi	# <u>386</u>
specifi ggested Add to entitled functio mr_tra transm state, s	Type TR sublayer link train cations." "185.5 PMD fun d "Inter-sublayer n for a Type O1 ining_enable is t hitter state (modu and coordinate th	Comment S ning (ILT) funct ctional specific link training (IL interface, spec rue, the ILT fur lation, training ne transition to	Juniper Netwo Status X ion" is missting ations" a sub-s T) function" wi ified in Annex nction is used t pattern, and p DATA mode."	g in "185.5 PMD subclause with a th text "A PMD s 178B. When the o request chang	functional pproprate numbering shall provide the ILT variable les to the peer	Chang 10 km To: "c km" Proposed Cl 185 Maniloff, E Comment The a Max Suggested	ge: "could ope Respon SC - Eric Type Iverage I dRemed	Id operate erate over ose 185.6.1 TR aunch por	12 km would mee Response Status P Cie Comment Statu	t the oper s O 7564 na rs X ild be upd	ating range requi	# <u>386</u>

C/ 185 SC 185.6.1

C/ 185 SC 185.6.1	P 564	L33	# 385	C/ 185	SC 185.8.16	P 571	L18	# 2
Maniloff, Eric	Ciena			Stassar, Pet	er	Huawei		
Comment Type TR	Comment Status X			Comment Ty	pe TR	Comment Status X		
	CC results in an excessively reduces to allow realistic rec sented.			sufficient	ly precise. "lov	nition of Receiver Sensitivit /est average receiver input p not right. Power is independ	ower at TP3 wit	h
SuggestedRemedy								
Replace the 3.4dB ET	CC Max Value with 2.5 dB			SuggestedRe	-	Made to an endered a second	and Constant and the	
Proposed Response	Response Status 0			receiver no link in	input power at	itivity is an optional parame TP3 with vhich the block error ratio re parameter defined as the lo	quirement in 185	5.2 is met." to "Receiv
C 185 SC 185.6.1	P 564	L 50	# 398	TP3 with			Sweat average re	
Mi, Guangcan	Huawei Tech	nologies Co., Ltd				ratio requirement in 185.2 is		
Comment Type TR	Comment Status X	-			ties in Table 18	nents from the link, which ar 35-7."	e addressed sep	
used term for coherent	f the term of acquisition in the t experts, it appears out of co nner FEC behaviour or PMA b	ntext in this draft	. It may be able to	C/ 185A Zimmerman,	SC 185A.1 George	<i>Р</i> 859 ADI,APLgp,C	L 16 Cisco,Marvell,On	# <u>335</u> Semi,Sony
SuggestedRemedy				Comment Ty	pe T	Comment Status X		-
add definition of acquis	sition in the text where Tx lase Coherent experts here.	er frequency slew	v rate is defined.			s a single methodology (ET the method of calculation.	CC), and it really	doesn't define the
Proposed Response	Response Status O				text of 185A.1	text with: "This annex define d transmitter constellation cl		
C 185 SC 185.6.2	P 565	L 30	# 387	Proposed Re	-	Response Status O	, , , , , , , , , , , , , , , , , , ,	
Maniloff, Eric	Ciena					,		
Comment Type TR	Comment Status X							
	aximum Average transmitter 00GBASE-LR1 Average recei							
SuggestedRemedy								
Modify Average received	e power tolerance (max) to -4	dBm						

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 185A SC 185A.1 Page 139 of 149 6/16/2025 2:13:39 PM

C/ 185A SC 185A.2	2.3 P862		# 11				L12	
Pfiefle, Joerg	Keysigh	t Technologies		Pfiefle, Joerg	ł	Keysight Tech	nnologies	
Comment Type T	Comment Status X			Comment Type T	Comment St	atus X		
	ssing steps should be desc			Reference equalizer	comprises two ste	ps, which do	not necessarily	need to be combined
•	C results, e.g. block-wise p	processing with a spe	cified block length.	SuggestedRemedy				
uggestedRemedy				Add a separate bloc				
	on a text similar to OIF-400 block wise with block size I			polarization demultip	• •		is a separate pro	ocessing block.
blocks for some of the	he processing steps. The p	processing steps sho	uld perform only the	Proposed Response	Response Sta	atus O		
	the description. Processing m any additional signal pro							
	resulting for example from			C/ 185A SC 185A.2	2.4	P 863	L 28	# 14
roposed Response	Response Status 0)		Pfiefle, Joerg	ł	Keysight Tech	nnologies	
				Comment Type T	Comment St			
/ 185A SC 185A.2	2.3 P862	L30	# 625	Effective number of There is a standard,	(/ I			0
Kota, Kishore		Semiconductor		2023. This standard	requires that the "a	amplitude and	d frequency at w	hich the measureme
Comment Type TR	Comment Status X			was made shall be s	necified " Therefore	re, it is also n	eeded to specify	y the amplitude of the
The offline digital sig	gnal processing described	in this section and Fig	g 185A-4. is missing a	sine wave, which ma the frequency.				
The offline digital signation post-equalizer after	gnal processing described the "carrier phase recovery	in this section and Fig y" block which is requ	ired to allow relaxation	sine wave, which ma the frequency.				
The offline digital signation of the signature of the sig	gnal processing described	in this section and Fig y" block which is requ 5ps in Table 185-5. T	ired to allow relaxation he relaxed skew	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE	ay also be translate E Standard 1241-2	ed to a percen 2023, Section	9.4.	scale of the ADC, an
The offline digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th	gnal processing described the "carrier phase recover re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/	ired to allow relaxation he relaxed skew ASE-LR1 modules.	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a	ay also be translate E Standard 1241-2	ed to a percen 2023, Section	9.4.	scale of the ADC, an
The offline digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v	gnal processing described the "carrier phase recover re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/	ired to allow relaxation he relaxed skew ASE-LR1 modules.	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE	ay also be translate E Standard 1241-2 mplitude and frequ	ed to a percen 2023, Section ency informa	9.4. 9.4.	scale of the ADC, an e specified value sha
The offine digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v SuggestedRemedy	gnal processing described the "carrier phase recover re skew (max)" spec to 0.7 irred to allow design of lowe he ETCC calculation will re value.	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty	ired to allow relaxation he relaxed skew ASE-LR1 modules. rif the skew gets close	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp	E Standard 1241-2 mplitude and frequ ne amplitude as 90 paced values betwee	ed to a percen 2023, Section ency informa % of the full-s een DC and th	9.4. tion for which th scale of the ADC ne 3-dB bandwid	scale of the ADC, an e specified value sha C and the frequency ith (according to Tab
The offline digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v SuggestedRemedy Add post-equalizer s	gnal processing described the "carrier phase recover re skew (max)" spec to 0.7 irred to allow design of lowe ne ETCC calculation will re value.	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentati	ired to allow relaxation he relaxed skew ASE-LR1 modules. rif the skew gets close	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final E	E Standard 1241-2 mplitude and frequ ne amplitude as 90 paced values betwe NOB number is the	ed to a percen 2023, Section ency informa % of the full-s een DC and th en the averag	9.4. tion for which th scale of the ADC ne 3-dB bandwid	scale of the ADC, an e specified value sha C and the frequency ith (according to Tab
The offline digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v SuggestedRemedy Add post-equalizer s	gnal processing described the "carrier phase recover re skew (max)" spec to 0.7 irred to allow design of lowe he ETCC calculation will re value.	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentati	ired to allow relaxation he relaxed skew ASE-LR1 modules. rif the skew gets close	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp	E Standard 1241-2 mplitude and frequ ne amplitude as 90 paced values betwee	ed to a percen 2023, Section ency informa % of the full-s een DC and th en the averag	9.4. tion for which th scale of the ADC ne 3-dB bandwid	scale of the ADC, an e specified value sha C and the frequency ith (according to Tab
The offline digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v uggestedRemedy Add post-equalizer s roposed Response	gnal processing described the "carrier phase recover re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re value. stage to the digital signal p <i>Response Status</i> O	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentati	ired to allow relaxation he relaxed skew ASE-LR1 modules. rif the skew gets close	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final E	E Standard 1241-2 mplitude and frequ ne amplitude as 90 paced values betwe NOB number is the <i>Response Sta</i>	ed to a percen 2023, Section ency informa % of the full-s een DC and th en the averag	9.4. tion for which th scale of the ADC ne 3-dB bandwid	scale of the ADC, an e specified value sha C and the frequency ith (according to Tab
The offine digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v cuggestedRemedy Add post-equalizer s proposed Response	gnal processing described the "carrier phase recovery re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re value. stage to the digital signal p <i>Response Status</i> O 2.3.5 <i>P</i> 863	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentation	ired to allow relaxation he relaxed skew ASE-LR1 modules. If the skew gets close on to be provided.	sine wave, which ma the frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final El Proposed Response	E Standard 1241-2 mplitude and frequ ne amplitude as 90 aced values betwe NOB number is the <i>Response Sta</i>	2023, Section ency informa % of the full-s een DC and th en the average atus O P865	9.4. tion for which th scale of the ADC a 3-dB bandwid e of these points	e specified value sha c and the frequency th (according to Tab s. # <u>337</u>
The offine digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v SuggestedRemedy Add post-equalizer s Proposed Response	gnal processing described the "carrier phase recovery re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re value. stage to the digital signal p <i>Response Status</i> O 2.3.5 <i>P</i> 863	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentation <i>L</i> 12 t Technologies	ired to allow relaxation he relaxed skew ASE-LR1 modules. If the skew gets close on to be provided.	sine wave, which mathe frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final El Proposed Response CI 185A SC 185A.2 Zimmerman, George Comment Type T	E Standard 1241-2 mplitude and frequ he amplitude as 90 baced values betwe NOB number is the <i>Response Sta</i> 2.5.2	ed to a percent 2023, Section ency information % of the full-steen DC and the en DC and the en the average atus O P865 ADI,APLgp,Ciatus X	9.4. tion for which th scale of the ADC ne 3-dB bandwid e of these points <i>L</i> 39 isco,Marvell,On	e specified value sha c and the frequency th (according to Tab s. # <u>337</u> Semi,Sony
The offine digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v SuggestedRemedy Add post-equalizer s Proposed Response	gnal processing described the "carrier phase recovery re skew (max)" spec to 0.7 irred to allow design of loww he ETCC calculation will re value. stage to the digital signal p <i>Response Status</i> 0 2.3.5 <i>P</i> 863 Keysigh	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentation <i>L</i> 12 t Technologies	ired to allow relaxation he relaxed skew ASE-LR1 modules. If the skew gets close on to be provided.	sine wave, which mathe frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final El Proposed Response Cl 185A SC 185A.2 Zimmerman, George Comment Type T The required signal th	E Standard 1241-2 mplitude and frequ he amplitude as 90 baced values betwe NOB number is the <i>Response Sta</i> 2.5.2 <i>Comment Sta</i> to noise ratio (in ge	2023, Section ency information % of the full-steen DC and the en DC and the atus O P865 ADI,APLgp,Ciatus X eneral) is not v	9.4. tion for which th scale of the ADC ne 3-dB bandwid e of these points <i>L</i> 39 isco,Marvell,Ons	e specified value sha c and the frequency th (according to Tab s. # <u>337</u> Semi,Sony on 185A-2. Equation
The offine digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v uggestedRemedy Add post-equalizer s roposed Response / 185A SC 185A.2 fiefle, Joerg omment Type T Reference equalizer uggestedRemedy	gnal processing described the "carrier phase recovery re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re value. stage to the digital signal p <i>Response Status</i> O 2.3.5 P863 Keysigh <i>Comment Status</i> X r misses to specify the num	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentation <i>L</i> 12 t Technologies nber of taps.	ired to allow relaxation he relaxed skew ASE-LR1 modules. if the skew gets close on to be provided. # 13	sine wave, which mathe frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final El Proposed Response CI 185A SC 185A.2 Zimmerman, George Comment Type T	E Standard 1241-2 mplitude and frequ he amplitude as 90 baced values betwe NOB number is the <i>Response Sta</i> 2.5.2 <i>Comment Sta</i> to noise ratio (in ge	2023, Section ency information % of the full-steen DC and the en DC and the atus O P865 ADI,APLgp,Ciatus X eneral) is not v	9.4. tion for which th scale of the ADC ne 3-dB bandwid e of these points <i>L</i> 39 isco,Marvell,Ons	e specified value sha c and the frequency th (according to Tab s. # <u>337</u> Semi,Sony on 185A-2. Equation
The offine digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v uggestedRemedy Add post-equalizer s proposed Response 1 185A SC 185A.2 tiefle, Joerg comment Type T Reference equalizer uggestedRemedy Add a specified num	gnal processing described the "carrier phase recover re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re value. stage to the digital signal p <i>Response Status</i> O 2.3.5 P863 Keysigh <i>Comment Status</i> X r misses to specify the num	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentation <i>L</i> 12 t Technologies nber of taps.	ired to allow relaxation he relaxed skew ASE-LR1 modules. if the skew gets close on to be provided. # 13	sine wave, which mathe frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final El Proposed Response Cl 185A SC 185A.2 Zimmerman, George Comment Type T The required signal to 185A-2 is the Required	E Standard 1241-2 mplitude and frequ he amplitude as 90 baced values betwe NOB number is the <i>Response Sta</i> 2.5.2 <i>Comment Sta</i> to noise ratio (in ge	2023, Section ency information % of the full-steen DC and the en DC and the atus O P865 ADI,APLgp,Ciatus X eneral) is not v	9.4. tion for which th scale of the ADC ne 3-dB bandwid e of these points <i>L</i> 39 isco,Marvell,Ons	e specified value sha c and the frequency th (according to Tab s. # <u>337</u> Semi,Sony on 185A-2. Equation
The offine digital sig post-equalizer after of the :IQ Quadratur specification is requ Without this block th to the max allowed v SuggestedRemedy Add post-equalizer s Proposed Response Cl 185A SC 185A.2 Pfiefle, Joerg Comment Type T Reference equalizer SuggestedRemedy Add a specified num	gnal processing described the "carrier phase recovery re skew (max)" spec to 0.7 irred to allow design of low ne ETCC calculation will re value. stage to the digital signal p <i>Response Status</i> O 2.3.5 <i>P</i> 863 Keysigh <i>Comment Status</i> X r misses to specify the num	in this section and Fig y" block which is requ 5ps in Table 185-5. T er complexity 800GB/ sult in a large penalty rocessing. Presentation <i>L</i> 12 t Technologies nber of taps.	ired to allow relaxation he relaxed skew ASE-LR1 modules. if the skew gets close on to be provided. # 13	sine wave, which mathe frequency. SuggestedRemedy Add a citation to IEE Add the sine wave a be achieved. Propose to specify th at least 10 evenly sp 185A-1). The final El Proposed Response C/ 185A SC 185A.2 Zimmerman, George Comment Type T The required signal t 185A-2 is the Requir not just RSNR.	ay also be translate E Standard 1241-2 mplitude and freque he amplitude as 90 baced values betwe NOB number is the <i>Response Sta</i> 2.5.2 <i>Comment Sta</i> to noise ratio (in general signal to noise fractional gnal to noise ratio (in	ed to a percent 2023, Section ency information when the full-seen DC and the en DC and the en the average atus O P865 ADI,APLgp,Cite atus X eneral) is not vertice in the pre- ratio in the pre- RSNR)" to "reference of the section of the section of the section of the section of the section of the section of the sect	9.4. tion for which th scale of the ADC te 3-dB bandwid e of these points <i>L</i> 39 isco,Marvell,Ons what is in equati esence of virtua	e specified value sha C and the frequency the th (according to Tab s. # <u>337</u> Semi,Sony on 185A-2. Equation I ASE. (RSNR_ase)

 TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
 C/
 185A
 Page 140 of 149

 COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
 SC
 185A.
 6/16/2025 2:13:39 PM

 SORT ORDER: Clause, Subclause, page, line
 SC
 185A.
 6/16/2025 2:13:39 PM

CI 185A SC 185A.2.5.2 P865	L 46	# 338	C/ 186 SC 186.2.1	P 582	L 4	# 209
Zimmerman, George ADI, APLgp,	Cisco,Marvell,On	Semi,Sony	Huber, Thomas	Nokia		
Comment Type E Comment Status X			Comment Type E	Comment Status X		
DeltaRSNR_trx doesn't relate to "RSNR" in equation	on 185A-3, it relat	es to RSNR_ASE.	In the second senten than the ER1 FEC co	ce, clarify "800GBASE-ER1 FE	C" is referring to	the sublayer rather
SuggestedRemedy Change RSNR to RSNR_ase at line 46			SuggestedRemedy			
Proposed Response Response Status O			Change "800GBASE applied throughout th	-ER1 FEC" to "800GBASE-ER1 ne subclause.	1 FEC sublayer"	. This should be
			Proposed Response	Response Status 0		
C/ 185A SC 185A.2.5.2 P866	L 7	# 525				
Dudek, Mike Marvell			C/ 186 SC 186.2.1	P 582	L19	# 210
Comment Type E Comment Status X			Huber, Thomas	Nokia		
Unnecessary duplication of "waveforms"			Comment Type E	Comment Status X		
SuggestedRemedy Delete "as waveforms"			The "8 lanes" should sublayers.	not be called lanes since they a	are not an interfa	ace between two
Proposed Response Response Status O			SuggestedRemedy			
		" [200		ER1 FEC flows" throughout the s change also needs to be mad aces		
	L 1	# 208				
			Pronosed Response	Response Status n		
Huber, Thomas Nokia			Proposed Response	Response Status 0		
Huber, ThomasNokiaComment TypeTComment StatusX				, -	/ 22	# 014
Huber, Thomas Nokia Comment Type T Comment Status X This clause is missing information on loopbacks			C/ 186 SC 186.2.1	P582	L 23	# 211
Huber, Thomas Nokia Comment Type T Comment Status X This clause is missing information on loopbacks SuggestedRemedy	hat is in OIF 8002		<i>Cl</i> 186 SC 186.2.1 Huber, Thomas	Р 582 Nokia	L 23	# 211
Huber, Thomas Nokia Comment Type T Comment Status X This clause is missing information on loopbacks SuggestedRemedy Add a subclause for loopbacks that is aligned to w	hat is in OIF 8002		Cl 186 SC 186.2.1 Huber, Thomas Comment Type T	P582	-	
Huber, Thomas Nokia Comment Type T Comment Status X This clause is missing information on loopbacks SuggestedRemedy Add a subclause for loopbacks that is aligned to w	hat is in OIF 8002		Cl 186 SC 186.2.1 Huber, Thomas Comment Type T	P 582 Nokia Comment Status X	-	
Huber, Thomas Nokia Comment Type T Comment Status X This clause is missing information on loopbacks SuggestedRemedy Add a subclause for loopbacks that is aligned to w	hat is in OIF 8002		Cl 186 SC 186.2.1 Huber, Thomas Comment Type T The interface betwee SuggestedRemedy	P 582 Nokia Comment Status X	is FEC codewor	ds, not symbols.

C/ 186 SC 186.2.1

C/ 186	SC 186.2.1	P 582	L 30	# 212	C/ 186	SC	186.2.3.3	P	584	L 42	# 214
Huber, The	omas	Nokia			Huber, Th	omas		Noki	а		
Comment	Туре Т	Comment Status X			Comment	Туре	Е	Comment Status	X		
	terface between QAM symbols.	the FEC and PMA sublayers i	s FEC codewor	ds, not digitized				urpose of the pad o a that is an intege			idea is that the 5 pad
Suggestea	Remedy				Suggested	dReme	dy				
synchr PMA:I	onization proces	ause of the second sentence f ss accepts a stream of m-bit d dication primitive and forms a	igitized DP-16Q	AM symbols via the		r numb					s." to "This creates an 0GBASE-ER1 tributar
	orm of m-bit dig	21 FEC synchronization processitized bitstreams representing			Proposed	Respoi	nse	Response Status	0		
,	Response	Response Status O			C/ 186	SC	186.2.3.3	P	584	L 47	# 98
ropoodu					Bruckman	, Leon		Nvid	lia		
					Comment	Туре	TR	Comment Status	X		
7 186	SC 186.2.2	P 582	L 47	# 213							e bits removed or do
Huber, The	omas	Nokia						is is defined later of	on in sec	tion 186.2.3.12, t	out better have it clear
Comment	Туре Т	Comment Status X				he begi	0				
		UNITDATA parameter is a sy	mbol, whereas	186.3.2 says it is FEC	Suggested				011/2		
codew	ords							it pad following the ng the OH field car			
Suggestea	Remedy				Proposed			Response Status	-		
		s the Gray coding and symbol service interface to the PMA a			TTOPOSCU	псоро	130	Response Status	0		
		odeword and rx_codeword, res		us. Change tx_symbol							
Proposed	Response	Response Status O			C/ 186	SC	186.2.3.4.1	I P	586	L 28	# 215
					Huber, Th	omas		Noki	a		
					Comment	Туре	Е	Comment Status	5 X		
C/ 186	SC 186.2.3.3	B P 584	L 24	# 97					values u	sed in it are in G	.709.6 (as indicated in
Bruckman	, Leon	Nvidia			the no	ormative	e text of this	s clause).			
Comment	Type TR	Comment Status X			Suggested	dReme	dy				
In Figu	ıre 186-4 it is ha	rd to identify the 5 bits of pad						"Recommendation	ITU_T G	6.709.1, Recomm	nendation ITU-T
uggestea	Remedy					-,	OIF-800ZF				
00		ne 5 bits of pad in the payload	area		Proposed	Respoi	nse	Response Status	0		
0	Response	Response Status O									
Toposcu	Coponse										

C/ 186 SC 186.2.3.4.1

	C/ 186 SC 186.2.3.5.10 P589 L10 # 100
Huber, Thomas Nokia	Bruckman, Leon Nvidia
Comment Type E Comment Status X	Comment Type ER Comment Status X
The EOH field is defined in G.709.1 rather than G.709.6	Missing "the"
SuggestedRemedy	SuggestedRemedy
Change G.709.6 to G.709.1.	Change: "by 800GBASE-ER1 FEC" to "by the 800GBASE-ER1 FEC"
Proposed Response Response Status O	Proposed Response Response Status O
C/ 186 SC 186.2.3.5.5 P588 L14 # 217	C/ 186 SC 186.2.3.5.10 P590 L14 # 242
Huber, Thomas Nokia	Gorshe, Steve Microchip Technology
Comment Type TR Comment Status X	Comment Type TR Comment Status X
Change "byte 8" to "byte 7" Proposed Response Response Status O	word. Since each of the 8 lanes are mapped into their own 800GBASE-ER1 frame, and GMP mapping is performed per lane, there should be a single stuff block in the first row Figure 186-7.
	SuggestedRemedy
C/ 186 SC 186.2.3.5.9 P 589 L 2 # 99 Bruckman, Leon Nvidia	
	a single stuff block. If the four stuff blocks are correct, an explanation should be added t
Bruckman, Leon Nvidia Comment Type ER Comment Status X Text in this paragraph can be improved SuggestedRemedy	
Bruckman, Leon Nvidia Comment Type ER Comment Status X Text in this paragraph can be improved SuggestedRemedy Change: "the test pattern is generated using the clock for the 800GBASE-ER1 tributary frame"	a single stuff block. If the four stuff blocks are correct, an explanation should be added t explain why. Proposed Response Response Status O
Bruckman, Leon Nvidia Comment Type ER Comment Status X Text in this paragraph can be improved SuggestedRemedy Change: "the test pattern is generated using the clock for the 800GBASE-ER1 tributary frame" To "the test pattern is generated using the same clock as the one used to generate the	a single stuff block. If the four stuff blocks are correct, an explanation should be added to explain why. Proposed Response Response Status 0 Cl 186 SC 186.2.3.8 P 591 L 52 # 264
Bruckman, Leon Nvidia Comment Type ER Comment Status X Text in this paragraph can be improved SuggestedRemedy Change: "the test pattern is generated using the clock for the 800GBASE-ER1 tributary frame"	a single stuff block. If the four stuff blocks are correct, an explanation should be added to explain why. Proposed Response Response Status O C/ 186 SC 186.2.3.8 P 591 L 52 # 264 Wang, Xuebo Huawei
Bruckman, Leon Nvidia Comment Type ER Comment Status X Text in this paragraph can be improved SuggestedRemedy Change: "the test pattern is generated using the clock for the 800GBASE-ER1 tributary frame" To "the test pattern is generated using the same clock as the one used to generate the 800GBASE-ER1 tributary frame"	a single stuff block. If the four stuff blocks are correct, an explanation should be added explain why. Proposed Response Response Status O Cl 186 SC 186.2.3.8 P 591 L 52 # 264 Wang, Xuebo Huawei Comment Type E Comment Status X "OBFG84" should be changed to "OFBG84" as OFBG is the abbreviation of OFEC block

C/ 186 SC 186.2.3.8

C/ 186 SC 186.2.4.1	P 594	L9	# 265	C/ 186 SC 186.2.	4.4 <i>P</i> 595	L11	# 452
Vang, Xuebo	Huawei	-		He, Xiang	Huawei		
Comment Type T	Comment Status X			Comment Type TR	Comment Status X		
The number 344064 sh	ould be 172032. Each DP-16 rrespond to 172032 DP-16Q/		presents 8 bits, then	21	of bit errors detected by CR	C32 check" is incor	rect. CRC32 can only
SuggestedRemedy				SuggestedRemedy			
Change "344064" to "17	72032".			Change the degrade	e detection method to align v	vith OIF 800ZR IA.	
Proposed Response	Response Status O			Proposed Response	Response Status O		
C/ 186 SC 186.2.4.4	P 594	L16	# 326	C/ 186 SC 186.2.	4.6.1 <i>P</i> 595	L 40	# 101
srown, Matt	Alphawave Se	emi		Bruckman, Leon	Nvidia		· · · · · · · · · · · · · · · · · · ·
	Comment Status X 1/ER1-20 PMD the error ratio			Comment Type ER Strange character	Comment Status X		
being a CRC error ratio. uggestedRemedy	. In order to measure this a s	et of counters ar	e required.	SuggestedRemedy			
uggesteunenjeuy				Change: "multi0fram	ie" to "multi-frame"		
Define a set of two cour a count of all CRC32 blo a count of all CRC32 blo Add the new counters to			ine the registers in	Proposed Response	Response Status 0	(40	# 249
Define a set of two cour a count of all CRC32 blo a count of all CRC32 blo Add the new counters to Clause 45.	ocks processed ocks in which error are detec o the list of status registers in		ine the registers in	Proposed Response	Response Status O 4.6.7 P 596	L 40	# <u>218</u>
Define a set of two cour a count of all CRC32 blo a count of all CRC32 blo Add the new counters to	ocks processed ocks in which error are detec		ine the registers in	Proposed Response Cl 186 SC 186.2. Huber, Thomas	Response Status 0 4.6.7 P596 Nokia	L 40	# <u>218</u>
Define a set of two cour a count of all CRC32 bla a count of all CRC32 bla Add the new counters to Clause 45. Proposed Response	ocks processed ocks in which error are detec o the list of status registers in <i>Response Status</i> O <i>P</i> 594 Huawei		ine the registers in # 451	Cl 186 SC 186.2. Huber, Thomas Comment Type T While the GID, IID, i transmitter, they cou interface. As such, t	Response Status O 4.6.7 P 596	ues when connecte onnected to an ITU- verify that they con	d to an 800GBASE-ER T FlexO-8e-DO tain the fixed values
Define a set of two cour a count of all CRC32 bld a count of all CRC32 bld Add the new counters to Clause 45. roposed Response / 186 SC 186.2.4.4 le, Xiang omment Type TR A new subclause definir FEC degrade is intende to correct all errors and	Acks processed ocks in which error are detect to the list of status registers in <i>Response Status</i> O <i>P</i> 594 Huawei <i>Comment Status</i> X ng FEC degrade behavior for ed to warn the degradation be	L 51	# <u>451</u>	Proposed Response Cl 186 SC 186.2. Huber, Thomas Comment Type T While the GID, IID, a transmitter, they cou interface. As such, t they are supposed t SuggestedRemedy Add text to 186.2.4. overhead doesn't ha	Response Status O 4.6.7 P 596 Nokia Comment Status X and MAP fields are fixed valued have different values if comment values	ues when connected onnected to an ITU- verify that they con a signal if they don't to not demapped if the cted. The SIGNAL	d to an 800GBASE-EF T FlexO-8e-DO tain the fixed values ne GID/IID/MAP OK parameter should
Define a set of two cour a count of all CRC32 bld a count of all CRC32 bld Add the new counters to Clause 45. Proposed Response 186 SC 186.2.4.4 He, Xiang Comment Type TR A new subclause definir FEC degrade is intende to correct all errors and SuggestedRemedy Reuse the methodology	Acks processed ocks in which error are detect to the list of status registers in <i>Response Status</i> O <i>P</i> 594 Huawei <i>Comment Status</i> X ng FEC degrade behavior for ed to warn the degradation be	LS1 and def	# 451 20 should be added. of until oFEC is unable	Proposed Response Cl 186 SC 186.2. Huber, Thomas Comment Type T While the GID, IID, a transmitter, they cou interface. As such, t they are supposed t SuggestedRemedy Add text to 186.2.4. overhead doesn't ha	Response Status O 4.6.7 P 596 Nokia Comment Status X and MAP fields are fixed valued have different values if compared to contain and not demap the contain and not demap the contain and not demap the to the values that are expendent of the context	ues when connected onnected to an ITU- verify that they con a signal if they don't to not demapped if the cted. The SIGNAL	d to an 800GBASE-EF T FlexO-8e-DO tain the fixed values ne GID/IID/MAP OK parameter should

C/ 186 SC 186.2.4.6.7

C/ 186	SC 186.2.4.9.	3 P 597	L 32	# 102	C/ 186	SC	186.3.3.2	P 603	L9	# 268
Bruckman	n, Leon	Nvidia			Wang, Xu	ebo		Huawei		
Comment	Type ER	Comment Status X			Comment	Туре	т	Comment Status X		
Incons	sistent lenguage				"S<70	23:707	5>" should	be changed to "S<7013:70	075>". Each 8000	BASE-ER1 PMA frame
Suggested	dRemedy							symbols per Line 46 on Pa ad symbols of row 113 lead		
		nt marker location feature is			Suggested			,		
		r_location_ability is set to 1) t_marker_location_enable (s		by the FEC control	00			" to "S<7013:7075>".		
To: "If (FEC_	the alignment ma _alignment_marke	rker location feature is supp r_location_ability is set to 1) _location_enable is set to 1)	orted and is enabled	FEC control variable	Proposed	Respor	ise	Response Status O		
Proposed	Response	Response Status O			C/ 186	SC	186.4.2.1	P610	L35	# 636
					Law, David	d		HPE		
C/ 186	SC 186.3.2	P 599	L 40	# 219	Comment	Туре	т	Comment Status X		
Huber, Th	omas	Nokia						eld lock state diagram req		
Comment	Туре Е	Comment Status X				-	0	re 186–16 '800GBASE-EF	R1 PMA FAW field	d lock state diagram'.
		he service interface has a lar			Suggested		-			
		and within those, a 'semantic						P requested by the FAW find requested by the FAW field		should be changed to
	ice descriptions.in	pared to the FEC subclause, this amendment	and compared	to other service	Proposed			Response Status O		
Suggested	•				Fioposeu	пезроі	130			
Revise	e the clause to rer	nove all the subheadings, m n the overall structure with w								
Proposed	Response	Response Status O								
C/ 186	SC 186.3.3.2	P602	L 5 1	# 267						
Wang, Xu	ebo	Huawei								
Comment	Type E	Comment Status X								
	<0:21>" should be nent word per CL1	e changed to "faw<0:21>", as 86.3.3.5.	it is shortened f	rom multi-frame						
Suggested	dRemedy									
Chang	ge "mfas<0:21>" te	o "faw<0:21>".								
Pronosod	Paananaa	Deenenee Statue								

Proposed Response Response Status **0**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 186 SC 186.4.2.1

C/ 186 SC 186.4.3	P618	L17	# 661	C/ 186	SC 186.4.3	P620	L 4	# 663
Law, David	HPE			Law, David	I	HPE		
Comment Type T Col	mment Status X			Comment	Туре Е	Comment Status X		
Since Figure 186–18 is the '86 that:)0GBASE-ER1 FEC F	AM field lock sta	te diagram', it seems	diagrar	ns follows the	tate diagram conventions' says conventions of 21.5.'. Table 21 as the use of the [equal sign] cl	–1 'State diagra	im operators' in
[1] The condition from the GE [2] The condition from the INV fam_bad_count = 5.	/ALID_FAM state to th	ne 5_BAD state s	hould be	Suggested. Change	-	nces of the text ' ==' in Fig	ure 186–20 to r	ead ' ='.
[3] The condition from the CO	MP_2ND state to the	2_GOOD state s	hould be fam_match.	Proposed I	Response	Response Status 0		
SuggestedRemedy								
Change:				C/ 186	SC 186.4.3	P620	L23	# 665
[1] The GET_BLOCK state to	the FIND_1ST state t	ransition conditio	n from test_amp to	Law, David		HPE		
test_fam. [2] The INVALID_FAM state to	o the 5 BAD state tra	nsition condition	from amp bad count =	Comment	Гуре Е	Comment Status X		
5 to fam_bad_count = 5. [3] The COMP_2ND state to t fam_match.				diagrar	ns follows the	tate diagram conventions' says conventions of 21.5.'. Table 21 as the use of the [left arrow] cha	–1 'State diagra	im operators' in
Proposed Response Res	ponse Status O			Suggested	Remedy			
						nces of the use of the characte		
C/ 186 SC 186.4.3	P619	L 9	# 662			86–20 '800GBASE-ER1 FEC A eft arrow] character.	lignment marke	er location state
_aw, David	HPE			Proposed F	Response	- Response Status O		
Comment Type T Col	mment Status X					, -		
The Figure 186–19 800GBAS					00 400 4 0		/ 00	# a a.t
variable fec_mfas_restart, but subclause 186.4.2.1 'Variable		t_lock is defined	in the associated	C/ 186	SC 186.4.3		L 39	# 664
	5.			Law, David		HPE		
SuggestedRemedy Either change the three instar	and of foo mfoo root	ort to road for m	foo rootort look in	Comment		Comment Status X		
Fillner change the three instar						tate diagram conventions' says		ised in the state
Figure 186–19, or change fec 186.4.2.1.	_mfas_restart_lock to	read fec_mfas_r	estart in subclause	subcla		conventions of 21.5.'. Table 21 as the use of the [greater than of	0	im operators' in

SuggestedRemedy

Change the text 'zero_aml_cnt >= 5' to read 'zero_aml_cnt [greater than or equal sign] 5' in Figure 186–20 '800GBASE-ER1 FEC Alignment marker location state diagram'.

Proposed Response Response Status **O**

C/ 186 SC 186.4.3.

C/ 186A SC 186A	P 868	L17	# 334	C/ 187	SC 187.1	P 630	L 44	# 419
Zimmerman, George	ADI,APLgp,Ci	sco,Marvell,OnS	emi,Sony	Ran, Adee		Cisco Syste	ns	
Comment Type T	Comment Status X			Comment T	ype TR	Comment Status X		
informative and therefore	icates Annex 186A doesn't ha re not for technical completer n the draft, making it difficult completeness.	ness, but also, it	does not appear to be	Annex fis true r	I78B (specifica egardless of th	ink that includes multiple ISL Ily Figure 178B–7 and Figure e PMD type, and even if the R1 and 800GBASE-ER1-20.	e 178B–8) is requ	uired across ISLs. This
SuggestedRemedy					e that don't hav	ve a training protocol, the "gu	iet" and "local na	attern" modes are the
	ors at initial WG ballot and pr ow it is informative, or delete		n the normative text		of communica	ting the RTS to the peer. Ho		
Proposed Response	Response Status 0			Suggested	Remedy			
				Add 17	B-ILT, Require	ed as row in Table 187-1 (as	in other PMD cla	auses)
C/ 187 SC 187.1 Maki, Jeffery	P 630 Juniper Netwo	L 39	# 550			er 187 defining the ILT funct le always set to false (since		
Comment Type TR	Comment Status X	IKS		training	protocol). Spe	cify that the 800GBASE-ER1	FEC encoded P	RBS31 test pattern
<i>,</i> ,	B—ILT is missing as Require	d for 800GBASE	-ER1-20 and			which may be generated by tx_mode has the value local		
800GBASE-ER1.				Proposed R		Response Status O	_pattern (000 111	021111011).
0								
Suggesteakemeay								
	178B—ILT as Required for 8	00GBASE-ER1-	20 and 800GBASE-	C/ 187	SC 187.5	P 634	L 27	# 551
Add Associated clause ER1.	178B—ILT as Required for 8 Response Status 0	00GBASE-ER1-	20 and 800GBASE-	C/ 187 Maki, Jeffer		P 634 Juniper Netw		# 551
Add Associated clause ER1.		00GBASE-ER1-	20 and 800GBASE-		у			# <u>551</u>
Add Associated clause ER1.		00GBASE-ER1-	20 and 800GBASE-	Maki, Jeffer Comment T	y ype TR ublayer link tra	Juniper Netw	vorks	
		00GBASE-ER1-	20 and 800GBASE-	Maki, Jeffer Comment T "Inter-s	y ype TR ublayer link tra ations."	Juniper Netw Comment Status X	vorks	
Add Associated clause ER1.		00GBASE-ER1-	20 and 800GBASE-	Maki, Jeffer Comment T "Inter-s specific Suggested Add to entitled functior mr_train transmi	y ype TR ublayer link trai ations." Remedy '187.5 PMD fur 'Inter-sublayer for a Type O1 hing_enable is tter state (mod	Juniper Netw Comment Status X	vorks ng in "187.5 PMD -subclause with a vith text "A PMD < 178B. When the to request chang precoder state), i) functional approprate numbering shall provide the ILT e variable ges to the peer

C/ 187 SC 187.5

C/ 187 SC 187.5.	P634	L31	# 103	C/ 187 SC 187.6.1	P638	L24	# 390
Bruckman, Leon	Nvidia	251	# 103	Maniloff, Eric	Ciena	- 24	# 390
Comment Type ER	Comment Status X			Comment Type T	Comment Status X		
51	d to be consistent with other sir	milar PMD clause	26	51	unch power (max) specificati	on for 800GBASI	E-ER1-20 is not
SuggestedRemedy					naximum power specification		
	agram for the transmit/receive p			SuggestedRemedy			
	PMD is shown in Figure 187–4 Figure 187–3 and the PMD bloc			•• •	aunch power (max) value for	800GBASE-ER1	-20 to -5 dBm
Proposed Response	Response Status O	g		Proposed Response	Response Status O		
7 187 SC 187.5.	P635	L 7	# 552	C/ 187 SC 187.6.1	P638	L 26	# 388
/aki, Jeffery	Juniper Netwo	orks		Maniloff, Eric	Ciena		
omment Type TR	Comment Status X			Comment Type T	Comment Status X		
SIGNAL_OK> ILT	and ILT> SIGNAL_OK missir	ng from Figure 1	87-3.		0GBASE-ER1 on defining th		
				should be aligned with	the coupling to ETCC define	d in 800GBASE-	LR1. A supporting
SuggestedRemedy				contribution with details	s of the values for Tx optical	power and ETCC	max will be provided
	ILT and ILT> SIGNAL_OK to			SuggestedRemedy			
above stating, "The	ILT function indicated in Figure	187–3 is defined	in Annex 178B."	00 ,			
Proposed Response	Response Status O				ER1 and 800GBASE-ER1-20		btical powers to ETCC
	,			Proposed Response	aligned with 800GBASE-LR1		
C/ 187 SC 187.6	P637	L 54	# 104	Proposed Response	Response Status O		
Bruckman, Leon	Nvidia			C/ 187 SC 187.6.1	P638	L 27	# 389
Comment Type TR	Comment Status X			Maniloff, Eric	Ciena		
An 800GBASE-ER1 requirement	PMD that supports 40Km is ob-	viously complain	t sinc ethis is the	Comment Type T	Comment Status X		
SuggestedRemedy					y specification in Table 187-5		
					d for single-wavelength appl		
	ate over 40 km would meet the	operating range	requirement of 2 m to		ned, and depending on other		
40 km" To: "could operate o	ver 45 km would meet the operation	ating range regu	irement of 2 m to 40	with DWDM lasers. Loc technologies to be used	osening the optical frequency	accuracy spec a	allows additional
km"		anig lange lequ		-			
Proposed Response	Response Status O			SuggestedRemedy			
	Nesponse Status U				ec in 800GBASE-ER1 to ± 20 radeoffs with different laser i		
				Proposed Response	Response Status 0		

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

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C/ 187	SC 187.6.2	P63	39	L35	# 399
Mi, Guang	can	Huaw	ei Technol	ogies Co., L	td
Comment	Type TR	Comment Status	х		
Sensiti spec, i the oth and Ry Power	ivity and the Rx / t is noticed that the er two coherent < Sens Tx AOF	the relation of the two PMDs. for both LR1 a P min = Power budget Sens Tx AOP min =	when checl paramete and ER1-2 t. While for	king across I rs of ER1 wa 0, Rx AOP i ER1, Rx AC	introuced, the Rx. LR1, ER1-20, and ER1 as not consistent with min - Tx AOP min = IL DP min - Tx AOP min = sentially offset by 1dB,
Suggested either		vn by 1dB or raise the	e Rx Sens.	& Rx AOP t	olerance_min up by 1dB
Proposed	Response	Response Status	0		
C/ 187	SC 187.8.6	P64	43	L 44	# 336
Zimmerma	an, George	ADI,A	PLgp,Cisc	o,Marvell,Or	Semi,Sony
Comment	Type E	Comment Status	Х		
calcula using t front e calcula	ation are defined he test setup an nd in Tables 187 ation - it just poin directly rather th	d calculation defined '-12 and 187-13) - no ts the reader on to ar	in Annex 1 ne of this is nother sect	85A. (and page of the state of	
Suggested	Remedy				
ETCC		and ETCC calculation			
		0		n the Tables	187-12 and 187-13."
Proposed I	Response	Response Status	0		

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