C/ 93A	SC 93A.5.1	P <b>202</b>	L 39	# 237	C/ 120F	SC 1	20F.3.1	P 208	L 14	# 82
Dawe, Piers	3	Nvidia			Brown, Mat	i		Huawei		
Comment Ty	ype TR	Comment Status D		ERL tukey (bucket5)	Comment T	ype	т	Comment Status D		ERL value (bucket5
Unexpla	ained notation o	f up and down: v ^						uired. If an appropriate refere	ence transmitter	r is defined, then a
SuggestedR	Remedy						Id be cor	rrect.		
		nd" "or" or whatever you mea			SuggestedF					
		equation; you can easily say at simpler) applies.	if I w is zero, H	Itw is 1, and if it's one,	Replace			_		
Proposed Re	•	Response Status W			Proposed R	•		Response Status W		
•	•	IN PRINCIPLE.			PROPC	SED A	CCEPTI	N PRINCIPLE.		
		-			[Editor's	note: /	Addresse	s incomplete specification.]		
Resolve	e using respons	e to comment #34.			The ref	rencer	l ad hoc r	presentations is here:		
		noved when closing this com		o bucket #5. The				J/3/ck/public/adhoc/sept23_2	0/wu_3ck_adho	oc_01a_092320.pdf
respons	e to closed con	nment #34 addresses this co	mment.]		Pocoly	ucina	the volue	the response to comment #	61	
/ 120F	SC 120F.3.1	P <b>207</b>	L 14	# 203	Resolve	using	une value		01.	
Vu, Mau-Lir	n	MediaTek						noved when closing this com ment #61 provides value for		
Comment Ty	ype <b>T</b>	Comment Status D		ERL value (bucket5)				Iment #61 provides value for	transmitter dEr	
dERL is	still TBD				C/ 120F	SC 1	20F.3.1	P 208	L <b>39</b>	# 188
uggestedR	Remedy				Calvin, Joh	۱		Keysight Tec	hnologies	
		e negative values. I had share			Comment T		т	Comment Status D		EO jitter (bucket5
	_adhoc_01_092 comment.	2320.pdf. I plan to prepare on	e contribution,	wu_3ck_02_1120.pdf,				Odd jitter is only 358 femtos th current state of the art tes		is too low to be
Proposed Re		Response Status W			SuggestedF	,			a equipinent.	
		IN PRINCIPLE.			••			rom 0.019 UI to 0.025 UI		
					Proposed R					
[Editor's	s note: Address	es incomplete specification.]				'		Response Status W		
The refe	erenced ad hoc	presentations is here:			T KOI C					
https://w	vww.ieee802.or	g/3/ck/public/adhoc/sept23_2	0/wu_3ck_adh	oc_01a_092320.pdf	Resolve	using	the respo	onse to comment #190.		
Resolve	e using the value	e the response to comment #	61.		[Editor's	note: (	CC: 120F	, 120G, 162, 163]		
		noved when closing this com	mont): Addod (	a buakat #E Tha	[Editor's	note -	This com	ment was added to bucket #	5 The response	e to comment #190

C/ 120F SC 120F.3.1

2/ 120F SC 120F.3.1.3	P 210	L <b>43</b>	# 127	C/ 120G	SC 120G	.3.1	P 226	L 17	# 88
lidaka, Yasuo	Credo Semico	onductor		Brown, Mat			Huawei		
Comment Type <b>T</b> Comm	nent Status D		EO jitter (bucket5)	Comment T	уре Т	Comr	ment Status D		ew/esmw (bucket5)
As Rob presented and we discust 120D.3.1.8.2 does not correctly bandwidth of clock recovery.				comme	nt resolutio	n revealed th	k width (ESMW) val at an eye width mea nethodology as defi	surement using	the currently defined
To prevent CDR from tacking tw	o cycles of test patt	ern, the best sol	ution may be to use a	SuggestedF	Remedy				
test pattern shorter than PRBS1		,		Either fi specific		odology and p	provide a value or re	place with an a	opropriate alternative
SuggestedRemedy				Proposed R		Respo	onse Status W		
Define PRBS9Q test pattern in c using PRBS9 defined in Table 6		imilar to PRBS1	3Q in 120.5.11.2.1, but	•	•	EPT IN PRIN			
Choose 12 edges in PRBS9Q te	st pattern, and add	a table similar to	o Table 120D-4.	[Editor's	note: Add	resses incom	plete specification.]		
Add a sub clause how to measu	re EOJ using PRBS	9Q, similar to 1	20D.3.1.8.2.	Resolve	this comm	ent using the	e response to comm	ent #41.	
Proposed Response Respon PROPOSED ACCEPT IN PRINC	nse Status W CIPLE.			bucket a		ent #41 remov	nen this comment is ves all specifications		omment was added to and updates the
Resolve using the response to c	omment #190.			C/ 120G	SC 120G	.3.1	P 226	L 17	# 240
[Editor's note: CC: 120F, 120G,	162, 163]			Dawe, Piers			Nvidia		// <u>210</u>
[Editor's note: This comment wa	s added to bucket #	t5. The response	e to comment #190	Comment T	pe TR	Comr	ment Status D		ew/esmw (bucket5)
The ERL value is specified as TI SuggestedRemedy Replace TBD with an appropriate	e value. <i>nse Status</i> <b>W</b> plete specification.] nt #114 indicates that ent. en closing this com	iment): Added to	bucket #5. The	DFE in If the VI ESMW SuggestedF Write do informa Proposed R PROPC [Editor's Resolve [Editor's bucket ;	the referen EC values i should be l Remedy own a rang tion to choo esponse SED ACC note: Add this comm	ce receiver; e n this draft ar between 0.22 e of candidate ose one. <i>Respo</i> EPT IN PRIN resses incom nent using the e removed will ent #41 removed	e limits in the next d onse Status W CIPLE. plete specification.] e response to comm	_3ck_adhoc_01a the ESMW in <i>A</i> raft, or a single ent #41. closed): This ca	a_092320.pdf . Innex 120E is right, limit if we have enough
with strikethrough in the reference YPE: TR/technical required ER/edi OMMENT STATUS: D/dispatched	torial required GR/				Zhuithdrou	'n	C/ 12	20G 20G.3.1	Page 2 of 14 11/16/2020 9:06:1

C/ 120G SC 120G.3.1	P 226	L 17	# 209	C/ 120G	SC 120G.3.	P 226	L 17	# 208
Ran, Adee	Intel			Ran, Adee		Intel		
Comment Type T	Comment Status D		ew/esmw (bucket5)	Comment 7	Гуре Т	Comment Status D		ew/esmw (bucket5)
The reference for ESMW i	is subclause 120G.3.1.6 v	which does not a	ddress ESMW at all.	ESMW	is TBD.			
Note: In another comment	t, ESMW is proposed to b	e removed.			•	MW is not clear and there ha	is been no propo	osal for a value for this
SuggestedRemedy				parame	eter.			
If ESMW is not removed, a 120G–1 and in Table 1200		n 120G.3.1.6 to	120G.5.2 in Table			ove EMSW, at least until evid imits) and a robust	dence of the nee	d for it (in addition to the
Proposed Response	Response Status 🛛 🛛 🛛 🛛 🛛 🛛 🖉					are presented, and a value	or limit is propos	sed.
PROPOSED ACCEPT IN	PRINCIPLE.			Suggested	Remedy			
[Editor's note: Addresses i	incomplete specification.]				re the EMSW ro I20G–6, and Ta	ow from this table (120G-1), a able 120G-9.	and also from Ta	ble 120G–3 (twice),
Resolve using the response	se to comment #41.			Proposed F	Response	Response Status W		
				PROP	OSED ACCEPT	IN PRINCIPLE.		
[Editor's note (to be remove bucket #5. Comment #41 EH/VEC test methodology	removes all specifications			[Editor'	s note: Address	ses incomplete specification.	]	
	1			Resolv	e using the res	conse to comment #41.		
				bucket		moved when this comment i #41 removes all specification logy.]		
				C/ 120G	SC 120G.3.	P 226	L 17	# 89
				Brown, Ma	tt	Huawei		
				Comment 7	Гуре Т	Comment Status D		ew/esmw (bucket5)
				points t		eference for host output eye However, 120G.3.1.6 does n		
				Suggested	Remedy			
				In 1200	G.3.1.6, add me	thodology for ESMW and ex	plain the relevan	ice.
				Proposed F PROPO	,	Response Status <b>W</b> IN PRINCIPLE.		
						ses incomplete specification.	]	
				Resolv	e this comment	using the response to comr	nent #41.	
				bucket	``	moved when this comment i #41 removes all specification logy.]	,	
YPE: TR/technical required	ER/editorial required GR	/general required	d T/technical E/editorial G	/deneral		C/ 1	20G	Page 3 of 14

TYPE. TR/lechnical required ER/editonal required GR/gene	ra required Triechnical Ereditorial Grgeneral	C/ 120G	Page 3 01 14
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed Z/withdrawn	SC 120G.3.1	11/16/2020 9:06:12 AM
SORT ORDER: Clause, Subclause, page, line			

C/ 120G SC 120G.3.1	P <b>226</b>	L 23	# 90	C/ 120G	SC 120G.3	.2 P 229	L 17	# 94			
Brown, Matt	Huawei			Brown, Matt		Huawei					
Comment Type <b>T</b>	Comment Status D		ERL value (bucket5)	Comment Ty	/ре Т	Comment Status D		ew/esmw (bucket5)			
The host output ERL va	alue is TBD.					reference for module output					
SuggestedRemedy						points to 120G.3.1.6. Howev hat to do with it.	er, 120G.3.1.6 de	pes not specify how to			
Replace TBD with an a	ppropriate value.			SuggestedR	emedy						
Proposed Response	Response Status W			In 120G	.3.1.6, add m	ethodology for ESMW and e	xplain the relevar	nce.			
PROPOSED ACCEPT	IN PRINCIPLE.			Proposed R	esponse	Response Status W					
[Editor's note: Address	es incomplete specification.]			PROPO	SED ACCEP	T IN PRINCIPLE.					
Resolve using the resp	onse to comment #114.			[Editor's	note: Addres	sses incomplete specification	n.]				
	noved when closing this com nment #114 adopts a table o			Resolve	this commer	nt using the response to com	ment #41.				
this comment.]						emoved when this comment #41 removes all specificatio					
C/ 120G SC 120G.3.1.	.3 P 227	L <b>46</b>	# 143	EH/VEC	test method	ology.]					
Ghiasi, Ali	Ghiasi Quant	tum/Inphi		C/ 120G	SC 120G.3	.2 P 229	L 17	# 93			
Comment Type TR	Comment Status D		ERL parameter (bucket5)	Brown, Matt		Huawei					
	mitted reflection of -4.2 dB w			Comment Ty		Comment Status D		ew/esmw (bucket5)			
by Mr. Mellitz but C2M COM	FE, at 50G we have Rx of 0.1 measurement points are at 1 g/3/ck/public/adhoc/jun10_2(	TP1a and TP4	not an end-end link using	Module Discuss	output near-e ion during D1	end and far-end eye symmetric. 2 comment resolution revea reference receiver and relate	aled that an eye w	SMW) values are TBD. vidth measurement using			
SuggestedRemedy	,,,,			meaning	gful.		07				
	back to the original Rx=0.19	which equates	s to -14.4 dB unless it	SuggestedR	lemedy						
can be proven that -4.2	dB would work on a link whe			Either fiz specifica		ology and provide a value or	replace with an a	ppropriate alternative			
Proposed Response	Response Status W			Proposed R	esponse	Response Status W					
PROPOSED REJECT.				PROPO	SED ACCEP	T IN PRINCIPLE.					
The response to closed changes proposed in the	l comment #114 indicates the	at there was no	consensus to make the	[Editor's	note: Addres	sses incomplete specification	ı.]				
	noved when closing this com			Resolve	this commer	nt using the response to com	ment #41.				
	response to closed comment #114 indicated there was no consensus to adopt the values with strikethrough in the referenced slide.]					[Editor's note (to be removed when this comment is closed): This comment was added to bucket #5. Comment #41 removes all specifications for EW/ESMW and updates the EH/VEC test methodology.]					

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 Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 120G SC 120G.3.2 Page 4 of 14 11/16/2020 9:06:12 AM

C/ 120G	SC 120G.3.2	P <b>229</b>	L 17	# 243	C/ 120G	SC 120G.3.2	2 P <b>229</b>	L <b>22</b>	# 245		
Dawe, Pie	rs	Nvidia			Dawe, Piers		Nvidia				
Comment	Type <b>TR</b>	Comment Status D		ew/esmw (bucket5)	Comment Typ	e T	Comment Status D		ew/esmw (bucket5)		
limited DFE ir Annex capabl	in combination n the reference re- 120E has NE ES	because in C2M, the effects ot separately. Eye width me ceiver; examples in louchet_ MW 0.265 UI. Here we exp a stay with the two-settings r 5 UI	easurement wor _3ck_adhoc_01a pect worse reflect	ks with or without a a_092320.pdf . ctions but a more	We need ESMW limits because in C2M, the effects of driver jitter and part-channel are limited in combination not separately. Eye width measurement works with or without a DFE in the reference receiver; examples in louchet_3ck_adhoc_01a_092320.pdf . Annex 120E has FE ESMW 0.2 UI, no explicit VEC limit, and EH 30 mV. Here we exp worse reflections but a more capable equaliser. If we stay with the two-settings methor ESMW should be somewhere in the range 0.16 to 0.2 UI. But 0.16 seems too small.						
Suggested	Remedy				SuggestedRe	medy					
	lown a range of c ation to choose o	andidate limits in the next d ne.	raft, or a single	limit if we have enough		n a range of to choose	candidate limits in the next o	Iraft, or a single	limit if we have enough		
Proposed	Response	Response Status W			Proposed Res	sponse	Response Status W				
PROP	OSED ACCEPT I	N PRINCIPLE.			PROPOS	ED ACCEPT	IN PRINCIPLE.				
[Editor	's note: Addresse	s incomplete specification.]			[Editor's r	ote: Address	ses incomplete specification.	l			
Resolv	e this comment u	ising the response to comm	ent #41.		Resolve t	his comment	using the response to comm	nent #41.			
bucket		oved when this comment is 1 removes all specifications gy.]			bucket #5		moved when this comment is #41 removes all specification logy.]				
					C/ 120G	SC 120G.3.2	2 P 229	L <b>29</b>	# 95		
					Brown, Matt		Huawei				
					Comment Typ		Comment Status D		ERL value (bucket5)		
					The modu	Ile output ER	RL value is TBD.				
					SuggestedRe	medy					
					Replace 1	BD with an a	appropriate value.				
					Proposed Res PROPOS	sponse ED REJECT	Response Status W				
					[Editor's r	ote: Address	ses incomplete specification.	l			
							d comment #114 indicates th his comment.	at there was no	consensus to make the		
							moved when closing this con mment #114 indicated there				

C/ 120G SC 120G.3.2

	.3 P 231	L 16	# 145	C/ 120G	SC 12	0G.3.3.2		P <b>232</b>	L 18	# 211
Ghiasi, Ali	Ghiasi Quant	um/Inphi		Ran, Adee			Int	tel		
Comment Type TR	Comment Status D		ERL parameter (bucket5)	Comment T	ype <sup>.</sup>	г	Comment Stat	tus <b>D</b>		ew/esmw (bucket5)
receiver with just 4T DI by Mr. Mellitz but C2M COM	mitted reflection of -4.2 dB w FE, at 50G we have Rx of 0.1 measurement points are at T g/3/ck/public/adhoc/jun10_20	19. Extensive P1a and TP4	analysis was performed not an end-end link using	no corre	espondir	ig param	neter of host str eter in the modu sed input (Table	ile output s	t specification ( <sup>-</sup> ignal.	Table 120G-6). There is
uggestedRemedy							ion for the stres such specificati			the test setup, and is
	back to the original Rx=0.19 2 dB would work on a link whe			SuggestedF	Remedy					
Proposed Response	Response Status W			Delete t	he eye v	width row	s in tables 120G	6-6 and 120	)G-9.	
PROPOSED REJECT.	1			Proposed R	esponse	<b>;</b>	Response Stat	us W		
_				PROPC	SED AG		N PRINCIPLE.			
The response to closed changes proposed in the	d comment #114 indicates the nis comment.	at there was n	o consensus to make the	[Editor's	note: A	ddresses	incomplete spe	ecification.]		
	noved when closing this com nment #114 indicated there v			Resolve	this co	mment us	sing the respons	se to comm	nent #41.	
with strikethrough in the				[Editor's	note (to	be remo	oved when this o	comment is	closed): This c	omment was added to
C/ 120G SC 120G.3.3	P 231	L 43	# 99					ecification	s for EŴ/ESMW	/ and updates the
Brown, Matt	Huawei	2 45	# <u>99</u>	EH/VEC	test m	ethodolog	jy.]			
					00.00	0G.3.3.2		_		
,			EPI value (bucket5)	C/ 120G	SC 12	06.3.3.2		P <b>232</b>	L 18	# 101
Comment Type T	Comment Status D		ERL value (bucket5)	C/ <b>120G</b> Brown, Matt		06.3.3.2		P <b>232</b> uawei	L 18	# 101
Comment Type <b>T</b> The host input ERL val	Comment Status D		ERL value (bucket5)	Brown, Matt	ype ·	Г	Hu Comment Stat	uawei tus <b>D</b>		ew/esmw (bucket5)
Comment Type <b>T</b> The host input ERL val	Comment Status <b>D</b> ue is TBD.		ERL value (bucket5)	Brown, Matt Comment T In Table	ype 120G-6	T 6 for host	Hu <i>Comment Stat</i> input stressed s	uawei tus <b>D</b> signal there	e are specificatio	ew/esmw (bucket5,
Comment Type <b>T</b> The host input ERL val SuggestedRemedy Replace TBD with an a	Comment Status <b>D</b> ue is TBD.		ERL value (bucket5)	Brown, Matt Comment T In Table symmet	ype 120G-6 ry mask	<b>T</b> 6 for host width (E	Hu <i>Comment Stat</i> input stressed s	uawei tus <b>D</b> signal there width (EW)	e are specificatio	ew/esmw (bucket5)
Comment Type <b>T</b> The host input ERL val SuggestedRemedy Replace TBD with an a	Comment Status D ue is TBD. ppropriate value. Response Status W		ERL value (bucket5)	Brown, Matt Comment T In Table symmet	ype 120G-6 ry mask d input p	<b>T</b> 6 for host width (E	Hu <i>Comment Stat</i> input stressed s SMW) and eye	uawei tus <b>D</b> signal there width (EW)	e are specificatio	ew/esmw (bucket5,
Comment Type <b>T</b> The host input ERL val SuggestedRemedy Replace TBD with an a Proposed Response PROPOSED ACCEPT	Comment Status D ue is TBD. ppropriate value. Response Status W IN PRINCIPLE.		ERL value (bucket5)	Brown, Matt Comment T In Table symmet stressed SuggestedF	ype 120G-6 ry mask d input p Remedy	<b>T</b> 5 for host width (E rocedure	Hu <i>Comment Stat</i> input stressed s SMW) and eye	uawei tus <b>D</b> signal there width (EW)	e are specificatio	ew/esmw (bucket5,
Comment Type <b>T</b> The host input ERL val SuggestedRemedy Replace TBD with an a Proposed Response PROPOSED ACCEPT	Comment Status D ue is TBD. ppropriate value. Response Status W		ERL value (bucket5)	Brown, Matt Comment T In Table symmet stressed SuggestedF	ype 120G-6 ry mask d input p Remedy ESMW r	T 5 for host ∷ width (E rocedure ow in Tat	Hu Comment Stat input stressed s SMW) and eye nor does it see	uawei tus <b>D</b> signal there width (EW) m relevant	e are specificatio	ew/esmw (bucket5,
Comment Type <b>T</b> The host input ERL val SuggestedRemedy Replace TBD with an a Proposed Response PROPOSED ACCEPT [Editor's note: Address	Comment Status D ue is TBD. ppropriate value. Response Status W IN PRINCIPLE.		ERL value (bucket5)	Brown, Matt Comment T In Table symmet stressed SuggestedF Delete E Proposed R	t 120G-6 ry mask d input p Remedy ESMW r esponse	T 5 for host ≤ width (E rocedure ow in Tat	Hu Comment Stat input stressed s SMW) and eye nor does it see ble 120G-6.	uawei tus <b>D</b> signal there width (EW) m relevant	e are specificatio	ew/esmw (bucket5,
Comment Type <b>T</b> The host input ERL val SuggestedRemedy Replace TBD with an a Proposed Response PROPOSED ACCEPT [Editor's note: Address Resolve using the resp [Editor's note (to be rer	Comment Status D ue is TBD. ppropriate value. Response Status W IN PRINCIPLE. es incomplete specification.] onse to comment #114. noved when closing this com		to bucket #5. The	Brown, Matt Comment T In Table symmet stressed SuggestedR Delete E Proposed R PROPC	ype 120G-6 ry mask d input p Remedy ESMW r esponse SED AC	F S for host width (E rocedure ow in Tate CCEPT IN	Hu Comment Stat input stressed s SMW) and eye nor does it see ole 120G-6. Response Stat	uawei tus <b>D</b> signal there width (EW) m relevant	e are specificatio ). ESMW is not	ew/esmw (bucket5,
Comment Type <b>T</b> The host input ERL val SuggestedRemedy Replace TBD with an a Proposed Response PROPOSED ACCEPT [Editor's note: Address Resolve using the resp [Editor's note (to be rer	Comment Status D ue is TBD. ppropriate value. Response Status W IN PRINCIPLE. es incomplete specification.] onse to comment #114.		to bucket #5. The	Brown, Matt Comment T In Table symmet stressed SuggestedR Delete E Proposed R PROPC [Editor's	ype 120G-6 ry mask 1 input p Remedy ESMW r esponse SED AC	T S for host width (E rocedure ow in Tal CCEPT IN ddresses	Hu Comment Stat input stressed s SMW) and eye nor does it see ble 120G-6. Response Statu N PRINCIPLE.	uawei tus D signal there width (EW) m relevant us W ecification.]	e are specificatio	ew/esmw (bucket5,

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 Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 120G SC 120G.3.3.2 Page 6 of 14 11/16/2020 9:06:12 AM

C/ 120G SC 120G.3.3.2 P 23	2 L 18	# 100	C/ 120G SC 120G.3.4.1 P 231 L 35 # 105
Brown, Matt Huawe	9İ		Brown, Matt Huawei
Comment Type T Comment Status I In Table 120G-6 for host input stressed signa		<i>ew/esmw (bucket5)</i> dth is TBD.	Comment Type         T         Comment Status         D         ew/esmw (buck           In Table 120G-9 for module input stressed signal the value for eye width is TBD.
SuggestedRemedy Replace TBD with an appropriate value.			SuggestedRemedy Replace TBD with an appropriate value.
Proposed Response Response Status V PROPOSED ACCEPT IN PRINCIPLE.	N		Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.
[Editor's note: Addresses incomplete specific	ation.]		[Editor's note: Addresses incomplete specification.]
Resolve this comment using the response to	comment #41.		Resolve this comment using the response to comment #41.
[Editor's note (to be removed when this comm bucket #5. Comment #41 removes all specific EH/VEC test methodology.]			[Editor's note (to be removed when this comment is closed): This comment was added to bucket #5. Comment #41 removes all specifications for EW/ESMW and updates the EH/VEC test methodology.]
C/ 120G SC 120G.3.4 P 23	5 <i>L</i> 11	# 104	C/ 120G SC 120G.3.4.1 P 235 L 34 # 106
Brown, Matt Huawe	yi -		Brown, Matt Huawei
Comment Type <b>T</b> Comment Status I The module input ERL value is TBD. SuggestedRemedy	)	ERL value (bucket5)	Comment Type <b>T</b> Comment Status <b>D</b> ew/esmw (buck In Table 120G-9 for host input stressed signal there are specifications for both far-end ey symmetry mask width (ESMW) and eye width (EW). ESMW is not mentioned in the stressed input procedure nor does it seem relevant.
Replace TBD with an appropriate value.			SuggestedRemedy
Proposed Response Response Status N PROPOSED REJECT.	N		Delete ESMW row in Table 120G-6.
PROPOSED REJECT.			Proposed Response Response Status W
[Editor's note: Addresses incomplete specific	ation.]		PROPOSED ACCEPT IN PRINCIPLE.
The response to closed comment #114 indica changes proposed in this comment.	ates that there was no	o consensus to make the	[Editor's note: Changed subclause, page, and line number from 120G.3.3.2, 232, and 18.
<b>3</b> • • •			[Editor's note: Addresses incomplete specification.]
[Editor's note (to be removed when closing th response to closed comment #114 indicated with strikethrough in the referenced slide.]			The commenter indicated that the suggested remedy should refer to Table 120G-9 rather than Table 120G-6.
			Resolve this comment using the response to comment #41.
			[Editor's note (to be removed when this comment is closed): This comment was added to bucket #5. Comment #41 removes all specifications for EW/ESMW and updates the EH/VEC test methodology.]

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 Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 120G SC 120G.3.4.1 Page 7 of 14 11/16/2020 9:06:12 AM

V 120G SC 120G.5.2	P 241	L 14	# 210	C/ 120G	SC 120G.5.2	2	P <b>241</b>	L <b>23</b>	# 102
Ran, Adee	Intel			Brown, Matt		н	uawei		
omment Type T Comme	ent Status D		ew/esmw (bucket5)	Comment T	/ре Т	Comment Sta	tus <b>D</b>		ew/esmw (bucket5)
"Compute the receiver input signa the sampling phase ts and tap weight		0		there is specifie	a pointer to 12 s a method on	20G.5.2. However,	120G.5.2 ( EC. ESMW	does not specifiy	ask width (ESMW) and a method for ESMW; it 120E.4.2, but even
It is not specified fully how the effective different eye shape. Although EH				SuggestedR	emedy				
retained they will depend on the D						ESMW and explair	the releva	ance.	
unambiguously.				Proposed R	esponse	Response Stat	us W		
SuggestedRemedy				PROPC	SED ACCEPT	T IN PRINCIPLE.			
If ESMW and EW specifications a	are not removed, (	Change the quote	ed statement to	[Editor's	noto: Addrood	ses incomplete sp	noification 1	1	
"Compute the receiver input signa	al yrx(k) by adding	the output of a [	OFE with tap weights		note. Address	ses incomplete sp	ecification.j	1	
b(n) determined in the previous st signal with transitions occurring at	ep to y2(k). The D					t using the respons			
Proposed Response Respons	se Status W					emoved when this #41 removes all sp			omment was added to and updates the
PROPOSED ACCEPT IN PRINCI	IPLE.				test methodo		comoution		
[Editor's note: Addresses incompl	ete specification.]			C/ 120G	SC 120G.5.	2	P 241	L <b>27</b>	# 257
Resolve this comment using the r	esponse to comm	ent #41.		Dawe, Piers	i	N	vidia		
-				Comment T		Comment Sta			ew/esmw (bucket5)
[Editor's note (to be removed whe bucket #5. Comment #41 remove EH/VEC test methodology.]				another solution	setting. Note s that fail EW		ire optimisi al). We did	ing for EW, only this in 120E, no	but it might be OK at rejecting candidate thing new here.
				SuggestedF	lemedy				
				Change where e the inter to:	ye height also	complies with the	specificatio	on for eye height	(min) as specified for
				where the		mplies with the sp ed for the interface		s for eye height, I	ESMW, and eye width if
				Proposed R	esponse	Response Stat	us W		
				PROPC	SED ACCEPT	T IN PRINCIPLE.			
				Resolve	this comment	t using the respon	se to comm	nent #41.	
				bucket #		#41 removes all sp			omment was added to and updates the

SORT ORDER: Clause, Subclause, page, line

C/ 162	SC	162.9.3	P 146	L <b>27</b>	# 3	C/ 162	SC	162.9.3	P 146	L <b>48</b>	# 48
Mellitz, F	Richard		Samtec			Ran, Adee			Intel		
Commen	nt Type	TR	Comment Status D		ERL value (bucket5)	Comment	Туре	т	Comment Status D		EO jitter (bucket5,
	ERL ran 3 Host d		een 7.3 dB and 18.8 for publ	shed channels	that representative of				it of 0.019 UI (less than 360 f		
Suggeste								tested in la channels.	ab environment. The same pa	arts showed goo	od link performance over
	•	,	B in Table 16210			This as					
Proposed PRO			Response Status W						ns difficult to meet and not too can be tolerated by existing r		nteroperability. It seems
[Edit	or's note	e: Address	es incomplete specification.]						ble generations of NRZ PMDs is not defined at all.	s the allowed EC	DJ is 0.035 UI; for C2M
Reso	olve usin	g the resp	oonse to comment #114.			Also a	pplies	to KR, Ta	ble 163-5 (163.9.2) and to AL	JI-C2C, Table 1	20F–1 (120F.3.1.1)
[Edit	or's note	e (to be rer	moved when closing this com	ment): Added t	o bucket #5. The	Suggested	Reme	dy			
resp		closed cor	nment #114 adopts a table of	,				er "Even-o comment.	dd jitter, pk-pk" change "valu	e" from 0.019 to	0.035, in all places
C/ 162	SC	162.9.3	P 146	L <b>48</b>	# 186	Proposed I	Respo	nse	Response Status W		
Calvin, J	ohn		Keysight Tecl	nnologies		PROP	OSED	ACCEPT	IN PRINCIPLE.		
Commen	nt Type	т	Comment Status D		EO jitter (bucket5)	Resolv	e usin	g the resp	oonse to comment #190.		
			n-Odd jitter is only 358 femtos vith current state of the art tes		is too low to be	[Editor	's note	e: CC: 163	, 120F]		
Suggeste Incre		•	from 0.019 UI to 0.025 UI						nment was added to bucket # imit value that addresses this		e to comment #190
Proposed	d Respo	nse	Response Status W						noved when this comment is	-	ed after bucket
PRO	POSED	ACCEPT	IN PRINCIPLE.			deadlin	ne. Ch	anged from	m REJECT to ACCEPT IN PI	RINCIPLE.]	
Reso	olve usin	g the resp	oonse to comment #190.								
			nment was added to bucket # imit value that addresses this		se to comment #190						

C/ 162 SC 162.9.3

C/ 162	SC 162.9.3.3	P 1 <b>50</b>	L <b>39</b>	# 189	C/ 162	SC 162.9.	3.3	P <b>150</b>	L <b>40</b>	# 52	
Calvin, J	ohn	Keysight Tec	hnologies		Ran, Adee			Intel			
Commen	t Type T	Comment Status D		EO jitter (bucket5)	Comment T	Гуре Т	Comment S	Status D		EO jitter (bucket5)	
https 620. base CDR	://grouper.ieee.org pdf it has been sho d on the test patte	/LeCheminant presentation /groups/802/3/ck/public/adh own that the EOJ measurem rn length and baud rate. Thi duced below 4 MHz	oc/sept16_20/ca ent is susceptibl	e to a systematic error	Physica wider d Since e	al measurem istribution an even-odd jitte	d larger values co	itter with PRE mpared with gh frequency	3S13Q at 53.125 shorter test patte effect (fb/2), this	GBd show a much	
mea mea slope	surement method sured with a clock e of 20 dB/decade	150 line 39 to read Even-o specified in 120D.3.1.8.2. wit recovery unit (CRU) with a c	h the exception	that EOJ may be	limiting If a dev	the accuracy	of measurement	s at this signa er pattern whic	aling rate. ch enables calcu	lation of even-odd jitter,	
•	d Response	Response Status W			The co	mment also a	applies to 120F.3.	1.3.			
PRO	POSED ACCEPT	IN PRINCIPLE.			Suggested		11	-			
Reso	olve using the resp	onse to comment #190.			Add the following exception in 162.9.3.3:						
		ment was added to bucket # od to resolve this comment.]	t5. The respons	e to comment #190		pattern that ir	r Even-odd jitter m ncludes the 12 pos			Q or any shorter odd- different PAM4	
					In 120F 162.9.3		ge the cross-refere	ence for EOJ	measurement fr	om 120D.3.1.8.2 to	
					Proposed F	Response	Response S	tatus W			
					PROPO	DSED ACCE	PT IN PRINCIPLE				
					Resolve	e using the re	esponse to comme	ent #190.			
					[Editor's	s note: CC: 1	20F, 162]				
						s note: This o provides a me			#5. The respons	e to comment #190	

C/ 162 SC 162.9.3.3

C/ 162	SC 162.9.3.4	P 151	L 12	# 217	C/ 162	SC 162.9.3	4 P 151	L 16	# 157		
Dawe, Piers		Nvidia			Dudek, M	ke	Marvell.				
Comment Ty	rpe <b>T</b> Com	ment Status D		ERL tfx (bucket5)	Comment	Туре Е	Comment Status D		ERL tfx (bucket5)		
associat		', "The specified Tfx	value represents	twice the transmission	The w what i	ording in the foo s "the test point	otnote doesn't properly descri and transmission line". A te	be what is being st point doesn't h	mitigated. In particular nave a return loss.		
And the	y which sufficiently mit terminology doesn't ma e thing or what?				Suggested Chan	-	iently mitigates the test point	and transmissior	n line return loss." to		
SuggestedR	0				"which	sufficiently mit	igates the effect of reflections	from the test co	nnector and test fixture		
	ndowing time that is la	rger than twice the d	elay associated v	vith the test point		Response	so on the footnote to table 16	2-17 on page 15			
	or but less than twice the transmission line.	he delay from the tes	st point connecto	r to the other end of the	•	•	Response Status <b>W</b> T IN PRINCIPLE.				
Also Tfx	needs to appear in 93 nilar changes in each l			hould go, not here.	Resol	ve using the res	ponse to comment #176.				
Proposed Re	1	onse Status W					emoved when this comment is				
PROPO	SED ACCEPT IN PRIN	NCIPLE.			comm	ent was update	d reflecting the result of offlin	e consensus buil	ding.]		
Rename	the Tfx parameter to "	Time-gated propaga	ition delay".		C/ 162	SC 162.9.4	P <b>151</b>	L <b>44</b>	# 4		
With edi	torial license, add Tfx t	o Table 93A-4 and n	nodify 93A-5 exp	lanation of Tfx	Mellitz, Ri	chard	Samtec				
	ing variation between o				Comment Type TR Comment Status D ERL value (bucket The ERL range is between 7.3 dB and 18.8 for published channel that representative of						
Given IE	EE Standards Style m	anual, convert footno	ote to informative	note.		RL range is bet Host designs.	ween 7.3 dB and 18.8 for pub	lished channel th	nat representative of		
Modify th	ne note text from "the s	specified Tfx value re	presents twice the	e transmission line	Suggestee	Remedy					
delay wh	nich sufficiently mitigate	es the test point and	transmission line	e return loss" to "The	Set E	RL (min) to 7.3	dB in Table 16213				
	If the test connection of test connect			mitigates the effect of	Proposed	Response	Response Status W				
	ate given 93A descripti				PROF	OSED ACCEP	T IN PRINCIPLE.				
Impleme	ent across clauses with	editorial license.			Resol	ve using the res	ponse to comment #114.				
[Editor's	note: CC: 162, 163, 12	20F, 120G, 93A]					emoved when closing this cor mment #114 adopts a table of				
	note (to be removed w at was updated reflectir					omment.]					
	note (to be removed w Fixed type in response										
		0.0									
<b>FYPE: TR/te</b>	chnical required ER/e	ditorial required GR	/general required	T/technical E/editorial G/g	general		C/ 1	62	Page 11 of 14		

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

SC 162.9.4

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C/ 162 SC 162.11	P 156	L 37	# 110	C/ 162 SC 162.11.2	P 157	L 10	# 17
Champion, Bruce	TE Connectiv	ity		DiMinico, Christopher	MC Commun	ications	
Comment Type <b>T</b>	Comment Status D		ERL value (bucket5)	Comment Type TR	Comment Status D		CA IL (bucket5
Cable Assembly ERL list	ted as TBD in Table 162-16			Replace TBD			
SuggestedRemedy				SuggestedRemedy			
TBD to be changed to 7.	4 dB. See presentation			Replace TBD with 0.05			
Proposed Response	Response Status W			Proposed Response	Response Status W		
PROPOSED REJECT.				PROPOSED ACCEPT	IN PRINCIPLE.		
[Editor's note: Addresses	s incomplete specification.]			[Editor's note: Addresse	es incomplete specification.]		
The response to closed of changes proposed in this	comment #114 indicates that	at there was no	consensus to make the	Resolve using the respo	onse to comment #173.		
[Editor's note (to be remo	oved when closing this com				noved when closing this com nment #173 provides value ir		
consensus is noted direc	ctly in the comment respons	e rather than in	the referenced slide.]	C/ 162 SC 162.11.2	P 157	L <b>26</b>	# 221
C/ 162 SC 162.11.2	P 157	L 10	# 174	Dawe, Piers	Nvidia		
Haser, Alex	Molex			Comment Type TR	Comment Status D		CA IL (buckets
Haser, Alex Comment Type TR	Comment Status D		CA IL (bucket5)	51	Comment Status <b>D</b> ve bends the wrong way at hi	gh frequencies	CA IL (bucket
Comment Type <b>TR</b> Fill in TBD. Low freqeund	Comment Status D cy cable loss can't vary wild	ly if the cable w	, ,	51		igh frequencies	CA IL (buckets
Comment Type TR Fill in TBD. Low freqeund freuqencies; no need to	Comment Status D cy cable loss can't vary wild	ly if the cable w	, ,	This minimum loss curv SuggestedRemedy		0	
Comment Type TR Fill in TBD. Low freqeund freuqencies; no need to	Comment Status <b>D</b> cy cable loss can't vary wild over-spec	ly if the cable w	, ,	This minimum loss curv SuggestedRemedy	ve bends the wrong way at hi	0	
Comment Type <b>TR</b> Fill in TBD. Low freqeund freuqencies; no need to SuggestedRemedy	Comment Status <b>D</b> cy cable loss can't vary wild over-spec	ly if the cable w	, ,	This minimum loss curv SuggestedRemedy Change the limit (Eq 16	ve bends the wrong way at hi 2-10) so it becomes flatter a <i>Response Status</i> <b>W</b>	0	
Comment Type TR Fill in TBD. Low frequence freuqencies; no need to o SuggestedRemedy Replace TBD with 0.05G	Comment Status D cy cable loss can't vary wild over-spec Hz Response Status W	ly if the cable w	, ,	This minimum loss curv SuggestedRemedy Change the limit (Eq 16 Proposed Response	re bends the wrong way at hi i2-10) so it becomes flatter a <i>Response Status</i> <b>W</b> IN PRINCIPLE.	0	CA IL (bucket5
Comment Type TR Fill in TBD. Low frequence freuqencies; no need to SuggestedRemedy Replace TBD with 0.05G Proposed Response PROPOSED ACCEPT IN	Comment Status D cy cable loss can't vary wild over-spec Hz Response Status W	ly if the cable w	, ,	This minimum loss curv SuggestedRemedy Change the limit (Eq 16 Proposed Response PROPOSED ACCEPT Resolve using the resor [Editor's note (to be rem	re bends the wrong way at hi 2-10) so it becomes flatter a <i>Response Status</i> <b>W</b> IN PRINCIPLE. Inse to comment #173. Inoved when closing this com	t high frequencie ment): Added to	es 9 bucket #5. The
Comment Type TR Fill in TBD. Low frequence freuqencies; no need to SuggestedRemedy Replace TBD with 0.05G Proposed Response PROPOSED ACCEPT IN	Comment Status <b>D</b> cy cable loss can't vary wild over-spec Hz <i>Response Status</i> <b>W</b> N PRINCIPLE. s incomplete specification.]	ly if the cable w	, ,	This minimum loss curv SuggestedRemedy Change the limit (Eq 16 Proposed Response PROPOSED ACCEPT Resolve using the resor [Editor's note (to be rem	re bends the wrong way at hi i2-10) so it becomes flatter a <i>Response Status</i> <b>W</b> IN PRINCIPLE. hse to comment #173.	t high frequencie ment): Added to	es 9 bucket #5. The

C/ 162 SC 162.11.2

P 158	L <b>9</b>	# 113	C/ 162	SC 162.11.	3 P 158	L 15	# 176
Amphenol			Haser, Alex		Molex		
nment Status D		ERL parameter (bucket5)	Comment Ty	/pe ER	Comment Status D		ERL tfx (bucket5
)"							
					delay. Only the coax is being	removed from th	e fixture.
round/consensus prese	entation			•	The second first Theory base size f		the factor shot and
			transmis	ssion line retu	Irn loss by removing the coax		
use reviewed by the tas	k force:		Proposed R	esponse	Response Status W		
		pdf	PROPO	SED ACCEP	T IN PRINCIPLE.		
o comment #114.			Resolve	using the res	sponse to comment #217.		
			•	•		,	
			C/ 163	SC 163.9.2	P <b>176</b>	L 44	# 202
P <b>158</b>	L <b>12</b>	# 175	Wu, Mau-Lii	n	MediaTek		
Molex			Comment Ty	/ре Т	Comment Status D		ERL value (bucket
		ERL parameter (bucket5)	dERL is	still TBD			
re delay is not flexible e	enough to acc	ount for variation	SuggestedR	emedy			
av (e.g. 2ns +/- 10%)					92320.pdf. I plan to prepare c	one contribution,	wu_3ck_02_1120.pdf,
			Proposed R	esponse	Response Status W		
			•	•	,		
	it there was no	consensus to make the			•	_20/wu_3ck_adho	oc_01a_092320.pdf
[Editor's note (to be removed when closing this comment): Added to bucket #5. The response to closed comment #114 indicated there was no consensus to adopt the values with strikethrough in the referenced slide.]							
			Resolve using the value in the response to comment #61.				
			<b>F</b>		emoved when closing this cor		
	ponse Status W INCIPLE. vas reviewed by the tas /public/20_10/kocsis_3d o comment #114. when closing this comm #114 adopts a table of P158 Molex mment Status D ure delay is not flexible of lay (e.g., 2ns +/- 10%) ponse Status W nent #114 indicates that mment. when closing this comm #114 indicated there w	o" round/consensus presentation ponse Status W INCIPLE. vas reviewed by the task force: /public/20_10/kocsis_3ck_01a_1020.p o comment #114. when closing this comment): Added t #114 adopts a table of parameters at P158 L12 Molex mment Status D tre delay is not flexible enough to accord lay (e.g., 2ns +/- 10%) ponse Status W ment #114 indicates that there was no consense when closing this comment): Added t #114 indicated there was no consense	round/consensus presentation ponse Status W INCIPLE. vas reviewed by the task force: /public/20_10/kocsis_3ck_01a_1020.pdf o comment #114. when closing this comment): Added to bucket #5. The #114 adopts a table of parameters and values that addresses P158  L12  # [175] Molex mment Status D  ERL parameter (bucket5) tre delay is not flexible enough to account for variation lay (e.g., 2ns +/- 10%) ponse Status W ment #114 indicates that there was no consensus to make the mment. when closing this comment): Added to bucket #5. The #114 indicated there was no consensus to adopt the values	0"       The notitive transmission of the transmissi to the transmission of the transmission of the transm	0"       The note about fixture the transmission line         round/consensus presentation       SuggestedRemedy         ponse Status       W         INCIPLE.       Vas reviewed by the task force:         /public/20_10/kocsis_3ck_01a_1020.pdf       Proposed Response         o comment #114.       Resolve using the rest         when closing this comment): Added to bucket #5. The       IEditor's note (to be r         mment Status       D       ERL parameter (bucket5)         Nolex       C/ 163       SC 163.9.2         Wu, Mau-Lin       Comment Type       T         Molex       Comment Type       T         mment Status       D       ERL parameter (bucket5)         Ire delay is not flexible enough to account for variation       Suggest to set as son wu_3ck_adhoc_01.0         ponse Status       W       Proposed Response         proposed Response       PROPOSED ACCEP         menent #114 indicates that there was no consensus to make the mment.       The referenced ad ho https://www.ieee802.         when closing this comment): Added to bucket #5. The       The following present https://www.ieee802.	0°       The note about fixture delay is misleading. The spetthe transmission line delay. Only the coax is being         0°       The note about fixture delay is misleading. The spetthe transmission line delay. Only the coax is being         0°       With the transmission line delay. Only the coax is being         0°       With the transmission line delay. Only the coax is being         0°       With the transmission line return loss by removing the coax measurement." or something along those lines         0°       Parse serviewed by the task force:         100       Public/20_10/kocsis_3ck_01a_1020.pdf         0 comment #114.       When closing this comment): Added to bucket #5. The #114 address a table of parameters and values that addresses         1114 adopts a table of parameters and values that addresses       Perse L 12 # 175         112       Molex         mment Status D       ERL parameter (bucket5)         re delay is not flexible enough to account for variation       Suggest to set as some negative values. I had sha wu_3.ck, adnoc_01_092320.pdf. I plan to prepare of for this comment.         ponse Status W       PROPOSED ACCEPT IN PRINCIPLE.         ment #114 indicates that there was no consensus to make the ment.       Proposed Response Response Status W         proposed Response       Response Status W         PROPOSED ACCEPT IN PRINCIPLE.       The referenced ad hoc presentation is here: htttps://www.ieee802.org/3/ck/public/20_10/wu_3ck	0°       The note about fixture delay is misleading. The specified delay doe: the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax is being removed from the transmission line delay. Only the coax connector and view measurement." or something along those lines         Proposed Response       Response Status W         P 158       L12       # 175         Molex       Molex       Omment Type T         mment Status D       ERL parameter (bucket5)         ire delay is not flexible enough to account for variation       Suggest to set as some negative values. I had shared some inform wull ack_adhoc_01_092320.pdf. I plan to prepare one contribution, for this comment.         proposed Response       Response Status W <t< td=""></t<>

C/ 163 SC 163.9.2

C/ 163	SC 163	.9.2	F	<sup>&gt;</sup> 177	L 16	# 187
Calvin, Joh	n		Ke	ysight Te	echnologies	
Comment T	Туре Т	(	Comment State	us <b>D</b>		EO jitter (bucket5)
					oseconds, which i est equipment.	is too low to be
Suggested	Remedy					
Increas	se the spec	limit fror	n 0.019 UI to 0	).025 UI		
Proposed H	Response	R	esponse Statu	ıs W		
PROP	OSED ACC	CEPT IN F	PRINCIPLE.			
Resolv	ed using th	ne respon	se to commen	it #190.		
			nt was added value that add			e to comment #190
			ed when this c EJECT to ACC		is closed): Modifie PRINCIPLE.]	ed after bucket
C/ 163	SC 163	.10.3	ŀ	<sup>⊃</sup> 186	L <b>41</b>	# 10
Mellitz, Ric	hard		Sa	mtec		
Comment T	Туре ТЕ	ર (	Comment State	us <b>D</b>		ERL value (bucket5)
	RL range is KR designs		9.7 dB and 23	3.5 dB for	r published chann	el that representative of
Suggested	Remedy					
change	e the TBD i	n in line 4	1 to 9.7 dB			
Proposed F			Response Statu	ıs W		
PROPO	USED ACC	JEPT IN I	PRINCIPLE.			
[Editor	's note: Ad	dresses i	ncomplete spe	cification	.]	
Resolv	e using the	e respons	e to comment	#114.		
respon					mment): Added to of parameters an	o bucket #5. The d values that addresses

C/ 163 SC 163.10.3