C/ 162	SC 162.7	P 137	L 6	# 7	C/ 120F	SC 120)F.1	P 201	L 49	# 34		
Marris, A	rthur	Cadenc	e Design Systems		Ben Artsi,	Ben Artsi, Liav Marvell						
Commen	t Type T	Comment Status)		Comment	Туре Т		Comment Status D				
Many refere	/ of the control enced in Claus	and status variables in Ta e 162.	oles 162-5 and 162-	6 are not described or	C2C a directl	pplications y connectir	dictat	e external DC blocking cap e ne Tx side	even in cases w	hen the Rx is capable of		
Suggeste	edRemedy				Suggested	Remedy						
Remo	ove rows from se 162	Table 162-5 and 162-6 tha	t refer to variables t	nat are not mentioned ir	Add a and T	sentence s P5, it is the	similar e respo	to the 802.3bj: Should the cansibility of implementors to c	apacitor be imp consider any ne	lemented outside TP0 cessary modifications to		
Proposed	d Response	Response Status V	V		comm impac	common-mode and channel specifications required for interoperability as well as any impact on the verification of transmitter and receiver compliance.						
PRO	POSED ACCE	PT IN PRINCIPLE.			Proposed	Response		Response Status W				
Reso	olve per comme	ent #25.			PROP	PROPOSED ACCEPT IN PRINCIPLE.						
C/ 163	SC 163.9.	2.4 P 180	L 47	# 33	The s	uggested re	emedy	refers to the following sente	nces from IEEE	802.3-2018 93.9.4:		
Ben Artsi	, Liav	Marvell				ld the cana	citor h	e implemented outside TP0	and TP5 the co	ommon-mode		
Commen	t Type T	Comment Status)	jitter toleran	ce specif	ications in	Table	93-4 may not be appropriate	."			
Recie extra 1.331 filteri with t resid	ever jitter tolera polation betwe MHz 0.05UI at ng out much of the TX specific e around a few	Ince test is specified at spi en frequency points. More 4-40MHz. Tx is measured the low frequency jitter of ations and have much mon handers of Hz. Since the	ecific frequency poin specificaly, 5UI at 4 when applying high a transmitter. A tran re than 0.15UI of jitte re is no Rx jitter tole	ts with no specified 0KHz, 0.15UI at pass filter on the jitter smitter may still comply er at frequecies which rance requirement at	"Shou impler specif transn	ld the capa nenters to ications rec nitter and r	acitor b consic quired eceive	e implemented outside TP0 ler any necessary modificatio for interoperability as well as r compliance."	and TP5, it is the price of the common- any impact on	ne responsibility of mode and channel the verification of		
these	e frequencies: /	A transmitter may have related	ativelv high iitter at lo	w frequencies and still	Clause	e 163 refer	s back	to 93.9.4 and thus by refere	nce includes th	e above statements.		

It is therefore reasonable to include the same or similar statements in 120F.

Implement the following.

In 120F.4 "Channel Characteristics", create new subclause 120F.4.4 "AC-Coupling" with the following content:

"Each lane shall include AC-coupling between TP0 and TP5. The low-frequency 3 dB cutoff of the AC-coupling should be less than 100 kHz.

Should the capacitor be implemented outside TP0 and TP5, the common-mode specifications in Table 120F-1 may not be appropriate. It is the responsibility of implementers to consider any necessary modifications to common-mode and channel specifications required for interoperability as well as any impact on the verification of transmitter and receiver compliance."

Delete three instances of the following sentence in 120.1: "The low-frequency 3 dB cutoff of the AC-coupling should be less than 100 kHz."

be compliant. The Rx may not be able to tolerate this jitter while being compliant as well.

Add a sentence that the reciever is expected to meet any frequency point between the specified in table 163-9 while jitter tolerance requirement is linearly extrapolated between

"Although the jitter tolerance test is specified at discrete frequencies, a compliant receiver

tolerates jitter at any frequency between 40 kHz and 40 MHz with peak-to-peak amplitude

The interoperability between these specified Tx and Rx is questionable.

Response Status W

any consecutive specified frequency points.

PROPOSED ACCEPT IN PRINCIPLE.

Add the following new text and equation:

jitter(f) = 0.05 for 4 MHz < f < 40 MHz

jitter(f) = (0.05*4 MHz / f) for 40 kHz < f < 4 MHz

according to equation 163-new.

SuggestedRemedy

Proposed Response

Equation 163-new:

C/ 120F	SC 120F.3.2.4	4 P 207	L 22	# 36	C/ 163	SC 163.9.2	
Ben Artsi,	Liav	Marvell			Ben Artsi, I	_iav	
Comment	Туре Т	Comment Status D		jitter tolerance [CC]	Comment	Туре Т	Corr
Reciev extrap	ver jitter tolerance olation between f	e test is specified at specific fr requency points. More specifi	equency point icaly, 5UI at 40	ts with no specified DKHz, 0.15UI at	Receiv at the r	er characteristic eciever input	cs lacks
1.33M filterin	Hz 0.05UI at 4-40	MHz. Tx is measured when a plow frequency jitter of a trans	applying high p smitter A tran	bass filter on the jitter	Suggested	Remedy	
with th reside	e TX specification around a few har	ns and have much more than inders of Hz. Since there is no	0.15UI of jitte o Rx jitter toler	r at frequecies which ance requirement at	Add the TBD at	e required capa t least for now	bility of F
these	frequencies: A tra	ansmitter may have relatively	high jitter at lo	w frequencies and still	Proposed I	Response	Resp
The in	teroperability bet	ween these specified Tx and	Rx is question	able.	PROP	OSED REJECT	
Suggestec	IRemedy				[The pi	roposed change	in the c
Add a	sentence that the	e reciever is expected to meet	t any frequenc	y point between the	specifi	c changes that s	satisfy th
any cc	insecutive specifi	ed frequency points.	nent is intearry		The co	mment does no	ot provide
Proposed	Response	Response Status W			The su	ggested remed	y does n
PROP	OSED ACCEPT	IN PRINCIPLE.			For tas	k force discuss	ion.
See co	omment #33.				See co	mment #37	
C/ 162	SC 162.9.4.3	P 152	L 38	# 37			
Ben Artsi,	Liav	Marvell			C/ 163	SC 163.10	
Comment	Туре Т	Comment Status D		CM noise tolerance (IR)	Ben Artsi, I	_iav	
Receiv at the	ver characteristics reciever input	s lacks the definition of capab	ility to tollerate	e common mode noise	Comment T Differe	<i>Type</i> T ntial to commor	<i>Corr</i> n mode c
Suggestec	IRemedy				channe	el characteristics	S
Add th	e required capab	ility of Rx common mode broa	adband noise	tolerance and set it at	Suggested	Remedy	
TBD a	t least for now				Specify and co	that the difference of the contract of the	ential to o
Proposed	Response	Response Status W			Proposed I	Response	Poon
PROP	OSED REJECT.				PROP		USBN 1
[The p specifi	roposed change c changes that sa	in the comment does not con atisfy the commenter.]	tain sufficient	detail to understand the	For tas	k force discussi	ion.
	0						
The co	omment does not	provide a justification for the	proposed new	v parameter.			
The co	omment does not	provide a justification for the does not provide a complete	proposed new solution with t	v parameter. est method and values.			

C/ 163	SC 163.9.2	P 178	L 45	# 38
Ben Artsi,	Liav	Marvell		
Comment	Туре Т	Comment Status D		CM noise tolerance (IF
Receiv at the	ver characteristics reciever input	lacks the definition of cap	ability to tollerate	e common mode noise
Suggested	Remedy			
Add th TBD a	e required capab It least for now	ility of Rx common mode b	roadband noise	tolerance and set it at
Proposed	Response	Response Status W		
PROP	OSED REJECT.			
[The p specifi	roposed change i ic changes that sa	n the comment does not co atisfy the commenter.]	ontain sufficient	detail to understand the
The co	omment does not	provide a justification for th	e proposed nev	v parameter.
The su	uagested remedy	does not provide a comple	te solution with t	test method and values.
_				
For tas	sk force discussio	in.		
See co	omment #37.			
C/ 163	SC 163.10	P 181	L 26	# 39
Ben Artsi,	Liav	Marvell		
Comment	Туре Т	Comment Status D		
Differe chann	ential to common el characteristics	mode conversion loss is no	t defined for a T	P0 to TP5 interconnect
Suggested	Remedy			
Specif and co	y that the differen prrelated to the ca	tial to common mode conv pability defined in 162.11.5	ersion loss of TI when measure	P0 to TP5 shall be [TBD] d with an MCB
Proposed	Response	Response Status W		
PROP	OSED ACCEPT	IN PRINCIPLE.		
For tas	sk force discussio	n.		

C/ 120F	SC 120F.1	P 202	L 31	# 59	C/ 120G	SC 120G.3.2	P 224	L 37	# 60
Ran, Adee		Intel			Ran, Adee		Intel		
		-					-		

Comment Type T Comment Status D

"If implemented, the transmitter equalization feedback mechanism described in 120D.3.2.3 may be used to identify an appropriate setting"

As presented in ran_3ck_adhoc_02_021920, that mechanism supports the equalizer that was specified in the original CAUI-4 C2M (Annex 83D), which has only 3 taps with 5% coefficient resolution. The PAM4 AUIs defined in 802.3.bs (120D.3.1.5) and re-used in 802.3cd have kept this structure. However, we now have a 5-tap equalizer with a finer resolution. Even if pre-cursor tap c(-3) is removed as suggested in 120F.3.1.4 it would not be identical to the FFE in Annex 83D.

Therefore, re-using this method for 100GAUI-1 is impossible and new method should be defined. Possible solutions include a training protocol as in the PMD control function, new management variables and registers, or combinations of the two approaches.

SuggestedRemedy

A presentation with possible solutions is planned.

Proposed Response Response Status W

PROPOSED REJECT.

The suggested remedy does not provide sufficient detail to implement. However, a presentation relating to this comment is anticipated for the March meeting.

For task force discussion.

See comment #82.

Comment Type T Comment Status D Signal swing and Tx equalization are important in PAM4 since the receiver has a limited linear range. A large swing at the host input may prevent linear operation and detection of PAM4. Attenuation has been used in past Rx designs, but it is becoming harder to implement with the large bandwidth requirements for 100G.

The current module output specifications have limited information about output swing and ISI (only implicitly through far-end eye height and far-end precursor ISI ratio, which are defined with a single channel), and do not mention any control of the Tx setting. With the large range of C2M host channels, it is unlikely that a fixed Tx setting will be usable for all hosts.

Actual modules even in 50G have some control of equalization and swing. There are indications that this control is required for actual operation.

If we ignore this capability in the specifications, some hosts may not be able to operate with the settings used for module output compliance; this means the module compliance specs are useless and measuring them is a waste of time.

The standard should at least mention the module's Tx control capabilities (with reference to external documents) and preferably define requirements for them, with management variables and control registers. It will be beneficial if the Tx specifications include these capabilities.

SuggestedRemedy

A presentation is planned with further details.

Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.

A presentation relating to this comment is expected at the March meeting.

C/ 120F	SC 120F.3.1	P 2	03	L 30	# 70	[
Mellitz, Richa	ard	Samt	ec			-					
Comment Ty	/pe TR	Comment Status	D		TX vfmin						
C2C, KF in table	R, and CR device 163-5	s may be the same	e ports	s on chips. Align Av, A	Afe, and Ane with Vf						
SuggestedR Replace	SuggestedRemedy Replace with Vfmin=0.413										
Proposed Re PROPO	esponse SED ACCEPT IN	<i>Response Status</i> NPRINCIPLE.	w								
For task	force discussion	ı.									

Comment ID 70

C/ 120F	SC 120F.3.2.3	P 206	L 48	# 78	C/ 120G	SC 120G.3.2	P 22	24 L 44	# 97
Healey, Ad	lam	Broadcom Inc			Ghiasi, Ali		Ghiasi	i Quantum/Inphi	
Comment	Type T Comm	nent Status D			Comment T	vpe TR	Comment Status	D	
I believ perforr	ve the intent is for the retu nance.	rn loss of the test se	etup to have "tes	st fixture" grade	Near er	d ESMW is TB	D		
Suggested	Remedy				Suggestear	TPD with 0.17	75 LII ago ghiggi 2gk	01 0220	
In item	b), change "Equation (TE	BD)" to "Equation (1	63-2)" (Test fixtu	ire reference return	Replace		5 OI see ghiasi_3ck_	01_0320	
loss lin	nit).				Proposed R	esponse	Response Status	w	
Proposed I	Response Respon	nse Status W			PROPU	SED ACCEPT	IN PRINCIPLE.		
PROP	OSED ACCEPT IN PRINC	CIPLE.			A prese	ntation related t	to this comment is ex	pected at the March	meeting.
For tas	sk force discussion.				For task	force discussion	on.		
CI 45	SC 45.2.1.129	P 50	L 50	# 82	C/ 120G	SC 120G.3.2	P 22	24 <i>L</i> 46	# 98
Healey, Ad	am	Broadcom Inc).		Ghiasi, Ali		Ghiasi	i Quantum/Inphi	
Comment	Type T Comm	nent Status D			Comment T	vpe TR	Comment Status	D	
Chip-to	o-chip transmitter equaliza	tion register definiti	ons have been a	are written as being	Near-er	d eye height is	TBD		
on a tra	ajectory to have different t	ap counts and coef	ficient step sizes	S.	SuggestedF	Remedy			
Suaaested	Remedv	•	·		Replae	TBD with 50 m ^v	V see ghiasi_3ck_01_	_0320	
The co	prrect amendment to 45.2.	1.129 through 45.2.	.1.132 seems to	be to indicate these	Proposed R	esponse	Response Status	w	
registe	rs are specific to 100GAU	II-n (n > 1), 200GAL	JI-n (n > 2) and $\frac{1}{2}$	400GAUI-n (n > 4) until	PROPC	SED ACCEPT	IN PRINCIPLE.		
the An this po	nex 120F taps counts, coe int it seems likelv a differe	enticient step sizes, ent set of registers v	and control sche	for Annex 120F	A proce	ntation related t	to this commont is ov	nacted at the March	monting
control	s.				A piese			pected at the march i	ineeting.
Proposed I	Response Respon	nse Status 🛛 🛛 🛛 🛛 🛛 🗤			For task	force discussion	on.		
PROP	OSED ACCEPT IN PRINC	CIPLE.			C/ 120G	SC 120G.3.2	P 22	24 L 47	# 99
If the d	letails of C2C transmitter	equalizer specificati	ons are not dete	rmined at this meeting	Ghiasi, Ali		Ghiasi	i Quantum/Inphi	
then a	dd the following editors no	te with editorial lice	nce saying:	Ŭ	Comment T	vpe TR	Comment Status	D	
"The d	etails of AUI chip-to-chip t	ransmit equalization	n have not vet be	een finalized. The	Far end	ESMW is TBD			
actual	amendment to 45.2.1.129	through 45.2.1.132	2 is likely to be to	o indicate these	SuggestedF	Remedy			
registe	rs are specific to 100GAU	II-n (n > 1), 200GAL	JI-n (n > 2) and 4	400GAUI-n (n > 4).	Replace	TBD with 0.17	5 UI see ghiasi_3ck_	01_0320	
it is like	ely a different set of regist	ers will be needed f	for Annex 120F of	controls."	Proposed Response Response Status W				
If the second					PROPC	SED ACCEPT	IN PRINCIPLE.		
If they	are then, if necessary, ad	d appropriate regist	ers in Clause 45						
See als	so comment 59				A prese	ntation related i	to this comment is ex	pected at the March I	meeting.
					For tasl	force discussion	on.		
	technical required ED/s-	itarial required CD/	annaral required	Theophysical Fladitation	annaral			Commont ID 00	Dogo 4 -f 0
THE: IK/	technical required ER/ed	itorial required GR/	general required	i intechnical Electional G	yenerai			Comment ID 99	Page 4 of 9

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn SORT ORDER: Comment ID

C/ 120G SC 120G.3.2 P 224 L 44	# 100	C/ 120G SC 120G.3.3.2 P 227 L 19 # 103
Ghiasi, Ali Ghiasi Quantum/Inphi		Ghiasi, Ali Ghiasi Quantum/Inphi
Comment Type TR Comment Status D Far-end eye height is TBD		Comment Type TR Comment Status D Far-end eye height is TBD
SuggestedRemedy Replace TBD with 20 mV see ghiasi_3ck_01_0320		SuggestedRemedy Replace TBD with 20 mV see ghiasi_3ck_01_0320
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.		Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.
A presentation related to this comment is expected at the March meeting.		A presentation related to this comment is expected at the March meeting.
For task force discussion.		For task force discussion.
Cl120GSC120G.3.3.2P 227L 15Ghiasi, AliGhiasi Quantum/InphiComment TypeTRComment StatusXFarend ESMW is TBD	# 101	C/ 120G SC 120G.3.4.1 P 229 L 40 # 104 Ghiasi, Ali Ghiasi Quantum/Inphi Ghiasi Quantum/Inphi ESMW is TBD ESMW is TBD
SuggestedRemedy Replace TBD with 0.175 UI see ghiasi_3ck_01_0320		SuggestedRemedy Replace TBD with 0.12 UI see ghiasi_3ck_01_0320
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.		Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.
A presentation related to this comment is anticipated at the March meeting	9.	A presentation related to this comment is anticipated at the March meeting.
For task force review.		For task force review.
C/ 120G SC 120G.3.3.2 P 227 L 16 Ghiasi, Ali Ghiasi Quantum/Inphi Comment Type TR Comment Status X Farend EW is TBD	# [102	Cl 120G SC 120G.3.4.1 P 229 L 46 # 105 Ghiasi, Ali Ghiasi Quantum/Inphi Comment Type TR Comment Status D Eye height is TBD
SuggestedRemedy Replace TBD with 0.175 UI see ghiasi_3ck_01_0320		SuggestedRemedy Replae TBD with 15 mV see ghiasi_3ck_01_0320
Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.		Proposed Response Response Status W PROPOSED ACCEPT IN PRINCIPLE.
A presentation related to this comment is anticipated at the March meeting	9.	A presentation related to this comment is anticipated at the March meeting.
For task force review.		For task force review.

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: Comment ID

Comment ID 105

C/ 120G SC 120G.3.4.1	P 229	L 47	# 106	C/ 120G SC 120G.3	3.1.2	P 222	L 2	# 119
Ghiasi, Ali	Ghiasi Quantu	um/Inphi		Ghiasi, Ali	G	Shiasi Quantu	ım/Inphi	
Comment Type TR	Comment Status D			Comment Type TR	Comment Sta	atus D		
Eye width is TBD				RLCD return loss ca	n be improved			
SuggestedRemedy				SuggestedRemedy				
Replace TBD with 0.12 UI	see ghiasi_3ck_01_0320			RLCD=30-30*f/25.78	B dB, from 10 MHz	to 12.89 GHz	<u>'</u>	
Proposed Response	Response Status W			RLCD=15 dB 12.891 See ghiasi 3ck 03	to 53 GHz 0320			
PROPOSED ACCEPT IN	PRINCIPLE.			Proposed Response	Response Sta	otus W		
A presentation related to t	this comment is anticipate	d at the March	meeting.	PROPOSED ACCEP	PT IN PRINCIPLE.			
For task force review.				[Editor's note: The su	ubclause was chan	ged from 120)G.3.4.1 to 12()G.3.1.2.]
C/ 120G SC 120G.4.2 Ghiasi Ali	P 232 Ghiasi Quanti	L 9 ım/Innhi	# 116	The comment relates output as specified in	s to common-mode n Table 120G-1 and	e to differentia d 120G.3.1.2	al return loss" (RLCD) for the host
Comment Type TR	Comment Status D			The comment does	not provide a justifi	cation for imr	proving the RL	0.0
TP4 need its own reference	ce receiver table							
SuggestedRemedy				A presentation relate	ed to this comment	is anticipated	1 at the March	meeting.
Create a new table that re	ferences table of gDC/gD t b1max=0 15 b[2-4]max=	C2 for TP4. In	the new table	For task force discus	sion of the propose	ed changes.		
Proposed Response	Response Status W			The reference in Tab	ble 120G-1 for RLD	C is incorrect	i. Change "120	G.3.1.3" to "120G.3.1.2".
PROPOSED REJECT.				Also, for consistency	throughout 802.3c	:k		
A new table is only require	ed if there is more than mi	nor differences	from Table 120G-9.	In Table 120G-1 and	beneath Equation	(120G-2)		
C/ 120G SC 120G 4 2	P 232	/ 9	# 117	To: "Common t	o differential mode to differential retur	return loss" n loss"		
Ghiasi Ali	Ghiasi Quanti	um/Innhi	"					
Comment Type TR	Comment Status D							
TP5 need its own reference	ce receiver table							
SuggestedRemedy								
Create a new table that re DFE normalized coefficen	ferences table of gDC/gD t b1max=0.3, b[2-4]max=0	C2 for TP4. In 0.08 and n0=8.3	the new table 37e-9					
Proposed Response	Response Status W							
PROPOSED REJECT.	,							
TP5 is not specified for C2	2M in Annex 120G.							

CL 4200	22	1000 2 4		D 220	/ 45	# 404	CI 4200	50	1000 2 2		D 224	1 50	# 405
	30	1206.3.4			L 15	# 124		30	1206.3.2		F 224	L 32	# 125
Ghiasi, Ali			(Shiasi Quanti	um/Inphi		Ghiasi, Ali				Ghiasi Quai	ntum/Inphi	
Comment	Туре	TR	Comment St	atus D			Comment	Туре	TR	Comr	ment Status D		
RLCD	return l	oss can be	e improved				RLCD	return	loss can b	be improv	ved		
Suggested	Remea	y .					Suggested	Reme	dy				
RLCD⊧ RLCD⊧ See gł	=30-30* =15 dB hiasi_30	f/25.78 dE 12.89 to 5 k_03_032	3, from 10 MHz 53 GHz 20	to 12.89 GH	łz		RLCD RLCD See gl	=30-30 =15 dB niasi_3)*f/25.78 dl 3 12.89 to 9 8ck_03_03	B, from 1 53 GHz 20	10 MHz to 12.89 G	Hz	
Proposed I	Respon	se	Response Sta	atus W			Proposed	Respoi	nse	Respo	onse Status W		
PROP	OSED	REJECT.					PROP	OSED	REJECT.				
The comment relates to common-mode to differential return loss" (RLCD) for the module input as specified in Table 120G-7 by reference Equation (120G-2). The comment does not provide a justification for improving the RLCD. A presentation related to this comment is anticipated at the March meeting.							The co output The co A pres	The comment relates to common-mode to differential return loss" (RLCD) for the module output as specified in Table 120G-3 by reference to Equation (120G-2). The comment does not provide a justification for improving the RLCD. A presentation related to this comment is anticipated at the March meeting.					
				, ,		().			·		proposed enalige		(1000.0)
For tas	sk force	discussio	on of the propos	ed changes.			The sa	ame ch	hange is be	eing prop	osed by comment	#119 for Equation	n (120G-2).
Howev	/er, refe 3 1 2"	rence in T	able 120G-7 fc	or RLDC is in	correct. Change	"120G.3.1.3" to	The re	ference	e in Table	120G-3	for RLDC is incorr	ect. Change "120	G.3.1.3" to "120G.3.1.2".
1200.	.0.1.2 .						Also, f	or cons	sistency th	roughou	t 802.3ck		
Also, fe	or cons	istency thr	roughout 802.3	ck					-	•			
In Tabl Chang To: "Co	le 1200 je: "Cor ommon	-8 nmon to di -mode to d	ifferential mode differential retu	conversion rn loss"	return loss"		In Tab Chang To: "C	ie 1200 je: "Coi ommoi	G-1 mmon-mo n-mode to	de to diff different	ferential mode retu ial return loss"	ırn loss"	

SC 120G.4.2	P 232	L 39	# 142	C/ 120F	SC 120F.3.1	P 203	L 38	# 151
S	Mellanox			Dudek, Mike	Э	Marvell		
Type TR	Comment Status D		(IR)	Comment T	<i>уре</i> т	Comment Status D		
account for scop	e noise as TDECQ does.			Footnot	e b to table 163	-5 which updates the linear	fit procedure for r	neasuring SNDR
Remedy				snould	be applied to ch	ip to chip as well as backpla	ine.	
RSSing out the so	cope noise (as done in TDE	CQ) if it's signific	cant.	Suggested	Remedy			
Response	Response Status W			Add the	same rootnote	to the SNDR row in Table 1	20F-1.	
OSED REJECT.				Proposed R	Response	Response Status W		
incored oberrae i	n the comment does not as	ntain aufficiant c	latail to understand the	PROPC	DSED ACCEPT	IN PRINCIPLE.		
c changes that sa	atisfy the commenter.]	ntain suncient o		Add the	e following footno	ote to the SNDR parameter	in Table 120F-1.	
DECQ method inf n 8 121.8.5.3. The	erred in the suggested reme e scope noise term sigma_s	edy may be foun is discussed at	d in IEEE 802.3-2018 the top of pages 133	"Measu fit proce	rement uses the edure in 162.9.3	e method described in 120D .1.1 is used."	.3.1.6 with the ex	ception that the linear
6. It is not clear r 3.4.2.	low this would be incorporation	ed into the eye	opening measurement	C/ 120F	SC 120F.3.2.	3 P 207	L 5	# 156
				Li, Mike		Intel		
ggested remedy	does not provide sufficient of	letail to impleme	ent.	Comment T	ype TR	Comment Status D		
k force discussio	n.			Np TBD)			
SC 120E 2 1	P 202	1 22	# 444	SuaaestedF	Remedv			
30 1 20F.3.1	F 203	L 32	# 144	Change	e it to 18 (length	of TX pre-taps + RX DFE ta	ps+main tap)	
S				Proposed R	Response	Response Status W	,	
rd proqueor boo	Comment Status D	" obonnolo, oo l	IX FIR C(-3)	PROPO	SED ACCEPT	IN PRINCIPLE.		
hile for "20 dB" c	hannels, yet it adds comple ld be done with simpler silic	xity to the silicor on, like C2M.	and the tuning. This	For tasl	k force discussion	on.		
Remedy								
e the third precu	rsor.							
Response	Response Status W							
OSED REJECT.								
lowing presentati els with COM nea ww.ieee802.org/	on shows an improvement o r 3 dB for various channels. 3/ck/public/adhoc/mar04_20	due to c(-3) of 0. √sun_3ck_adhor	1 to 0.8 dB in COM for c_01_030420.pdf					
ring the c(-3) wou	ld result in marginal channe	Is failing or putti	ing more burden on the					
	s <i>Type</i> TR account for scop <i>Remedy</i> <i>Remedy</i> <i>Response</i> DSED REJECT. 'oposed change i : changes that sa DECQ method infort 12.1.8.5.3. The 6. It is not clear h 3.4.2. ggested remedy ik force discussion SC 120F.3.1 s <i>Type</i> TR ird precursor has thile for "20 dB" c <i>C</i> (R or CR, it show <i>Remedy</i> the the third precursor <i>Response</i> OSED REJECT. Ilowing presentatiles with COM near www.ieee802.org/3 <i>ting</i> the c(-3) would	s Mellanox <i>Type</i> TR <i>Comment Status</i> D account for scope noise as TDECQ does. <i>Remedy</i> Response <i>Response Status</i> W DSED REJECT. 'oposed change in the comment does not cord changes that satisfy the commenter.] DECQ method inferred in the suggested remet n 8 121.8.5.3. The scope noise term sigma_s 6. It is not clear how this would be incorporat 3.4.2. ggested remedy does not provide sufficient of the force discussion. <u>SC 120F.3.1</u> <i>P</i> 203 s Mellanox <i>Type</i> TR <i>Comment Status</i> D ind precursor has only minor value for "28 dB" chile for "20 dB" channels, yet it adds comple (R or CR, it should be done with simpler silic <i>Remedy</i> re the third precursor. Response <i>Response Status</i> W OSED REJECT. Howing presentation shows an improvement of els with COM near 3 dB for various channels. roww.ieee802.org/3/ck/public/adhoc/mar04_20 ring the c(-3) would result in marginal chance	s Mellanox fype TR Comment Status D account for scope noise as TDECQ does. Remedy Remedy Response Response Status W SSing out the scope noise (as done in TDECQ) if it's signific $Response$ Response Status W SSED REJECT. Toposed change in the comment does not contain sufficient of c changes that satisfy the commenter.] ECQ method inferred in the suggested remedy may be found $n \ 8 \ 121.8.5.3$. The scope noise term sigma_s is discussed at 6. It is not clear how this would be incorporated into the eye 3.4.2. ggested remedy does not provide sufficient detail to implement R force discussion. $SC \ 120F.3.1$ $P \ 203$ $L \ 32$ s Mellanox Type TR Comment Status D $rd precursor has only minor value for "28 dB" channels, so I thile for "20 dB" channels, yet it adds complexity to the silicor (R \ or \ CR, it should be done with simpler silicon, like C2M.Remedyre the third precursor. Response Response Status WOSED REJECT.Howing presentation shows an improvement due to c(-3) of 0.Response$ Response Status W OSED REJECT. Howing presentation shows an improvement due to c(-3) of 0. $Response \ Response \ Status \ Status \ Status \ COM \ near \ 3 \ dB \ for various \ channels.$ $roww.ieee802.org/3/ck/public/adhoc/mar04_20/sun_3ck_adhoc$	s Mellanox fype TR Comment Status D (<i>IR</i>) account for scope noise as TDECQ does. Remedy Response Response Status W DSED REJECT. roposed change in the comment does not contain sufficient detail to understand the c changes that satisfy the commenter.] DECQ method inferred in the suggested remedy may be found in IEEE 802.3-2018 in 8 121.8.5.3. The scope noise term sigma_s is discussed at the top of pages 133 6. It is not clear how this would be incorporated into the eye opening measurement 3.4.2. ggested remedy does not provide sufficient detail to implement. ik force discussion. SC 120F.3.1 P 203 L 32 # [144] s Mellanox Type TR Comment Status D TX FIR c(-3) ird precursor has only minor value for "28 dB" channels, so I don't expect it will be hille for "20 dB" channels, yet it adds complexity to the silicon and the tuning. This (R or CR, it should be one with simpler silicon, like C2M. Remedy te the third precursor. Response Response Status W DSED REJECT. Ilowing presentation shows an improvement due to c(-3) of 0.1 to 0.8 dB in COM for els with COM near 3 dB for various channels. www.ieee802.org/3/ck/public/adhoc/mar04_20/sun_3ck_adhoc_01_030420.pdf ing the c(-3) would result in marginal channels failing or putting more burden on the	s Mellanox fype TR Comment Status D (IR) account for scope noise as TDECQ does. Remedy Response Response Status W DSED REJECT. $foposed change in the comment does not contain sufficient detail to understand the c changes that satisfy the commenter.] DECQ method inferred in the suggested remedy may be found in IEEE 802.3-2018 18 121.8.5.3. The scope noise term sigma_s is discussed at the top of pages 133 6. It is not clear how this would be incorporated into the eye opening measurement 3.4.2. ggested remedy does not provide sufficient detail to implement. Rc force discussion.SC 120F.3.1$ $P 203$ $L 32$ # 144 S Mellanox fype TR Comment Status D TX FIR c(-3) rd precursor has only minor value for "28 dB" channels, so I don't expect it will be hile for "20 dB" channels, yet it adds complexity to the silicon and the tuning. This (R or CR, it should be done with simpler silicon, like C2M. Remedy re the third precursor. Response Response Status W OSED REJECT. Itowing presentation shows an improvement due to c(-3) of 0.1 to 0.8 dB in COM for als with COM near 3 dB for various channels. ww iece802.org/3/ck/upublic/adhoc/mar04_20/sun_3ck_adhoc_01_030420.pdf ding the c(-3) would result in marginal channels failing or putting more burden on the	s Mellanox Type TR Comment Status D (IR) account for scope noise as TDECQ does. Remedy SSing out the scope noise (as done in TDECQ) if it's significant. Response Response Status W DSED REJECT. Toposed change in the comment does not contain sufficient detail to understand the to changes that satisfy the commenter.] DECQ method inferred in the suggested remedy may be found in IEEE 802.3-2018 to 1218.5.3. The scope noise term sigma_s is discussed at the top of pages 133 6. It is not clear how this would be incorporated into the eye opening measurement 3.4.2. ggested remedy does not provide sufficient detail to implement. Ik force discussion. SC 120F.3.1 P 203 L 32 # 1144 Type TR Comment Status D TX FIR c(-3) FOPOSED ACCEPT We at the difference of "28 dB" channels, so I don't expect it will be thile for "20 dB" channels, yet it adds complexity to the silicon and the tuning. This Remedy re the third precursor. Response Response Status W DSED REJECT. Itowing presentation shows an improvement due to c(-3) of 0.1 to 0.8 dB in COM for sis with COM near 3 dB for various channels. www.ieee802.corg/3/ck/public/adhoc/mar04_20/sun_3ck_adhoc_01_030420.pdf into the c(-3) would result in marginal channels failing or putting more burden on the	be in the formation of	be received in the contrast transport of the suggested remedy are not the suggested remedy and the suggested remedy are not clear to the suggested remedy are not provide sufficient detail to implement. K force discussion. Sc 120F.3.1 P 203 L 32 # [144] s Melanox Type TR Comment Status D TX FIR c(-3) Type TR Comment Status D TX FIR c(-3) Type TR Comment Status D TX FIR c(-3) Type TR Comment Status W PROPOSED ACCEPT IN PRINCIPLE. Add the following footnote to the SNDR parameter in Table 120F.1. Proposed Response Status W PROPOSED ACCEPT IN PRINCIPLE. Add the following footnote to the SNDR parameter in Table 120F.1. Proposed Response Status D TX FIR c(-3) Type TR Comment Status D TX FIR c(-3) Type TR Comment Status D TX FIR c(-3) Status C and the tuning. This Remedy re the third precursor. Remedy re the third precursor. Response Status W SCH PROPOSED ACCEPT IN PRINCIPLE. For task force discussion. Remedy re the third precursor. Response Status W SCH PROPOSED ACCEPT IN PRINCIPLE. For task force discussion. Remedy re the third precursor. Response Status W SCH PROPOSED ACCEPT IN PRINCIPLE. For task force discussion. Remedy re the third precursor. Response Status W SCH PROPOSED ACCEPT IN PRINCIPLE. For task force discussion. Remedy re the third precursor. Response Status W SCH PROPOSED ACCEPT IN PRINCIPLE. For task force discussion. Remedy re the third precursor. Response Status SW SCH PROPOSED ACCEPT IN PRINCIPLE. For task force discussion. Remedy SCH PROP

C/ 162 SC 162.11.7	P 160	L 27	# 161		C/ 162	SC 162.9.4	.5 <i>P</i> 156	L 14	# 163		
Palkert, Tom	Molex				Palkert, To	m	Molex				
Comment Type T	Comment Status D			LATE	Comment	Туре т	Comment Status D		LATE		
One sided noise spectra 1x10-8. This went too fa	al density for passive coppe ar causing adverse impacts	r cables was cha on COM results.	nged from 8.2x ²	10-9 to	ERL m Suagesteg	neasurement sh IRemedy	nould not be required for hig	h values of COM			
SuggestedRemedy					Add se	entence 'If CON	I is greater than 4 dB the E	RL limit does not a	vlage		
Change One-sided nois presentation)	e spectral density from to 1	x10-8 to 1x10-9.	(Supporting		Proposed	Response	Response Status W				
Proposed Response	Response Status W				PROP	OSED REJEC	Г.				
PROPOSED REJECT.					This co	omment was re	ceived after the task force	eview was closed.			
This comment was rece	ived after the task force rev	riew was closed.			The co	omment does n	ot provide sufficient evidend	ce to support the p	proposed changes.		
The comment does not	provide sufficient evidence	to support the pr	oposed changes	6.	For tas	sk force discus	sion.				
For task force discussio	n.				C/ 162	SC 162.5	P 135	L 18	# 164		
C/ 162 SC 162.11.7	P 160	L 6	# 162		Palkert, To	m	Molex				
Palkert, Tom	Molex				Comment	Туре Т	Comment Status D		LATE		
Comment Type T	Comment Status D			LATE	One w	ay delay thru m	nedium of 14ns is insufficier	nt for DAC delay tir	mes.		
Need value for SNRtx					Suggestea	lRemedy					
SuggestedRemedy					Chang	e value back to	o 20 ns				
Make SNRtx = 33dB (Se	ee supporting presentation)				Proposed	Response	Response Status W				
Proposed Response	Response Status W				PROP	OSED REJEC	Г.				
PROPOSED ACCEPT I	N PRINCIPLE.				This comment was received after the task force review was closed.						
This comment was rece	ived after the task force rev	iew was closed.			The comment does not provide sufficient evidence to support the proposed changes.						
For task force discussio	n.				For tas	sk force discus	sion.				