C/ FM SC FM Anslow, Pete	P 9 Ciena	L 31	# [1	C/ 108 SC 108.7.4.2 P 27 L 29 # 4
Comment Type E "The following member SuggestedRemedy Remove the underline	Comment Status D rs of the individual balloting" h	as a double und	erline	Comment Type E Comment Status D Comments #43 and #83 against D2.0 were ACCEPT: "Show the entry in the Status column as a change from the version in 802.3by." SuggestedRemedy In "BEC*(SR or LR or ER):M" show "(" and " or LR or ER)" in underline font
PROPOSED ACCEPT.	Response Status W			Proposed Response Response Status W PROPOSED ACCEPT.
C/ 105 SC 105.1.1 Anslow, Pete	P 23 Ciena	L 13	# 2	C/ 114 SC 114.11 P 39 L 50 # 5
The changes shown do 802.3bq-2016. The "and" in strikethrou underlined. SuggestedRemedy Change to "25GBASE- 25GBASE-ER" where t 25GBASE-ER" is under	KR-S, 25GBASE-SR, and 25 the first "and " is in strikethrou	document as m "25GBASE-T" s GBASE-T, 25GE gh font and just	odified by IEEE Std nould not be BASE-LR, and ", 25GBASE-LR, and	Comment Type E Comment Status D "Table 114-12" should be a cross-reference "Table 114-12" should be a cross-reference SuggestedRemedy Make it a cross-reference "W" Proposed Response Response Status W" PROPOSED ACCEPT. "W" "Table Status"
Proposed Response PROPOSED ACCEPT	Response Status W			C/ 45 SC 45.2.1.6 P 20 L 10 # 6 Anslow, Pete Ciena Ciena<
C/ 105 SC 105.5 Anslow, Pete	P 25 Ciena	L 14	# 3	Comment Type E Comment Status D As the changes to table 45-7 involve some deletion, an insert editing instruction is not appropriate.
Comment Type E space missing in "2016 SuggestedRemedy Change to "2016) and"	Comment Status D			SuggestedRemedy Change the editing instruction to "Change two reserved rows in Table 45-7 (as modified by IEEE Std 802.3bq-2016) as follows (unchanged rows not shown): Show "25GBASE-ER PMA/PMD", "1 1 0 1 0 1 = 25GBASE-LR PMA/PMD" and "1 1 0 1 0 0 = reserved" in underline font.
Proposed Response PROPOSED ACCEPT	Response Status W			Proposed Response Response Status W PROPOSED ACCEPT.

	_					_		
C/ 105 SC 105.1.2	P 23	L 22	# 7	C/ 114	SC 114.7.2	P 36	L 46	# 10
Anslow, Pete	Ciena			Anslow, Pe	ete	Ciena		
Comment Type TR	Comment Status D	addad in D2 1		Comment	Type TR	Comment Status D	moacurod"	
Where did this come fro IEEE Std 802.3bq-2016 uses a 4 lane data path.	m? added "d) The MDI as spec "	cified in Clause 1	13 for 25GBASE-T	This te Why w The m	ext was proposed as a change ma odified text can b	to be changed by comment de? be read to say that this measu	#87, but this was	s REJECTed. made, which is no
SuggestedRemedy				Suggestee	ent.			
Delete "in Clause 113 fo	or 25GBASE-T," from item c	;)		Suggested	ikeniedy e "when measur	ed" back to "if measured" as	it was in D2.0	
Proposed Response	Response Status W			Dranaad	Deenenee		it was in D2.0.	
PROPOSED ACCEPT.				Proposed PROP	OSED ACCEPT	. Response Status w		
C/ 105 SC 105.1.2	P 23	L 31	# 8	0	00	D a a	1.50	
Anslow, Pete	Ciena			C/ 114	SC 114.11	P 39	L 52	# 11
Comment Type TR	Comment Status D			Ansiow, Fe		Ciella		
The text "25GBASE-T, " Where did this come fro	has been added in D2.1. m?			Comment The te	<i>Type</i> E ext in 114.11 wou	Comment Status D Id be improved by following th	hat in 87.12 mor	e closely.
IEEE Std 802.3bq-2016 covered by the term "25	added a new third paragra GBASE-R"	ph to cover 25GE	BASE-T which is not	Suggestea	Remedy			
SuggestedRemedy				Chang	je "given in Table	e 114-12" to "given in Table 1	14-12 for the two) link directions
Delete "25GBASE-T, " f	rom 105.1.3			Pronosed	Response	Response Status W		
Proposed Response PROPOSED ACCEPT.	Response Status W			PROP	OSED ACCEPT			
	D 44	1.2	# 6	C/ 114	SC 114.11	P 40	L 31	# 12
Anslow Pete	r 4 1 Ciena	L Z	# 9	Anslow, Pe	ete	Ciena		
				Comment	Туре Т	Comment Status D		
As type was changed to	types in the name of the cl	ause by commen	nt #84, this should be	The tw cause	vo footnotes to Ta more confusion	able 114-12 do not come fron than clarity.	n the equivalent	table in 87.12 and
reflected in the title of 1	14.12 and the text in 114.12	2.1		Suggestea	lRemedy			
SuggestedRemedy				Delete	both footnotes			
In the title of 114.12 and	I the text in 114.12.1, chang	ge "type" to "types	5"	Proposed	Response	Response Status W		
Proposed Response	Response Status W			PROP	OSED ACCEPT	IN PRINCIPLE.		
				Propos	se to make simila	ar to table in 87.12.		

C/ 114	SC 114.11	P 40	L 27	# 13	C/ 105	SC 105.1.1	P 23	L 13	# 14	
Anslow, Pe	ete	Ciena			Law, David	l	HPE			
Comment	Туре Т	Comment Status D			Comment	Туре Е	Comment Status D			
The in LR Tx The LI The E This lin At ma: Eor ma	sertion loss red to ER Rx R transmitter ha R receiver can mits the LR Tx CTDP, the LR ta STDP the FR	quirements in Table 114-12 do as an average launch power of receive an average power of - to ER Rx channel insertion los transmitter has an OMA of -5 - receiver sensitivity OMA is -1	not seem to be of f - 7 dBm min and 21 dBm min and is to be between $- 2.7 = -2.3 dBm$	correct. 1 2 dBm max - 4 dBm max 14 dB and 6 dB min and 2.2 dBm max Bm and overloads at .4	As IEE of the f 25GBA SR, <5 <i>Suggested</i> See cc	E Std 802.3bq 2 irst paragraph c SE-T.'. On that S>and 25Gl <i>Remedy</i> omment.	25GBASE-T is an approved IE of subclause reads ' 25GBAS basis the change text should BASE-T <u>, 25GBASE-LR, a</u>	EE standard the E-KR-S, 25GB/ read ' 25GBA nd 25GBASE-E	e base text at the end ASE-SR, and SE-KR-S, 25GBASE- R.	
dBm This lii this is	mits the LR Tx the more string	to ER Rx channel insertion los gent requirement, this sets the	s to be between values for this di	14 dB and 6.2 dB. As irection.	Proposed I PROP	Response OSED ACCEPT	Response Status W			
The E	R transmitter h	as an average launch power o	f -3 dBm min and	d 6 dBm max	C/ 105	SC 105.1.2	P 23	L 16	# 15	
The LI	R receiver can	receive an average power of -	13.3 dBm min ar	nd 2 dBm max	Law, David	l	HPE			
This lii At may	TDP the FR	to LR Rx channel insertion los transmitter has an OMA of -1 -	s to be between ⊦ 2 7 = 1 7 dBm i	10.3 dB and 4 dB min and 6 dBm max	Comment	Туре Т	Comment Status D			
For max TDP, the ER transmitter has an OMA of -1 + 2.7 = 1.7 domining and 6 dominax For max TDP the LR receiver sensitivity OMA is -11.3 + 2.7 = -8.6 dBm and overloads at 2.2 dBm This limits the ER Tx to LR Rx channel insertion loss to be between 10.3 dB and 3.8 dB. As the average power requirements are more stringent, they set the values for this direction.					Rather than modify item c) of subclause 105.1.2 to add 25GBASE-T the published IEEE Std 802.3bq-2016 25GBASE-T standard adds a new item d) to the list that reads 'd) The MDI as specified in Clause 113 for 25GBASE-T uses a 4 lane data path.' (see IEEE Std 802.3bq-2016 page 69). I believe that this is because item c) lists the single-lane data path PHYs yet 25GBASE-T uses a 4 lane data path. The change to item c) in IEEE P802.3cc					
Suggested	IRemedy				draft D	2.1 however ad	ds 25GBASE-T to the item c)	list, as well as 2	5GBASE-LR, and	
For LF	R Tx to ER Rx o	change the min loss to 6.2 dB a	and the max loss	s to 14 dB.	remove	ed.	believe it is correct to add 250		is change should be	
For EF	R Tx to LR Rx o	change the max loss to 10.3 dB	3.		Suggested	Remedy				
Proposed	Response	Response Status W			Sugge	st that:				
PROP Discus Loss r specify	OSED ACCEP ss. Existing values ange was inter ange of log	PT IN PRINCIPLE. ues were based on practical vanded to maintain some margin oss, then can change as propo	alues for attenua from extremes. E ised.	tors and their tolerance. But if group prefers to	[1] The 2016 a IEEE S [2] The <s>or 25GBA</s>	e subclause 105 ind modified by Std 802.3by-201 e subclause 105 in Clause 1 \SE-ER us	.1.2 editing instructions text ' IEEE Std 802.3bq- 2016)' b 6)'. .1.2 item c) change text be ch 112 for 25GBASE-SR <u>, or i es a single-lane data path.</u>	. (as inserted by e changed to re anged to read ' n Clause 114 fo	IEEE Std 802.3by- ad ' (as inserted by 25GBASE-KR-S, r 25GBASE-LR and	
					Proposed I	Response	Response Status W			

PROPOSED ACCEPT.

C/ 105 S											
	SC 105.1.3	P 23	L 27	# 16	C/ 45	SC 45.2.	1.14b	P 21	L 23	# 18	
Law, David		HPE			Slavick, Je	eff		Broadcom Li	mited		
Comment Type	e E	Comment Status D			Comment	Type TR	Со	mment Status D			
Туро.					100G,	200G, 400C	have a bi	t indicating when the F	MA supports ren	note loopback Ability	
SuggestedRer	medy				Dit. Ir	nis dit is miss	sing from tr	ne 25GE extended abi	lity register		
The text '	by Std 802.3	by-2016' should read '	by IEEE Std 802	.3by-2016'.	Suggested	Remedy	050		10) (
Proposed Res PROPOSE	ponse ED ACCEPT.	Response Status W			1.19.1 ability	5 25G PMA	remote loo	pback	.19) to be:		
Cl 105 S Law, David	SC 105.1.3	<i>Р</i> 23 НРЕ	L 32	# 17	1 = 25 0 = 25 RO	G PMA has G PMA does	s not have	the ability to perform a	a remote loopback	function	
Comment Type	e T	Comment Status D			45.2.1	.14b.aa 25G	PMA rem	ote loopback ability (1.	.19.15)		
Rather than modify the second paragraph of 105.1.3 to add 25GBASE-T the published IEEE Std 802.3bq-2016 25GBASE-T standard adds a new third paragraph. I believe that this is because the second paragraph describes 64B/66B PHYs which I don't believe 25GBASE-T is. The change to the second paragraph of 105.1.3 in IEEE P802.3cc draft D2.1 however adds 25GBASE-T, as well as 25GBASE-LR, and 25GBASE-ER. I don't						When read as a one, bit 1.19.15 indicates that the 25G PMA is able to perform the remote loopback function. When read as a zero, bit 1.19.15 indicates that the 25G PMA is not able to perform the remote loopback function. If a 25G PMA is able to perform the remote loopback function, then it is controlled using the PMA remote loopback bit 1.0.1 (see 45.2.1.1.4).					
believe this	is is correct an	d should be removed.			Proposed Response Response Status W						
SuggestedRen	medy				PROP	OSED REJE	ECT.				
Suggest that: [1] The subclause 105.1.3 editing instructions text ' (as inserted by Std 802.3by-2016 and					IEEE Std 802.3by-2016 defines the 25G PMA remote loopback capability in bit 1.13.15 i the 40G/100G PMA/PMD extended ability register. See Clause 109 (Table 109-3).						
modified b 802.3bv-2	oy IEEE Std 80 016)'.	2.3bq- 2016)' be change	d to read ' (as	inserted by IEEE Std	C/ 00	SC 0		P 39	L 49	# 19	
[2] The sul	bclause 105.1	.3 change text be changed	to read ' 25GB	ASE-KR-S, <s>and</s>	Maguire, V	/alerie		Siemon			
25GB	BASE-SR <u>,</u>	25GBASE-LR, and 25GBA	SE-ER.		Comment	Туре Е	Со	mment Status D			
Proposed Res	ponse	Response Status W			Capitalization error.						
PROPOSED ACCEPT.			SuggestedRemedy Replace, "the Fiber optic cabling" with, "the fiber optic cabling".								
					- · ·	Boononoo	Ros	······································	-		

Dudek, MikeComment TypeTComment Type	Cavium								
Comment Type T Com				Dudek, Mike		Cavium			
	ment Status D			Comment Type TF	Commen	t Status D			
The test reference to 95.8.8 inc sinusoidal jitter, interferers and on and be only at the 2.5dB SE	ludes 95.8.8.2 which noise turned off. Th C that is the target.	n requires the SEC is will make it imp	C to be 2.5dB with the possible to turn them	The stressed eye wide whereas the eye. There is not the budget.	closure is measur TDP is measured hing in the budget	ed at +/-0.05UI with a minimally to allow for this	offset with histog y narrow sample discrepancy whic	rams that are 0.02UI at the middle of the ch creates a "hole" in	
It also includes the requirement	to meet the stresse	d receiver eye ma	ask of Table 95-7.	SuggestedRemedy					
SuggestedRemedy Add an additional exception f)	"The SEC created by	y the selection of	the appropriate	Change the stress from 2.5dB to 2.60	ed eye closure va IB with no other c	alue to account f hanges is sugge	or this difference ested.	. Changing the value	
bandwidth for the combination of sinusoidal jitter, sinusoidal inter generator turned off is at least 2	of the low-pass filter ferer 1, sinusoidal in 2.0dB.	and the E/O conv terferer 2, and the	erter with the e Gaussian noise	Proposed Response PROPOSED ACC	Response EPT IN PRINCIP	Status W LE.			
Add to the exceptions in bullet	c), SRS eye mask.			Discuss appropria	te value.				
Proposed Response Res	onse Status W			C/ 114 SC 114. Dudek, Mike	11	<i>P</i> 40 Cavium	L 33	# 23	
C/ 114 SC 114 10	P 39	/ 43	# 21	Comment Type TF	Commen	t Status D			
Dudek, Mike	Cavium	2 40		Footnote b to the	max loss of table	114-12 is confue	sing. What is the	"channel insertion	
Comment Type T Com	ment Status D			loss of 25GBASE	LR". This shoul tandard	d be the loss of	the specific cable	e being used not what	
The specification is referred to	88.11. However tha	t clause requires	compliance to table 88-	SuggestedRemedy					
2.0 what was accepted but not	implemented).	nis is a repeat of		Delete footnote b.					
SuggestedRemedy Add "with the exception that Ta	ble 88-14 is replaced	d by Table 114–1	1"	In section 114.11 can be created by are dependent on	add the following. using additional f the channel loss	"These maxim ixed optical atte without the atter	um and minimum nuators in the cha nuator."	insertion loss values annel whose values	
Proposed Response Respo	onse Status W			Proposed Response Response Status W					
PROPOSED ACCEPT.				PROPOSED ACCEPT IN PRINCIPLE.					
				Propose to remov Comment #12.	e both footnotes t	o make similar t	o Table 87-16, as	s suggested in	

P 34 Mellanox	L 7	# 24	C/ 114 SC 114.6.1 Dawe. Piers	P 34 Mellanox	L 7	# 26
omment Status D a ratio limit should be re- ture range. 10GBASE se TDP than 25GBASE ceiver is protected by li e highest power in 0, 1	elaxed to allow lo -ER has a 3 dB l E-ER, so there is mits on max OM or average is no	w cost transmitters that imit with the same room to relax the A, max average power ot affected by this	Comment Type TR The 25GBASE-LR et operate over a wide because the laser ha better receiver reflec on max OMA and ma is not affected by this	Comment Status D extinction ratio limit should be re- temperature range. The limit s is to run faster. This can be do tance and TDP than 10GBASE ax average power that mean the s change.	elaxed to allow lo hould be lower to one here becaus E-LR. The receiv at the highest po	ow cost transmitters that han 10GBASE-LR e 25GBASE-LR has ver is protected by limits ower in 0, 1 or average
			SuggestedRemedy	C C		
			Change 3.5 dB to 3 d	B		
sponse Status W			Proposed Response PROPOSED REJEC	Response Status W T.		
here consensus was fo	or 4 dB.		Repeat of past discu	ssion, where consensus of gro	up was for 3.5 d	B for consistency with
P 32 Mellanox	L 6	# 25	other related specific	ations, such as CWDM4 or PS	6M4.	
omment Status D						
GBASE-ER (-25 dBm) here should be at least	is now too near t 6 dB, preferably	the minimum average 7 dB, between them.				
optical power at TP3 F4 ach power (min) in Tabl bower at TP3 FAIL limit ny difference to transm 10, nor does it stop im e LR-ER interop, increa min losses in Table 11 sponse Status W RINCIPLE.	AIL limit in Table e 114-6 for ER fit t in Table 114-4 th hitters with more plementers making ase the LR Tx and 14-10.	114-4 for ER from -25 rom -3 to -2.2, and for ER from -25 to -26 than 1.8 dB TDP or a ng high extinction id Rx min average by				
	P 34 Mellanox omment Status D or ratio limit should be returner range. 10GBASE se TDP than 25GBASE ceiver is protected by lite ceiver is protected by lite highest power in 0, 1 sponse Status W where consensus was for P 32 Mellanox D GBASE-ER (-25 dBm) D GBASE-ER (-25 dBm) here should be at least optical power at TP3 FAIL limit Imit ony difference to transmin 10, nor does it stop imple LR-ER interop, increading in Table 11 sponse Status W RINCIPLE. W	P34 L7 Mellanox omment Status D a ratio limit should be relaxed to allow lot ture range. 10GBASE-ER has a 3 dB I se TDP than 25GBASE-ER, so there is ceiver is protected by limits on max OM the highest power in 0, 1 or average is not sponse Status sponse Status W where consensus was for 4 dB. P32 L6 Mellanox omment Status D GBASE-ER (-25 dBm) is now too near there should be at least 6 dB, preferably optical power at TP3 FAIL limit in Table nor does it stop implementers with more 10, nor does it stop implementers making e LR-ER interop, increase the LR Tx and min losses in Table 114-10. sponse Status W RINCIPLE. W	P34 L7 # 24 Mellanox particle limit should be relaxed to allow low cost transmitters that the range. 10GBASE-ER has a 3 dB limit with the same see TDP than 25GBASE-ER, so there is room to relax the ceiver is protected by limits on max OMA, max average power is highest power in 0, 1 or average is not affected by this sponse Status W there consensus was for 4 dB. $P32$ L6 $P32$ L6 Mellanox omment Status D GBASE-ER (-25 dBm) is now too near the minimum average here should be at least 6 dB, preferably 7 dB, between them. optical power at TP3 FAIL limit in Table 114-4 for ER from -25 to -26, and for the power (min) in Table 114-6 for ER from -3 to -2.2, and power at TP3 FAIL limit in Table 114-4 for ER from 25 to -26 in y difference to transmitters with more than 1.8 dB TDP or a 10, nor does it stop implementers making high extinction extinction extinction externel to transmitters with more than 1.8 dB TDP or a 10, nor does it stop implementers making high extinction extinction externel to transmitters with more than 1.8 dB TDP or a 10, nor does it stop implementers making high extinction (ER-ER interop, increase the LR Tx and Rx min average by a min losses in Table 114-10. sponse Status W sponse Status W	P34L7#24Cl 114SC 114.6.1Mellanoxcomment StatusDthe ratio limit should be relaxed to allow low cost transmitters that there range. 10GBASE-ER, as a 3 dB limit with the same se TDP than 25GBASE-ER, so there is room to relax the ceiver is protected by limits on max OMA, max average power the highest power in 0, 1 or average is not affected by thisCl 114SC 114.6.1sponse StatusWsponse StatusWP32L6#25MellanoxMellanoxSuggested/Remedy Change 3.5 dB to 3 dproposed Response MellanoxProposed Response PROPOSED REJECCMellanoxDSponse StatusCl 114Scale power at TP3 FAIL limit in Table 114-4 for ER from -25Repeat of past discu other related 5 dB, preferably 7 dB, between them.optical power at TP3 FAIL limit in Table 114-4 for ER from -25 to -26 ony difference to transmitters making high extinction e LR-ER interop, increase the LR Tx and Rx min average by Imin losses in Table 114-10. sponse StatusWsponse StatusWStatusWRNCIPLE.	P34 L7 # 24 Mellanox D ratio limit should be relaxed to allow low cost transmitters that there range. 10GBASE-ER has a 3 dB limit with the same see TDP than 25GBASE-ER, so there is room to relax the ceiver is protected by limits on max OMA, max average power to relax the sign protected by limits on max OMA, max average power to relax the ceiver is protected by limits on max OMA, max average power to relax the sign protected by limits on max OMA, max average power to relax the ceiver is protected by limits on max OMA, max average power to relax the sign protected by limits on max OMA, max average power that mean the is not affected by this change. Comment Type TR Comment Status D sponse Status W P32 L6 # 25 Mellanox Mellanox mment Status D Response Comment Status W P32 L6 # 25 Mellanox Mellanox Mellanox proposed Response Response Status W Repeat of past discussion, where consensus of groo other related specifications, such as CWDM4 or PS Point related specifications, such as CWDM4 or PS other power (min) in Table 114-6 for ER from -35 to -22, and 30 more stop implementers making high extinction e LR-ER interop, increase the LR Tx and Rx min average by min losses in Table 114-10. Sponse Status W sponse Status W N N	P34 L7 # 24 Mellanox Mellanox Darratio limit should be relaxed to allow low cost transmitters that three range. 10GBASE-ER has a 3 dB limit with the same set TP than 25GBASE-ER, so there is room to relax the ceiver is protected by limits on max OMA, max average power is 0, 1 or average is not affected by this The 25GBASE-LR extinction ratio limit should be relaxed to allow low cost transmitters that the highest power in 0, 1 or average is not affected by this sponse Status W P32 L6 # 25 Mellanox W P32 L6 # 25 Mellanox W PROPOSED REJECT. P33 L6 # 25 Mellanox W PROPOSED REJECT. Mellanox D GBASE-ER (-25 dBm) is now too near the minimum average there should be at least 6 dB, preferably 7 dB, between them. optical power at TP3 FAIL limit in Table 114-4 for ER from -25 to -26 m of difference to transmitters with more than 1.8 dB TDP or a 10, nor does it stop implementers making high extinction e lar-ER: interprive for certain the LR and Rx min average by trim toses in Table 114-10. sponse Status W NOCIPIE W