Cl **120G**   *SC* **120G.3.2**   *P* **261**   *L* **11**   # 21

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *MO EH*

D2.2 comment 93: If the eye height limit is the same at near end as at far end, there is huge margin at near end and the implementer is encouraged to optimise for far end or beyond, only limited by the NE VEC spec, while we want modules to be set up consistently, for the full range from near to far. EH is naturally much larger at NE than FE for a well set up output and the spec should reflect that. Also, host designers know their own loss and lower-loss hosts can take advantage of a better signal that cost the module nothing. This applies to both the short and long modes.

SuggestedRemedy

Change the near end eye height so that it is 2.5 dB above long far end: if far can remain at 15 mV, near becomes 20 mV. Far end remains the one with less margin. This would align with OIF VSR.

Response   *Response Status* **U**

REJECT.

This comment pertains to the module output eye height (min) for long mode, near end.

The task force has previously considered substantively similar comments.
This comment is a restatement of comments Draft 2.1 #98 and Draft 2.2 #93. Both were rejected on the basis of insufficient evidence to make the proposed changes. The responses may be found in the following comment resolution reports:
https://www.ieee802.org/3/ck/comments/draft2p2/8023ck_D2p2_final_closedcomments_sortedByNumber.pdf
https://www.ieee802.org/3/ck/comments/draft2p1/8023ck_D2p1_final_closedcomments.pdf

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Cl **120G**   *SC* **120G.3.3.5.1**   *P* **266**   *L* **15**   # 23

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *HI SI calibration*

As pointed out in D2.2 comment 148, the host stressed input signal is emulating a module so must obey the same rules. VEC and eye height must be in spec for both near end and far end. So ensuring this is part of the calibration process.

SuggestedRemedy

Similar to D2.1 comment 126 published in July: change "short or long mode far-end test" to "short or long mode far-end calibration or long mode near-end calibration"

Response   *Response Status* **U**

REJECT.

This comment pertains to the host input stressed input far-end test for long mode.

The task force has previously considered a substantively similar comment.
This comment is a restatement of comment Draft 2.2 #148, which was rejected on the basis of insufficient evidence and insufficient detail to make the proposed changes. The response may be found in the following comment resolution report:
https://www.ieee802.org/3/ck/comments/draft2p2/8023ck_D2p2_final_closedcomments_sortedByNumber.pdf

There is insufficient evidence to make the proposed changes.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID   *Comment ID* **23**   Page 1 of 9
2021-11-27 8:52:45 AM

Cl **120G**   *SC* **120G.3.3.5.2**   *P* **267**   *L* **20**   # 25

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   HO SI calibration

As pointed out in D2.2 comment 148, the host stressed input signal is emulating a module so must obey the same rules. VEC and eye height must be in spec for both near end and far end. So ensuring this is part of the calibration process.
This says "parameters in Table 120G–5 for far-end host channel type and the requested mode": but in one case, the near end needs a parameter from the table

SuggestedRemedy

As in D2.1 comment 129 published in July: change to "parameters in Table 120G–5 for host channel type and the requested module output mode"

Response   *Response Status* **U**

REJECT.

The task force has previously considered a substantively similar comment.
This comment is a restatement of comment Draft 2.2 #148, which was rejected on the basis of insufficient evidence to make the proposed changes and insufficient detail to implement the proposed changes. The response may be found in the following comment resolution report:
https://www.ieee802.org/3/ck/comments/draft2p2/8023ck_D2p2_final_closedcomments_sortedByNumber.pdf

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Cl **120G**   *SC* **120G.3.3.5.2**   *P* **267**   *L* **21**   # 26

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   HI SI calibration

Ref. D2.2 comment 148. The module output eye height and VEC have to comply at both near end and far end, so a module can be tuned to either end or somewhere in the middle. The host stressed input signal is tuned to far end, only. This is inconsistent and a serious flaw in the spec.

SuggestedRemedy

Tighten the equaliser limits for module output so that modules are tuned consistently across the industry.

Response   *Response Status* **U**

REJECT.

The task force has previously considered a substantively similar comment.

This comment is a restatement of Draft 2.2 comment #148, which was rejected on the basis of insufficient evidence to make the proposed changes and insufficient detail to implement the proposed changes. The response may be found in the following comment resolution reports:
https://www.ieee802.org/3/ck/comments/draft2p2/8023ck_D2p2_final_closedcomments_sortedByNumber.pdf

For this comment, the suggested remedy does not contain sufficient detail so that the task force can understand the specific changes that satisfy the comment.

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

Comment ID **26**

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2021-11-27 8:52:45 AM

Cl **120G**	*SC* **120G.3.3.5.2**	*P* **267**	*L* **25**	*#* 27

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *HI SI calibration*

Ref. D2.2 comment 148. The signal needs to be checked with the near end channel so that its eye height is at least the target and its VEC is no more than VEC (max) in the table. If it fails, the signal must be adjusted to bring it into compliance. For short mode, near end VEC might be worse than far; however it may still be feasible to tune it to get 3 of 4 (near, far, VEC and EH) to the targets.

SuggestedRemedy

Road-test the procedure and revise the text per comment.

Response   *Response Status* **U**

REJECT.

The task force has previously considered a substantively similar comment.
This comment is a restatement of comment Draft 2.2 #148, which was rejected on the basis of insufficient evidence to make the proposed changes and insufficient detail to implement the proposed changes. The response may be found in the following comment resolution reports:
https://www.ieee802.org/3/ck/comments/draft2p2/8023ck_D2p2_final_closedcomments_sortedByNumber.pdf

For this comment, the suggested remedy does not contain sufficient detail so that the task force can understand the specific changes that satisfy the comment.

Cl **120G**	*SC* **120G.5.2**	*P* **277**	*L* **6**	*#* 35

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *EO method*

Ref D2.2 comment 101: this draft has a (de-)weighted rectangular eye mask spec with mask height = max(EHmin, EA/VECmax) and effective mask width ~2x0.03 to 2x0.035 UI, although it is described as a histogram 2x0.05 UI wide. This is too narrow; compare 120E with ESMW of 0.2 or 0.22 UI. It's half as wide as TDECQ with histograms extending to +/- 0.07 UI. This de-weighted histogram might work if there were a guarantee that no host or module would ever produce a fast, highly jittered eye, but -
we don't have that guarantee. That work needs to be done before making such a hole in the spec.
De-weighting the sides of the histogram with flat top and bottom, rather than chanmfering the corners, means that infringing the corners by a mile is counted the same as infringing by an inch, which is bad.
Most of the weight of samples is in the middle of the eye which is pointless; we know the corners will fail first so we should focus on measuring them, not the middle.
The effective BER criterion of the (de-)weighted mask seems to be around 1e-4, not 1e-5 as before.
The distribution of repeated measurements is very skewed.
We need an eye mask that's more eye shaped, so that a higher proportion of the samples near the boundary are measured at full weight and contribute properly to the measurement. Eye mask measurement with a 10-sided mask has been pre-programmed into scopes for about 20 years, we should use established tools and methods where they work well.

SuggestedRemedy

Change from a 4-cornered weighted mask with corners at t = ts+/-0.05, V = y +/-H/2 to a 10-cornered unweighted mask with corners at t = ts+/-1/16, ts+/-0.05, ts+/-3/32, V = y +/- H/2, k +/-H*0.4, y. y is near VCmid, VCupp or VClow (vertically floating, as in D2.2).
H is max(EHmin, Eye Amplitude * 10^(-VECmax/20)). Eye Amplitude is AVupp, AVmid or AVlow, as today.
This simple scalable method gives VEC results 0.5 to 1 dB more optimistic than the unweighted rectangular mask. It can remain as the EH and VEC limits are revised in the light of experience.

Response   *Response Status* **U**

REJECT.

The task force has previously considered substantively similar comments.

This comment is a restatement of Draft 2.2 Comment #101 (which was a restatement of D2.1 #106 and D2.0 #180), which were rejected on the basis of lack of consensus. A set of two straw polls demonstrated strong consensus to retain the measurement method in D2.2, which is unchanged in D2.3.
The responses may be found in the following comment resolution reports:
https://www.ieee802.org/3/ck/comments/draft2p2/8023ck_D2p2_final_closedcomments_sortedByNumber.pdf
https://www.ieee802.org/3/ck/comments/draft2p1/8023ck_D2p1_final_closedcomments.pdf

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

Comment ID **35**   Page 3 of 9
2021-11-27 8:52:45 AM

https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_final_closedcomments_sortedByNumber.pdf

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Cl **120G**   *SC* **120G.5.2**   *P* **277**   *L* **6**   # `36`

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *EO method*

D2.2 comment 95: the Gaussian weighting has the effect of destroying the histogram width, allowing bad fast eyes to pass, while giving the false impression that the histogram width still applies. With a weighting standard deviation of 0.02 UI, the eye height is measured at around +/-0.035 UI rather than the +/-0.05 UI in the previous draft - depending on eye shape. Compare 120E with ESMW of 0.2 or 0.22 UI, and TDECQ with histograms extending twice as wide, to +/-0.07 UI.
This weighting is equivalent to relaxing the VEC spec by 1.5 to 2 dB - but it depends on the eye shape, it weakens the spec most for the worst-shaped eyes, which is bad. It applies a worse BER criterion than the 1e-5 intended.

SuggestedRemedy

Remove the Gaussian weighting and set the eye height and VEC limits (which need revision anyway) appropriately. ghiasi_3ck_01_0721 which was not given the presentation time it deserved says that the minimum eye height in particular needs to be reduced for TP1 and TP4 far end.

Response   *Response Status* **U**

REJECT.

The task force has previously considered substantively similar comments.
This comment is a restatement of comment Draft 2.2 #95, which was rejected on the basis of lack of consensus. A set of two straw polls demonstrated strong consensus to retain the measurement method in D2.2, which is unchanged in D2.3.
The responses may be found in the following comment resolution reports:
https://www.ieee802.org/3/ck/comments/draft2p2/8023ck_D2p2_final_closedcomments_sortedByNumber.pdf

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Cl **120G**   *SC* **120G.5.2**   *P* **252**   *L* **25**   # `20178`

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *RR CTLE*

As a lot of the channel for TP4 far-end is known exactly, one would expect that a known subset of gDC, gDC2 combinations would be the only candidates to try. As for TP1a, I believe the strongest gDC and gDC2 should add to a constant.

SuggestedRemedy

For Continuous time filter, DC gain for TP4 far-end (gDC), change to a set of limits that depend on gDC2 in the same style as for TP1a, with the strongest gDC and gDC2 adding to a constant. The allowed values should be a subset of those for TP1a.

Response   *Response Status* **U**

REJECT.

The comment does not provide sufficient justification to support any changes and the suggested remedy does not provide sufficient detail to implement.

Cl **120G**   *SC* **120G.5.2**   *P* **252**   *L* **16**   # `20183`

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *RR CTLE*

The limits for TP4 gDC, gDC2 should not be the same for short and long output modes.

SuggestedRemedy

Create separate limits for TP4 short and long output modes.

Response   *Response Status* **U**

REJECT.

The comment does not provide sufficient justification to support any changes and the suggested remedy does not provide sufficient detail to implement.

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

Comment ID **20183**   Page 4 of 9
2021-11-27 8:52:45 AM

Cl **162**　　　*SC* **162.11.7**　　　　　*P* **171**　　　*L* **31**　　　　# 20235

Dawe, Piers　　　　　　　　　　　Nvidia

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

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

SuggestedRemedy

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

Response　　　　　　　　*Response Status* **U**

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

Cl **162**　　　*SC* **162.11.7**　　　　　*P* **183**　　　*L* **39**　　　　# 21095

Dawe, Piers　　　　　　　　　　　Nvidia

Comment Type **TR**　　*Comment Status* **R**　　　　　　*COM bbgmax*

The normalized DFE coefficient minimum limit bbmin for taps 3 to 12 is -0.03. It doesn't make sense that taps 13 to 40 could be worse, -0.05. If I have understood the data correctly, the example channels we have don't need this. (Remember, these are reference receiver limits not hard cable or channel limits anyway; a cable or channel can go beyond a tap limit if it makes up the COM another way, e.g. with acceptable crosstalk.)

SuggestedRemedy

Change bgmax 0.05 to bbgmax 0.05, bbgmax -0.03. Also in 163.

Response　　　　　　　　*Response Status* **U**

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3ck D2.1 and D2.0 or the unsatisfied negative comments from the initial ballot.
Hence it is not within the scope of the recirculation ballot.

The following presentation showed that some backplane channels had floating tap coefficient values of <-0.03.
https://www.ieee802.org/3/ck/public/19_09/heck_3ck_01_0919.pdf
The comment does not provide an assessment of the impact to those channels.
[Editor's note: CC: 162, 163]

Cl **120G**　　　*SC* **120G.3.2**　　　　　*P* **253**　　　*L* **11**　　　　# 21097

Dawe, Piers　　　　　　　　　　　Nvidia

Comment Type **TR**　　*Comment Status* **R**　　　　　　*MO VEC/EH*

The driver swing has to be aggressively reduced from 600 mV pk-pk to deliver only 15 mV at near end, short mode. 120E has 70 mV, and D1.4 had 24 mV, ghiasi_3ck_adhoc_01a_042121 shows 35 mV (before Vpkpk was reduced). Yet a host can usefully optimise for e.g. different crosstalk or noise if given a reasonable signal strength. A NIC has no high-loss ports so it can do this even if a switch won't. There is room to increase this weak signal without overloading the receiver. Also, making the limits more like reality encourages more consistent module setup across the industry.

SuggestedRemedy

Increase the eye height, short mode near end, by 1.1 dB from 15 mV to 17 mV

Response　　　　　　　　*Response Status* **U**

REJECT.

This comment pertains to the module output eye height (min) for short mode, near end.

The comment does not provide sufficient evidence that the proposed change is necessary.

Cl **120G**　　　*SC* **120G.3.2**　　　　　*P* **253**　　　*L* **11**　　　　# 21098

Dawe, Piers　　　　　　　　　　　Nvidia

Comment Type **TR**　　*Comment Status* **R**　　　　　　*MO VEC/EH*

If the eye height limit is the same at long near end as at long far end, there is huge margin at near end and the implementer is encouraged to optimise for far end or beyond, only limited by the NE VEC spec, while we want modules to be set up consistently, for the full range from near to far. EH is naturally larger at NE for a well set up output.

SuggestedRemedy

Increase the eye height, long mode near end, by 3 dB from 15 mV to 21 mV

Response　　　　　　　　*Response Status* **U**

REJECT.

This comment pertains to the module output eye height (min) for long mode, near end.

The comment does not provide sufficient evidence that the proposed change is necessary.

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

Comment ID **21098**　　　Page 5 of 9
2021-11-27 8:52:45 AM

Cl **120G**   *SC* **120G.5.2**   *P* **265**   *L* 16   # 21103

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *RR gdc*

The limits for TP4 gDC, gDC2 should not be the same for short and long output modes.

SuggestedRemedy

Create separate limits for TP4 short and long output modes, so 4 sets for TP4+, in the style of TP1a.

Response   *Response Status* **U**

REJECT.

This comment is a restatement of D2.0 comment #179, which was rejected on the basis of insufficient justification and detail. It adds request to provide 4 sets of values in the style used for TP1a but does not provide specific values. No further justification is provided.

The comment does not provide sufficient justification for the proposed changes nor does the suggested remedy provide sufficient detail to implement.

Cl **120G**   *SC* **120G.5.2**   *P* **265**   *L* 25   # 21104

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *RR gdc*

As a lot of the channel for TP4 far-end is known exactly and the max loss to TP4 far end is less than to TP1a, the range of gDC, gDC2 combinations should be a subset of the TP1a ones. As for TP1a, I believe the strongest gDC and gDC2 should add to a constant.

SuggestedRemedy

For Continuous time filter, DC gain for TP4 far-end (gDC), change to a set of limits that depend on gDC2 in the same style as for TP1a, with the strongest gDC and gDC2 adding to a constant. The allowed values should be a subset of those for TP1a.

Response   *Response Status* **U**

REJECT.
This comment is a restatement of D2.0 comment #178, which was rejected on the basis of insufficient justification and detail. No further justification or implementation detail is provided.
The comment does not provide sufficient justification for the proposed changes nor does the suggested remedy provide sufficient detail to implement.

Cl **162**   *SC* **162.11.7**   *P* **191**   *L* 39   # 22090

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *COM DFE bgmax/min (CC)*

The normalized DFE coefficient minimum limit bbmin for taps 3 to 12 is -0.03. It doesn't make sense that taps 13 to 40 could be worse, -0.05. I know of only example channel with a tap like this. Remember, these are reference receiver limits not hard cable or channel limits anyway; a cable or channel can go beyond a tap limit if it makes up the COM another way, e.g. with acceptable crosstalk. In the case of Bch2_b2p5_7_t, reducing |bmaxg| from 0.05 to 0.03 increases COM by less than 0.1 dB, and the channel still passes comfortably. In this example, there were no taps that would be affected by reducing +ve bgmax from 0.05 to 0.03; one -ve tap was limited.

SuggestedRemedy

Change bgmax 0.05 to bbgmax 0.05, bbgmin -0.03. Also in 163.

Response   *Response Status* **U**

REJECT.
This is a restatement of comment #95 against D2.1 which was rejected by the task force due to insufficient supporting evidence. Some new information on the analysis of one channel is provided, but this is insufficient evidence to support the proposed changes.
[Editor's note: CC: 162, 163]

Cl **162**   *SC* **162.11.7**   *P* **191**   *L* 38   # 22091

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *COM DFE RSS (CC)*

The spec allows a cable to have its COM calculated with 9 taps in the range 13 to 24 clipped at +/-0.05 - which means that the channel's pulse response could be worse than +/-0.05 for all these 9 taps. That's a very bad cable! and not likely to get made: there won't be that many reflections in the same area. (Remember, these are reference receiver limits not hard cable limits anyway; a cable can go beyond a tap limit if it makes up the COM another way, e.g. with acceptable crosstalk.)
We don't need to provide all the receiver power and complexity to cope with unreasonably bad cables.

SuggestedRemedy

Use another DFE root-sum-of-squares limit for positions 13-24. A limit of 0.045 works well with Bch2_b2p5_7_t. Similarly in 163.

Response   *Response Status* **U**

REJECT.
This is a restatement of comment #96 against D2.1 which was rejected by the task force due to incomplete remedy and insufficient analysis. This new comment provides some new, but unsubtantiated information.
[Editor's note: CC: 162,163]

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

Comment ID **22091**   Page 6 of 9
2021-11-27 8:52:45 AM

Cl **120G**   *SC* **120G.3.2**   *P* **264**   *L* **11**   # 22093

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *MO EH*

If the eye height limit is the same at long near end as at long far end, there is huge margin at near end and the implementer is encouraged to optimise for far end or beyond, only limited by the NE VEC spec, while we want modules to be set up consistently, for the full range from near to far. EH is naturally larger at NE than FE for a well set up output and the spec should reflect that. Host designers know their own loss and medium-loss hosts can take advantage of a better signal that cost the module nothing.

SuggestedRemedy

Change the eye height, long near end, so that it is 3 dB above long far end, e.g. 15 mV (far) and 21 mV (near) if long far is not changed. 3 dB is about half the loss from long near end to long far end, so long far end remains the harder one to meet.

Response   *Response Status* **U**

REJECT.

This comment is a restatement of D2.1 comment #98, for which there was no consensus to make the proposed changes.

The intent of specifications is to enforce what is necessary not what is possible. However, as this comment states, a long-mode host might be able to take advantage of the extra eye height.

There is insufficient evidence to make the proposed changes.

Cl **120G**   *SC* **120G.5.2**   *P* **279**   *L* **43**   # 22095

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *EO mask*

The Gaussian weighting has the effect of destroying the histogram width, allowing bad fast eyes to pass, while giving the impression that the histogram width still applies. With a weighting standard deviation of 0.02 UI, the eye height is measured at around +/-0.03 UI rather than the +/-0.05 UI in the previous draft. Compare 120E with ESMW of 0.2 or 0.22 UI.

SuggestedRemedy

Remove the Gaussian weighting and set the eye height and VEC limits (which need revision anyway) appropriately.

Response   *Response Status* **U**

REJECT.

The current method of determining eye height and VEC using a weighted window was introduced in D2.2 based on approved D2.1 comment #39. A final straw poll indicated acceptance of the response with a ratio (yes:no) of 21:11.

Per straw poll #9 and #10 there is no consensus to change the measurement method.

--- the following added 2021/10/4 ---

Straw poll #9 (pick one)
Straw poll #10 (chicago)
 (direction)
I support the following method of determining eye height and VEC:
A: weighted window per Draft 2.2 (no change)
B: weighted window per Draft 2.2, except increase standard deviation
C: unweighted window per Draft 2.1 (perhaps with different width)
D: mask per D2.2 comment #101
#9: A: 17 B: 5 C: 6 D: 2
#10 A: 22 B: 12 C: 7 D: 3

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **22095**   Page 7 of 9
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2021-11-27 8:52:45 AM
SORT ORDER: Comment ID

Cl **120G**　　*SC* **120G.5.2**　　　　*P* **277**　　　*L* **38**　　　# 22098

Dawe, Piers　　　　　　　　　　　Nvidia

Comment Type **TR**　　*Comment Status* **A**　　　　　*EO RR gdc*

The limits for TP4 gDC, gDC2 should not be the same for short and long output modes. Obviously, different channels will need different CTLE settings. Obviously, CTLE settings that only signals outside what the spec is designed for use, should be excluded, to make implementers set up their product correctly.

SuggestedRemedy

Create separate limits for TP4 short and long output modes, so 4 sets for TP4+, in the style of TP1a. If you don't have any better numbers, create them anyway with the same numbers in each set - but see another comment.

Response　　　　　　　*Response Status* **U**

ACCEPT IN PRINCIPLE.

This comment is a restatement of D2.1 comment #103 and D2.0 comment #183, which were rejected on the basis of providing insufficient justification and detail.

This comment provides expanded justification.

Slides 7, 8, 11, 12 of the following presentation for a representation we reviewed by the task force.
https://www.ieee802.org/3/ck/public/21_09/kochuparambil_3ck_01b_0921.pdf

Slides 7, 8, and 11 of kochuparambil_01b provide a view the suggested remedy if implemented.

There was no consensus to provide separate gdc specifications for long and short modes.

However, some related editorial changes as follows are an improvement to the draft.

Update style of the TP4 gdc specifications in Table 120G-11 as shown in the referenced slide 12 of kochuparambil_01b. Include similar changes for g_dc2.

Implement with editorial license.

Cl **120G**　　*SC* **120G.5.2**　　　　*P* **277**　　　*L* **46**　　　# 22099

Dawe, Piers　　　　　　　　　　　Nvidia

Comment Type **TR**　　*Comment Status* **R**　　　　　*EO RR gdc*

As a lot of the channel for TP4 far-end is known exactly and the max loss to TP4 far end is less than to TP1a, the range of gDC, gDC2 combinations should be a subset of the TP1a ones.

SuggestedRemedy

For Continuous time filter, DC gain for TP4 far-end (gDC), change to sets of limits that depend on gDC2 in the same style as for TP1a. The allowed values should be subsets of those for TP1a. For TP4 long far end, use minimum gDC 1 dB higher than allowed for TP1a; for TP4 short far end, 3 dB higher than for TP1a.

Response　　　　　　　*Response Status* **U**

REJECT.

This comment is a restatement of D2.1 comment #104 and D2.0 comment #178, which were rejected on the basis of providing insufficient justification and detail.

This comment provides no new justification, but does provide more details for implementation.

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

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Cl **120G**   *SC* **120G.3.3.5.2**   *P* **270**   *L* **22**   # 22148

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **R**   *HI SI method*

The host stressed input signal is emulating a module so must obey the same rules. VEC and eye height must be in spec for both near end and far end. The signal should be adjusted to minimise VEC for both, or possibly to minimise VEC for far end while keeping in spec at near end. The eye height should match the target at far end and be graeter at near end.

SuggestedRemedy

This procedure needs road-testing before the draft can be said to be "without technical issues". In the meantime, add text to the draft to explain more fully what the procedure is.

Response   *Response Status* **U**

REJECT.

Item g) instructs that the eye height of the smallest eye match the target value in Table 120G-8. Table 120G-8 provides only one value to be used for both near-end and far-end measurements.
Item g) instructs that VEC is within the limits in Table 120G-8. Table 120G-8 provide only one range (with maximum and minimum) to be used for both near-end and far-end measurements.
The module output specifications for eye height and VEC are the same for near-end and far-end.

The comment does not provide sufficient evidence to support the proposed changes. The suggested remedy does not provide sufficient detail to implement.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **22148**   Page 9 of 9
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2021-11-27 8:52:45 AM
SORT ORDER: Comment ID