Cl **FM**   *SC* **FM**   *P* **1**   *L* **32**   # 165

Grow, Robert   RMG Consulting / KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

Don't forget to update copyright year when producing the next draft.

SuggestedRemedy

Update framemaker variable if used, and inspect front two pages and footer(s) to make sure copyright year is current.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **FM**   *SC* **FM**   *P* **3**   *L* **1**   # 166

Grow, Robert   RMG Consulting / KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

This line recurrs at line 10

SuggestedRemedy

Delete the first line (or text if you need a blank line for the anchor for the Editori's Note).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.158a.1**   *P* **31**   *L* **9**   # 1

Hayashi, Takehiro   HAT Lab.

Comment Type **E**   *Comment Status* **D**   *Text improvement*

It should be indicated that the values "0000", "0001" (line 9), "0010" (line 10), "0011" line 11), and "0100" (line 12) are binary.

SuggestedRemedy

add "the value of binary" before the numbers.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87a.1**   *P* **33**   *L* **35**   # 101

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

BASE-AU —> BASE-U (PCS). OAM is referred as BASE-U OAM.

SuggestedRemedy

Replace BASE-AU with BASE-U.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87c.2**   *P* **36**   *L* **4**   # 7

Hayashi, Takehiro   HAT Lab.

Comment Type **E**   *Comment Status* **D**   *Text improvement*

The description "(no loopback operation)" is inconsistent.

SuggestedRemedy

"(no loopback mode)"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Use "no loopback" as described in Table 45-313c.

Cl **45**   *SC* **45.2.3.87c.2**   *P* **36**   *L* **4**   # 102

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

BASE-AU —> BASE-U (PCS).

SuggestedRemedy

Replace BASE-AU with BASE-U.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87c.2**   *P* **36**   *L* **5**   # 8

Hayashi, Takehiro   HAT Lab.

Comment Type **E**   *Comment Status* **D**   *Text improvement*

The meaning "no test mode is selected in 3.2348.15:13" is not clear.

SuggestedRemedy

"a value of binary 000 in 3.2348.15:13" may be better.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **45**
SC **45.2.3.87c.2**

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Cl **45**   *SC* **45.2.3.87c.2**   *P* **36**   *L* **5**   # 47

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

"Loopback modes are specified in 166.10." is redundant with information provided at the beginning f the same paragraph.

SuggestedRemedy

Remove it

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87c.3**   *P* **36**   *L* **13**   # 9

Hayashi, Takehiro   HAT Lab.

Comment Type **E**   *Comment Status* **D**   *Text improvement*

No instruction what operation causes "PMA reset"

SuggestedRemedy

Add "see 166.3.4.1 for details".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Add "(see 166.3.4.1)".

Cl **45**   *SC* **45.2.3.87c.4**   *P* **36**   *L* **21**   # 10

Hayashi, Takehiro   HAT Lab.

Comment Type **E**   *Comment Status* **X**   *Text improvement*

No instruction what operation causes "PMA reset"

SuggestedRemedy

Add "see 166.3.4.1 for details".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Add "(see 166.3.4.1)".

Cl **45**   *SC* **45.2.3.87c.4**   *P* **36**   *L* **18,19**   # 103

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

BASE-AU —> BASE-U (PCS).

SuggestedRemedy

Replace BASE-AU with BASE-U.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87d.3**   *P* **37**   *L* **46**   # 104

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

BASE-AU —> BASE-U (PCS).

SuggestedRemedy

Replace BASE-AU with BASE-U.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87d.9**   *P* **38**   *L* **28**   # 48

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

Only refresh is transmitted.

SuggestedRemedy

Replace "transmitting refresh and quiet" with "transmitting refresh".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87d.10**   *P* **38**   *L* **34**   # 49

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

Only refresh is received.

SuggestedRemedy

Replace "refresh and quiet" with "refresh".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87d.13**   *P* **39**   *L* **3,4,5**   # 105

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

BASE-AU —> BASE-U (PCS).

SuggestedRemedy

Replace BASE-AU with BASE-U.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **45**
SC **45.2.3.87d.13**

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Cl **45**   *SC* **45.2.3.87d.14**   *P* **39**   *L* **12**   # 50

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

When read as one, bit 3.24.0 indicates …

SuggestedRemedy

Should be: When read as one, bit 3.2349.0 indicates

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.3.87d.14**   *P* **39**   *L* **12,13,1**   # 106

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

BASE-AU —> BASE-U (PCS).

SuggestedRemedy

Replace BASE-AU with BASE-U.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.5.3.7**   *P* **42**   *L* **47**   # 12

Hayashi, Takehiro   HAT Lab.

Comment Type   **E**   *Comment Status* **X**   *Text improvement*

The description "(no loopback operation)" is inconsistent.

SuggestedRemedy

"(no loopback mode)"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Use "no loopback" as described in Table 45-313c.

Cl **105**   *SC* **105.1.1**   *P* **47**   *L* **18**   # 170

Grow, Robert   RMG Consulting / KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

Recommend rewriting to eliminate the list of PHY types as we did for Clause 44.

SuggestedRemedy

25 Gigabit Ethernet uses the IEEE 802.3 MAC sublayer, connected through a 25 Gigabit Media Independent Interface (25GMII) to [start underscore] one of a number of 25 Gb/s Physical Layers. [remainder of existing paragraph become strike-through].

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.1.3**   *P* **49**   *L* **27**   # 41

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

Table 105-1, Table 125-1 and 131-1 do not use consistent wording. Unify three tables with same wording.

SuggestedRemedy

Replace with: 25 Gb/s PHY using 64B/65B and Reed-Solomon encoding with NRZ modulation over optical fiber for use in automotive applications (see Clause 166).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **116**   *SC* **116.12.1**   *P* **113**   *L* **17**   # 138

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

Reduce examples list. BASE-AU are targeted to automotive.

SuggestedRemedy

change to: "(e.g., automotive) "

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **116**
SC **116.12.1**

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Cl **116,1**   *SC* **116,1**   *P* **112**   *L* **45**   *#* 136

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

Figure 166–3shows

SuggestedRemedy

should be: "Figure 166–3 shows"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **125**   *SC* **125.2.3a**   *P* **57**   *L* **3**   *#* 43

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

Amend for consistency with 105.

SuggestedRemedy

The 2.5GBASE-AU and 5GBASE-AU use the PMD and its corresponding media specified
in Clause 166.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **131**   *SC* **131.1.3**   *P* **59**   *L* **32**   *#* 42

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

Table 105-1, Table 125-1 and 131-1 do not use consistent wording. Unify three tables with
same wording.

SuggestedRemedy

Replace with: 50 Gb/s PHY using 64B/65B and Reed-Solomon encoding with PAM4
modulation over optical fiber for use in automotive applications (see Clause 166).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **131**   *SC* **131.2.2**   *P* **59**   *L* **48**   *#* 44

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

50GBASE-AU use the PCS specified in Clause 166. Should be "uses" or different wording.

SuggestedRemedy

50GBASE-AU PCS is specified in Clause 166.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **131**   *SC* **131.2.3**   *P* **59**   *L* **53**   *#* 45

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

50GBASE-AU use the PMA specified in Clause 166. Should be "uses" or different wording.

SuggestedRemedy

50GBASE-AU PMA is specified in Clause 166.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.1.1**   *P* **62**   *L* **46**   *#* 52

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

… specifications subject to frequency scaling.

SuggestedRemedy

Should be: … specifications subject to frequency scaling and modulation scheme.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.1.4**   *P* **64**   *L* **33**   *#* 53

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

… connects the PMD transmitter …

SuggestedRemedy

Should be: … connects the local PMD transmitter …

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **166**
SC **166.1.4**

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Cl **166**   *SC* **166.1.4**   *P* **64**   *L* **38**   # 15

Hayashi, Takehiro   HAT Lab.

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

"Type" typo

SuggestedRemedy

"type"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.1.4**   *P* **64**   *L* **52**   # 56

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

The fixed-length Transmit Block …

SuggestedRemedy

Should be: A fixed-length Transmit Block … First time introduced.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.1.4**   *P* **65**   *L* **33**   # 57

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

… provides clock recovery …

SuggestedRemedy

Should be: "… provides clock and data recovery …" Data recovery may need equalization, etc. and it is the final end of the PMA RX.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.1.4**   *P* **65**   *L* **34**   # 58

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

The baud rates are nominal.

SuggestedRemedy

"… provides full duplex communications at nominal 2656.25 MBd for 2.5GBASE-AU, nominal 5312.5 MBd for 5GBASE-AU, nominal 10625 MBd for 10GBASE-AU, and nominal 26562.5 MBd for …"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.1.4**   *P* **65**   *L* **36**   # 59

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

50GBASE-AUover two .…

SuggestedRemedy

Should be: 50GBASE-AU over two …

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.1.4**   *P* **65**   *L* **36**   # 176

Torres, Luisma   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

Missing space between" 50GBASE-AU" and "over"

SuggestedRemedy

Add space

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **166**
SC **166.1.4**

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Cl **166**   *SC* **166.1.4**   *P* **66**   *L* **28**   # 60

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

Suggest to replace "Equalizer" with "Data recovery". Equalizer is not mandatory, it is up to the implementor. Though spec allows training of an equalizer, and equalizer may improve the RX sensitivity, there may be interoperable implementations that do not implement equalizer.

SuggestedRemedy

Replace "Equalizer" with "Data recovery"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.1**   *P* **67**   *L* **34**   # 61

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

codified

SuggestedRemedy

Most extended use is: encoded

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.1**   *P* **67**   *L* **36**   # 62

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

The Physical Header path

SuggestedRemedy

Change to: The Physical Header data path

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.1**   *P* **67**   *L* **38**   # 63

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

checksum, that is concatenated at the end of the PHD

SuggestedRemedy

checksum, which is concatenated at the end of the PHD

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.1**   *P* **67**   *L* **47**   # 64

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

See Figure 166–11 for details on PCS bit ordering. See Figure 166–11 for details on PCS Physical Header bit ordering.

SuggestedRemedy

Replace with: See Figure 166–11 for details on PCS transmit bit ordering. See Figure 166–10 for details on PCS Physical Header Data transmit bit ordering.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.1**   *P* **68**   *L* **4**   # 65

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

PCS bit ordering

SuggestedRemedy

Replace with: PCS transmit bit ordering

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **166**   Page 6 of 14
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **166.2.1**   03/01/2022 13:40:53
SORT ORDER: Clause, Subclause, page, line

Cl **166**   *SC* **166.2.1**   *P* **68**   *L* **6**   # 66

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

Paragraph of lines 6 through 8 is not complete in summarizing PCS RX function.

SuggestedRemedy

Replace with: The PCS receive function comprises binary descrambling, RS-FEC decoding of the received Transmit Block, 65B/64B decoding of payload portion to extract the xMII receive data stream, and TRC decoding and CRC16 checking of the PHD. The decoded PHD is also provided to the PMA sublayer for coordinated control of local and remote PHYs.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.1**   *P* **68**   *L* **16**   # 68

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

See 166.2.6 for information on how 65-bit blocks containing control 16 characters are mapped.64B/65B transmission process is ore than a mapping. I suggest replacing "mapped" with "generated"

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.2.1.1**   *P* **69**   *L* **18**   # 70

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

and is provided in log2 units (see 166.3.5.1).

SuggestedRemedy

Should be: and is provided in log2 units (see 166.3.5.2).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.2.1.1**   *P* **69**   *L* **19**   # 69

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

in response to link margin estimation as defined in 166.3.5.1

SuggestedRemedy

Should be: in response to link margin estimation as defined in 166.3.5.2

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.2.1.1**   *P* **69**   *L* **21**   # 71

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

Upon PHD reception,

SuggestedRemedy

Should be: Upon reception of valid PHD,

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.2.1.1**   *P* **70**   *L* **19**   # 72

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

Only one filed exists

SuggestedRemedy

Should be: The field PHD.TX.NEXT.MODE is used by the local PHY to provide the link partner transmission mode of the next Transmit Block, so that the remote PHY can align its reception.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Replace with "The field PHD.TX.NEXT.MODE is used by the local PHY to provide the transmission mode of the next Transmit Block to the remote PHY, so that the remote PHY can align its reception."

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

Cl **166**
SC **166.2.2.1.1**

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Cl **166**   *SC* **166.2.2.1.1**   *P* **70**   *L* **25**   # 73

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status*   **D**   *Text improvement*

Should be period instead of full stop. Next paragraph is about the same thing.

SuggestedRemedy

Per comment

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.2.1.4**   *P* **71**   *L* **50**   # 74

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status*   **D**   *Text improvement*

Then, the second 20-bit chunk is processed, repeated three times, and concatenated to the three 20-bit chunks resulting of the processing of the first 20-bit chunk.What is the meaning of "processed". In my opinion nothing and it may be confuse in understanding the

SuggestedRemedy

Should be: Then, the second 20-bit chunk is repeated three times and concatenated to the three times repeated 20-bit of the first chunk.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.2.4**   *P* **72**   *L* **45**   # 90

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status*   **D**   *Text improvement*

ten-bit —> 10-bit, for consistency.This happens in many places

SuggestedRemedy

Per comment, correct in all the occurrences. At least unify. My preference is 10-bit.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT IN PRINCIPLE. Replace all occurrences of "ten-bit" by "10-bit"

Cl **166**   *SC* **166.2.2.5**   *P* **74**   *L* **48**   # 91

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status*   **D**   *Text improvement*

Init value is given using hexadecimal digits, but not binary ones. Indicating "rightmost bit" might be confuse.

SuggestedRemedy

Change "the rightmost bit. " to "least significant bit"

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.4**   *P* **77**   *L* **24**   # 17

Hayashi, Takehiro   HAT Lab.

Comment Type   **E**   *Comment Status*   **D**   *Text improvement*

The titles of Figure 166-12 and 166-13 ahould be harmonized.

SuggestedRemedy

Use either of "65-bit block" or "64B/65B block" for both figures

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT IN PRINCIPLE. Replace "64B/65B block" by "65-bit block" in Figure 166-12 caption

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Cl **166**   *SC* **166.2.5.3**   *P* **79**   *L* **12**   # 132

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status*   **D**   *Text improvement*

"The format of the 65-bit blocks for 2.5GBASE-AU, 5GBASE-AU, 10GBASE-AU, and 25GBASE-AU PCS is as shown …"A more compact form, and taking into account it is about PCS spec:"The format of the 65-bit blocks for BASE-U PCS connected to XGMII/25GMII is as shown …"

SuggestedRemedy

Check full PCS spec and replace to use compact form and avoid the use of BASE-AU instead of BASE-U, in order to be consistent with other sections (PMA, EEE, …)

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

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

Cl **166**
SC **166.2.5.3**

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Cl **166**   *SC* **166.2.6.1.1**   *P* **83**   *L* **29**   # 163

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

"For 2.5GBASE-AU, 5GBASE-AU, 10GBASE-AU, and 25GBASE-AU PHYs, vector containing two successive XGMII or 25GMII transfers."A more compact form, and taking into account it is about PCS spec: "For a BASE-U PCS connected to XGMII/25GMII, vector containing two successive transfers."

SuggestedRemedy

Check full PCS spec and replace to use compact form and avoid the use of BASE-AU instead of BASE-U, in order to be consistent with other sections (PMA, EEE, …).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT. Same as #132.

Cl **166**   *SC* **166.2.6.1.1**   *P* **83**   *L* **34**   # 164

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

"For 50GBASE-AU PHY, vector containing a single 50GMII transfer." A more compact form, and taking into account it is about PCS spec:"For BASE-U PCS connected to 50GMII, vector containing a single transfer."

SuggestedRemedy

Check full PCS spec and replace to use compact form and avoid the use of BASE-AU instead of BASE-U, in order to be consistent with other sections (PMA, EEE, …)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.6.1.2**   *P* **83**   *L* **41**   # 111

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

The ENCODE function shall encode the block as specified in 166.2.5.4.

SuggestedRemedy

Change reference as: "The ENCODE function shall encode the block as specified in 166.2.5."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.7**   *P* **84**   *L* **37**   # 123

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

"including compliance with the associated state variables as specified in 166.2.8.1.1."Compliance should be with associated state functions and constants as well. However, compliance with variables, constants, counters and functions of a state diagram is implicit with being compliance with the state diagram itself.

SuggestedRemedy

Remove "including compliance with the associated state variables as specified in 166.2.8.1.1."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.7**   *P* **86**   *L* **5**   # 113

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

"When the xMII and PMA sublayer data rates are not synchronized, the receive process inserts idles, deletes 5 idles, or deletes sequence ordered sets to adapt between rates."This is confuse. PMA recovers data and clock, which are provided to PCS. The xMII is source synchronous, so the clock is defined by the PCS. If different clock domains are used for each sublayer is a matter of implementation, nothing to do with interoperability.Rate matching is performed in the PCS transmit function. See 166.2.5.

SuggestedRemedy

Remove paragraph.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.7**   *P* **86**   *L* **11**   # 114

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

Transmission Block

SuggestedRemedy

Change to "Transmit Block"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **166**
SC **166.2.7**

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Cl **166**   *SC* **166.2.7.1**   *P* **86**   *L* **19**   # 115

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

"using the same polynomial". To be accurate, it is the same linear-feedback shift register, not just polynomial.

SuggestedRemedy

Change to: "using the same LFSR with same initialization value"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.7.2**   *P* **86**   *L* **27**   # 116

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

"R_BLOCK_TYPE of the affected 65-bit blocks equal to /E/"/E/ is not valid value for R_BLOCK_TYPE, but E.

SuggestedRemedy

Change to: "R_BLOCK_TYPE of the affected 65-bit blocks equal to E.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.7.3**   *P* **86**   *L* **33**   # 117

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

Figure 166-17 does not specifies PHD sub-blocks concatenation to form a complete encoded PHD.

SuggestedRemedy

Change paragraph to read: "The PCS receiver ordering shall separate from each RS-FEC message the group of 80 65-bit blocks and 20-bit encoded PHD sub-block as specified in Figure 166–17. The 36 20-bit encoded PHD sub-blocks that are in the same Transmit Block shall be concatenated to compose an encoded PHD."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.7.5**   *P* **86**   *L* **49**   # 119

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

Not clear what is payload.

SuggestedRemedy

Change to: "The 65-bit block contains information from an invalid RS-FEC codeword"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.7.5**   *P* **86**   *L* **46,47**   # 118

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

References to Table 166-14 should be replaced to references to two tables, when control codes for XGMII/25GMII and 50GMII are separated.

SuggestedRemedy

Per comment. Check all the references to Table 166-14 in the text and change by two reference when control codes for XGMII/25GMII and 50GMII are separated.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.8.1.1**   *P* **89**   *L* **28**   # 124

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

The format for this vector is shown in Figure166–14.

SuggestedRemedy

Replace with: "The format for this vector is shown in Figure 166–14 for 2.5GBASE-AU, 5GBASE-AU, 10GBASE-AU, and 25GBASE-AU PHYs, and Figure 166-15 for 50GBASE-AU PHY."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **166**   Page 10 of 14
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **166.2.8.1.1**   03/01/2022 13:40:53
SORT ORDER: Clause, Subclause, page, line

Cl **166**   *SC* **166.2.8.1.2**   *P* **89**   *L* **46**   # 125

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

The DECODE function shall decode the rx_block based on code specified in 166.2.5.4.

SuggestedRemedy

Change reference as: "The DECODE function shall decode the rx_block based on code specified in 166.2.5."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.2.8.2**   *P* **93**   *L* **11**   # 126

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

LP_BLOCK_R is not defined

SuggestedRemedy

Change to: "LPBLOCK_R"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.3.2**   *P* **93**   *L* **50**   # 128

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

"The PMA receive function comprises Transmit Block synchronization, clock recovery for sampling received symbols and adaptive channel equalization."It can be understood that equalization is obligatory. Equalization is up to the implementer, consistent with pg 94, line 4.

SuggestedRemedy

Simplify this introductory paragraph to: "The PMA receive function comprises Transmit Block synchronization and the clock and data recovery from the signal received from the PMD receive function." Symbols are delimited by the clock recovery function in the PMA, which select the optimum sampling instants of time of the received signal. Therefore, I prefer to use the term "signal" instead of "symbol" for the information coming from PMD RX.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.3.3.2**   *P* **94**   *L* **32**   # 129

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

"where the received signal y(n) is sampled by the PMA receive function with the recovered clock"

SuggestedRemedy

Change to: "where the received signal y(n) is the result of sampling by the PMA receive function the signal produced by the PMD receive function"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Replace with "where the received signal y(n) is the result of sampling the signal produced by the PMD receive function"

Cl **166**   *SC* **166.3.4.1**   *P* **96**   *L* **9**   # 130

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

decoder operation (see 166.2.7).

SuggestedRemedy

should be: "decoder operation (see 166.2.8.2)."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.3.4.2**   *P* **96**   *L* **42**   # 131

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

specified in 166.2.5

SuggestedRemedy

should be: specified in 166.2.2

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **166**
SC **166.3.4.2**

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Cl **166**   *SC* **166.3.4.2**   *P* **97**   *L* **18**   # 142

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

(LOCPHD.TX.NEXT.MODE == 0)

SuggestedRemedy

should be: (LOCPHD.TX.NEXT.MODE = 0)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.3.4.3**   *P* **97**   *L* **42**   # 143

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

"When clock is stable (rcvr_clock_lock = OK), the PHY receiver shall train the equalizers to compensate the …"Equalizer is no mandatory, it is implementation dependent.

SuggestedRemedy

should be: When clock is stable (rcvr_clock_lock = OK), the PHY receiver shall train the equalizers (if implemented) to compensate the …

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.3.4.3**   *P* **99**   *L* **1**   # 145

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

"The 65-bit blocks decoding function is stopped until the bidirectional link is re-established (link_status = OK)."I think decoding function is not really stopped, because it is generating LBLOCK_R as xMII transfers. I think this sentence can generate confusion and is not providing additional info not already stated.

SuggestedRemedy

Remove it.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.3.5.2**   *P* **101**   *L* **43**   # 147

Pérez - Aranda, Rubén   KDPOF

Comment Type **T**   *Comment Status* **D**   *Text improvement*

$\log2(E[nd^2]) < T\_LM$. Comparison is not consistent with 166.3.5.4.

SuggestedRemedy

Change to: $\log2(E[nd^2]) <= T\_LM$

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.2**   *P* **104**   *L* **52**   # 149

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

LPI operation mode as specified in 166.5.

SuggestedRemedy

should be: LPI operation mode as specified in 166.4.2.3.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.2**   *P* **104**   *L* **52**   # 150

Pérez - Aranda, Rubén   KDPOF

Comment Type **E**   *Comment Status* **D**   *Text improvement*

codified 65-bit blocks

SuggestedRemedy

change to: 65-bit blocks generated by the PCS 64B/65B transmit state diagram (see 166.2.6.2).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **166**
SC **166.4.2**

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Cl **166**   *SC* **166.4.2**   *P* **105**   *L* **1**   # 151

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*
   codified 65-bit blocks

SuggestedRemedy
   change to: 65-bit blocks generated by the PCS 64B/65B transmit state diagram (see
   166.2.6.2).

Proposed Response   *Response Status* **W**
   PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.2**   *P* **105**   *L* **7**   # 39

Hayashi, Takehiro   HAT Lab.

Comment Type   **E**   *Comment Status* **D**   *Text improvement*
   not "Figure"

SuggestedRemedy
   delete "Figure"

Proposed Response   *Response Status* **W**
   PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.2.3**   *P* **106**   *L* **34**   # 154

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*
   Text "(fast wake signaling state)" is confuse. This state is not defined as part of any state
   diagram. It is not necessary for accurate specification.

SuggestedRemedy
   Remove parenthetical text from figure.

Proposed Response   *Response Status* **W**
   PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.3**   *P* **107**   *L* **52**   # 156

 Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*
   The PHY receive function shall

SuggestedRemedy
   should be: The PCS receive function. Same for page 108, lines 21,25, 28

Proposed Response   *Response Status* **W**
   PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.3**   *P* **108**   *L* **19**   # 157

 Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*
   (see Figure 166.2.7)

SuggestedRemedy
   should be: (see 166.2.7.4)

Proposed Response   *Response Status* **W**
   PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.3**   *P* **108**   *L* **22**   # 159

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*
   which is to detect the transmission of an LPI wake codeword as specified in 166.4.2.

SuggestedRemedy
   should be: which is to detect the reception of an LPI wake codeword as specified in
   166.4.2.2.

Proposed Response   *Response Status* **W**
   PROPOSED ACCEPT.

Cl **166**   *SC* **166.4.3**   *P* **108**   *L* **29**   # 160

 Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*
   (see 166.4.2).

SuggestedRemedy
   change to: (see 166.4.2.2).

Proposed Response   *Response Status* **W**
   PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **166**   Page 13 of 14
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **166.4.3**   03/01/2022 13:40:53
SORT ORDER: Clause, Subclause, page, line

Cl **166**   *SC* **166.5.1**   *P* **109**   *L* **16**   # 80

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

"and does not change value unless a PMA reset takes 16 place."Operating mode does not change unless PMA reset, and value of PHD.TX.NEXT.MODE is a consequence.

SuggestedRemedy

Remove word "value".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.6.1.2.3**   *P* **110**   *L* **28**   # 133

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

"Upon receipt of this primitive the PMA performs clock recovery for correct time sampling of received symbols and adaptive channel equalization (see 166.3.2)."Equalization is not mandatory. I suggest using more general wording. Specification for PMA receive function is referenced.

SuggestedRemedy

Change to: "Upon receipt of this primitive the PMA performs clock and data recovery (see 166.3.2)."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166**   *SC* **166.6.1.3.3**   *P* **111**   *L* **4**   # 134

Pérez - Aranda, Rubén   KDPOF

Comment Type   **T**   *Comment Status* **D**   *Text improvement*

In automotive applications, PMD signal detect function is used for implementation of wake-up / sleep functionality. For example, in ECUs integrating 1000BASE-RHC ports, reception of optical power over a threshold is used to wake up a full ECU from deep-sleep state where only few tens of micro-amperes are consumed from the battery.

SuggestedRemedy

Add at the end of line 4: "PMD_RXDETECT.indication(OK) may be used to wake up from deep sleep in a system that includes a BASE-AU PHY." Add at the end of line 7: "PMD_RXDETECT.indication(FAIL) may be used to transition a system that includes a BASE-AU PHY into deep sleep."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166,1**   *SC* **166,1**   *P* **62**   *L* **41**   # 51

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

… may use the BASE-U operations, …

SuggestedRemedy

Should be: … may use the optional BASE-U PCS-based operations, …

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **166,9**   *SC* **166,9**   *P* **112**   *L* **11**   # 135

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

BASE_U

SuggestedRemedy

should be: BASE-U

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **Keywor**   *SC* **Keywords**   *P* **2**   *L* **5**   # 40

Pérez - Aranda, Rubén   KDPOF

Comment Type   **E**   *Comment Status* **D**   *Text improvement*

Add Physical Medium Dependent, for consistency

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **Keywor**   Page 14 of 14
SC **Keywords**   03/01/2022 13:40:54