

P802.3bv PMD Ad-Hoc
F2F Meeting

May 19-20 2015
Yazaki Corporation

Agenda

1. Confirm participants
2. Confirm meeting minutes of April 24
3. Technical discussion
 - TP2, 3 and Link budget
 - Assert / De-assert functionality
 - EAF Template
4. Others

1. Confirmation participants

	Name	Company	E-mail	Participants
1	Naoshi Serizawa	Yazaki		X
2	Takayuki Tajima	Yazaki		X
3	Rubén Pérez de Aranda Alonso	KDPOF		X
4	Volker Goetzfried	Avago		X
5	Carlos Pardo	KDPOF		
6	Dylan Longhnan	Firecomms		X
7	Michael O'Gorman	Firecomms		
8	Bob Grow	P802.3bv chair		X
9	Yasuhiro Hyakutake	Adamant		X
10	Thomas Lichtenegger	Avago		
11	Takehiro Hayashi	Hat Lab		
12	Shigeru Kobayashi	TE		
13	Hayato Yuuki	Sumitomo		X
14	Yoshihiro Tsukamoto	Mitsubishi Rayon		X
15	Eugene Dai	Cox		
16	Satoshi Takahashi	POF Promotion		X
17	Keisuke Kawahara	Furukawa		X
18	Tsunetoshi Saito	Furukawa		
19	Manabu Kagami	Toyota Central R&D		
20	Philippe Bolle	SKYLANE optics		X

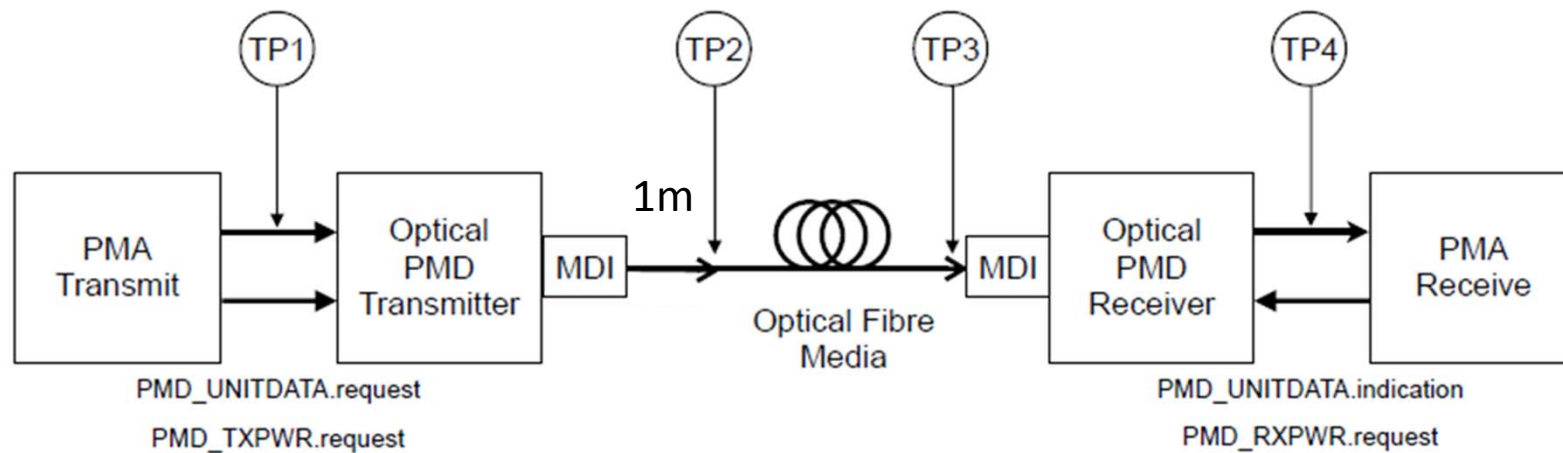
2. Confirm meeting minutes of April 24th

Approved by all attendees

3-1. Technical discussion – TP2, 3 and Link budget

Reference scheme of PMD spec points

Figure 115-1_ 1000BASE-RH block diagram



Needs to be described TP2/ TP3 terminal treatment conditions (polishing?)

- TP2 has to be measured after 1m of POF
- End face treatment conditions at TP2 & TP3: Informative
- TP2 & TP3 Values: Normative

3-1. Technical discussion – TP2, 3 and Link budget

TP2 Parameter	Units	Min	Max
LOP Type C, up to 85 deg. C	dBm	-7.5	1
LOP Type C, up to 105 deg. C	dBm	-9	1
LOP Type B	dBm	-7	1
LOP Type A	dBm	-6	1
LOPoff Type C	dBm	-	-35
Extinction ratio (ER)	dB	11	-
Launching condition EAF NA	Template	TBD	TBD
Center wavelength	nm	635	670->665
Spectral width	nm	-	20
Rise time	ns	-	3.0
Fall time	ns	-	3.0
Transmitter random jitter	ps RMS	-	20
2 nd order Harmonic Distortion (HD2)	dBc	-	-21
3 rd order Harmonic Distortion (HD3)	dBc	-	-29
Relative Intensity Noise (RIN)	dB/Hz	-	-137

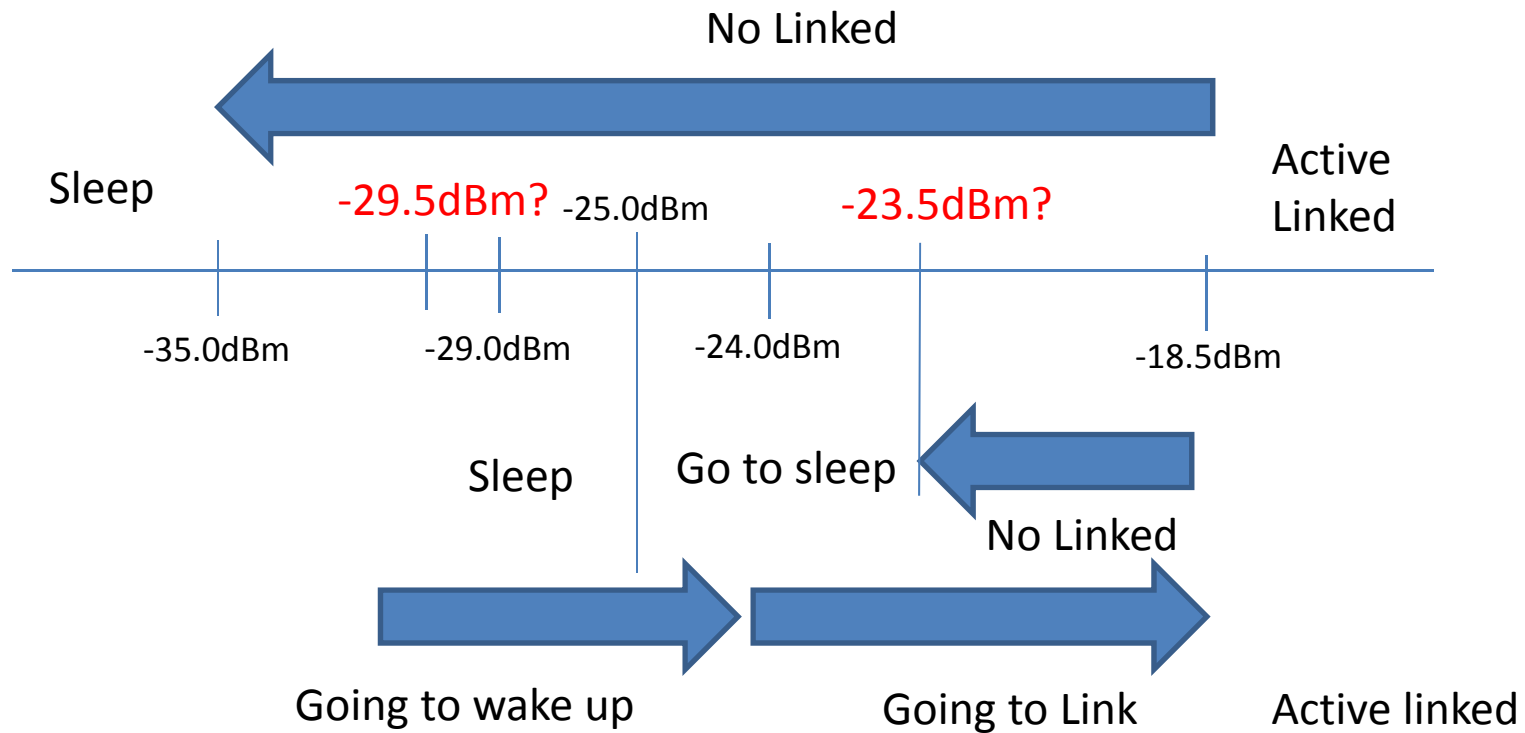
3-1. Technical discussion – TP2, 3 and Link budget

TP3 Parameter	Units	Min	Max
Average optical power, type C up to 85deg.C (15m POF)	dBm	-18.5	1
Average optical power, type C up to 105deg.C (15m POF)	dBm	-18.5	1
Average optical power, type C up to 85deg.C (40m POF)	dBm	-17	1
Average optical power, type C up to 105deg.C (40m POF)	dBm	-17	1
Average optical power, type B up to 85deg.C (50m POF)	dBm	-17	1
Average optical power, type A up to 85deg.C (50m POF)	dBm	-17	1
Pin Off	dBm	-	-35
Pin Wakeup	dBm	-29	-
Receiving condition EAF NA	Template	TBD	TBD

3-1. Technical discussion – TP2, 3 and Link budget

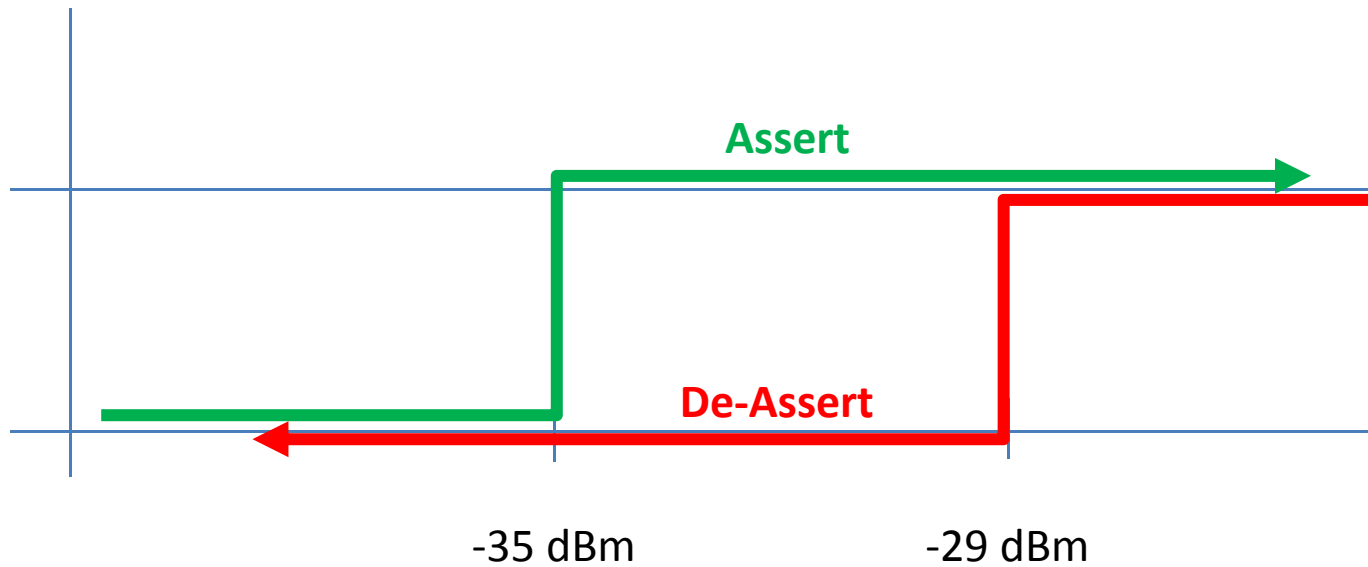
Link power budget	Type C up to 85 °C / 15m	Type C up to 105 °C/ 15m	Type C up to 85 °C / 40m	Type C up to 105 °C / 40m	Type B up to 85 °C / 50m	Type A up to 70 °C / 50m
Link length (m)	15	15	40	40	50	50
# inline connectors	4	4	0	0	0	1
TP2 (dBm)	-7.5	-9.0	-7.5	-9.0	-7.0	-6.0
Routing attmax (dB)	0.0	0.0	0.0	0.0	0.0	0.0
POF attmax (dB)	3.0	3.0	8.0	8.0	10.0	9.5
Ilmax inline connectors (dB)	6.0	6.0	0.0	0.0	0.0	1.5
TP3 (dBm)	-18.5	-18.5	-17.0	-17.0	-17.0	-17.0
Link margin (dB)	2.0	0.5	1.5	0.0	0.0	0.0
Link budget (dB)	11.0	9.5	9.5	8.0	10.0	11.0
Notes:	POF att = 0.2 dB/m Il _{conn} = 1.5dB	POF att = 0.2 dB/m Il _{conn} = 1.5dB	POF att = 0.2 dB/m Il _{conn} = 1.5dB	POF att = 0.2 dB/m Il _{conn} = 1.5dB	POF att = 0.2 dB/m Il _{conn} = 1.5dB	POF att = 0.19 dB/m Il _{conn} = 1.5dB

3-2. Technical discussion – Assert / De-assert function



See the next slide

3-2. Technical discussion – Assert / De-assert function



Assert function: Mandatory to “Sleep” -> “Wake up” at the threshold level at -35dBm

De-Assert function: Mandatory to “Wake up” -> “Sleep” at the threshold level at -29dBm

4. Others

Round Robbin activity

Sample

Fiber-Doc sample x 3

Yazaki connector x 3

Temperature: -40, 25, 70, 85 and 105 deg C

TP2: POF 1m

TP3: POF 15, 40 and 50 m by BH-4001(up to 105 degC) and GH-4001 (up to 85 deg C)

Measured by: POF-P, Adamant, Avago, Firecomms, Mitsubishi Rayon, SKYLANE optics
and Yazaki

<Next step>

Inline connector consideration

Bandwidth measurement --- KDPOF

Schedule & Methodology

Takahashi-san to create and provide it to the team

Sample & Test board

KDPOF to provide, w/o PHY

5. Wrap up

Thank you