

200GbE & 400GbE 2km & 10km Specifications Update Proposals

IEEE P802.3bs 200GbE & 400GbE Task Force
SMF Ad Hoc Conference Call

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200GbE TX Specifications May'16 Adopted

Description (PAM4)	200GBASE-FR4	200GBASE-LR4	Unit
Reach	2	10	km
Signaling Rate, each lane	26.5625	26.5625	GBd
Operating BER	2.4E-04	2.4E-04	
Total average launch power (max)	11.2	11.7	dBm
OMA _{outer} , each lane (max)	5.0	5.5	dBm
OMA _{outer} , each lane (min)	-0.7	0.1	dBm
Diff. in launch power between any two lanes (OMA _{outer}) (max)	4.4	4.4	dB
Launch Power in OMA _{outer} minus TDP, each lane (min)	-1.7	-0.9	dBm
Transmitter and dispersion penalty, (TDP) each lane (max)	2.4	2.5	dB
Extinction ratio (ER) (min)	4.5	4.5	dB
RIN OMA (max)	-136	-136	dB/Hz

200GbE TX Specifications Proposed

Description (PAM4)	200GBASE-FR4	200GBASE-LR4	Unit
Reach	2	10	km
Signaling Rate, each lane	26.5625	26.5625	GBd
Operating BER	2.4E-04	2.4E-04	
Total average launch power (max)	10.7	11.3	dBm
OMA _{outer} , each lane (max)	4.5	5.1	dBm
OMA _{outer} , each lane (min)	-0.7	0.1	dBm
Diff. in launch power between any two lanes (OMA _{outer}) (max)	4.0	4.0	dB
Launch Power in OMA _{outer} minus TDP, each lane (min)	-1.7	-0.9	dBm
Transmitter and dispersion penalty, (TDP) each lane (max)	2.4	2.5	dB
Extinction ratio (ER) (min)	4.5	4.5	dB
RIN OMA (max)	-136	-136	dB/Hz

400GbE TX Specifications 802d3bs_D1p4

Description (PAM4)	400GBASE-FR4	400GBASE-LR4	Unit
Reach	2	10	km
Signaling Rate, each lane	26.5625		GBd
Operating BER	2.4E-04		
Total average launch power (max)	13.2		dBm
OMA _{outer} , each lane (max)	5.5	5.7	dBm
OMA _{outer} , each lane (min)	0	0.7	dBm
Diff. in launch power between any two lanes (OMA _{outer}) (max)	4.4	4.4	dB
Launch Power in OMA _{outer} minus TDP, each lane (min)	-1	-0.3	dBm
Transmitter and dispersion penalty, (TDP) each lane (max)	2.2	2.4	dB
Extinction ratio (ER) (min)	4.5		dB
RIN OMA (max)	-136	-136	dB/Hz

400GbE TX Specifications Proposed

Description (PAM4)	400GBASE-FR4	400GBASE-LR4	Unit
Reach	2	10	km
Signaling Rate, each lane	26.5625		GBd
Operating BER	2.4E-04		
Total average launch power (max)	13.2		dBm
OMA _{outer} , each lane (max)	5.5	5.7	dBm
OMA _{outer} , each lane (min)	0	0.7	dBm
Diff. in launch power between any two lanes (OMA _{outer}) (max)	4.0	4.0	dB
Launch Power in OMA _{outer} minus TDP, each lane (min)	-1	-0.3	dBm
Transmitter and dispersion penalty, (TDP) each lane (max)	2.2	2.4	dB
Extinction ratio (ER) (min)	4.5		dB
RIN OMA (max)	-136	-136	dB/Hz

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Thank you