

# 10/1GBASE-PXR-U3 power budget proposal

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Parameter name	Value	Unit	Description	Value min	Value max
<b>Transmitter parameters</b>					
ITU_ERnom	6,00	dB	Extinction Ratio used to convert average power values to OMA values	0,00	10,00
ITU_Tx_Ave_Min	1,00	dBm	Average output power in ITU format (min)	-99,00	99,00
ITU_Tx_Ave_Max	4,00	dBm	Average output power in ITU format (max)	-99,00	99,00
IEEE_Tx_OMA_Min	1,78	dBm	Average output power in IEEE OMA format [dBm] (min)		
IEEE_Tx_OMA_Min	1,41	mW	Average output power in IEEE OMA format [mW] (min)		
IEEE_Tx_OMA_Max	4,78	dBm	Average output power in IEEE OMA format [dBm] (max)		
IEEE_Tx_OMA_Max	2,51	mW	Average output power in IEEE OMA format [mW] (max)		
Tx_Wavelength_Min	1260,00	nm	Transmitter wavelength (min)	1200,00	1600,00
Tx_Wavelength_Max	1360,00	nm	Transmitter wavelength (max)	1200,00	1600,00
Tx_Wavelength_Uc	1310,00	nm	Transmitter wavelength (central wavelength)	1260,00	1360,00
Tx_Chirp_Parameter_Max	-2,00	-	Chirp parameter for transmitter signal (max) [C] (Normal DML's are negative)		
Tx_Data_Rate	1250,00	Mbd	Effective data rate in Mbaud	1000	11500
<b>Link parameters</b>					
Fibre_Attenuation_Curve	lambda^-4	-	Fibre attenuation curve type (lambda^-4,G652AB,G652CD models)		
Fibre_Attenuation_Curve_Type	min	-	Maximum / minimum value curve (not available for lambda^-4 model)		
Fibre_Attenuation_Base_Value	0,35	dB/km	Base fibre attenuation (for lambda^-4 model)	0	1
Fibre_Attenuation_Base_Wavelength	1310,00	nm	Base wavelength for fibre attenuation estimation		
Fibre_Attenuation_Value	0,35	dB/km	Fibre attenuation at base wavelength		
Channel_Length_Max	20	km	Maximum distance between an ONU and the OLT	0,5	20
Fibre_Loss	7,00	dB	Fibre (no connectors) CHIL @ Tx_Uc		
PSC_Split_count	32,00	-	Number of splitter ports (powers of 2 only)	2	64
PSC_Loss_Curve	max	-	Type of PSC loss curve (minimum, average and maximum types)		
PSC_Loss	18,40	dB	PSC induced CHIL		
SRS_Loss	1,00	dB	SRS induced nonlinear penalty (from other services)		10
Excess_Loss	2,60	dB	Connectors, splices and any other excess loss		
ITU_Optical_Path_Penalty	1,00	dB	Optical path penalty in accordance with ITU definition	0	5
Channel_Loss_Min	15,00	dB	Channel Insertion Loss (CHIL) (min) - user input	0	29,00
Channel_Loss_Max	29,00	dB	Channel Insertion Loss (CHIL) (max)		29
Dispersion_Uo_Min	1300,00	nm			
Dispersion_Uo_Max	1324,00	nm			
Dispersion_So	0,09	ps/nm^2.km			
Dispersion_D_Max	5,22	ps/(nm.km)			
Dispersion_D_Min	-6,42	ps/(nm.km)			
Dispersion_Penalty	0,01	dB	Dispersion penalty calculated following 3av_0705_saeki_1.pdf		
TDP	1,00	dB	Transmitter Dispersion Penalty	0	10
<b>Receiver parameters</b>					
ITU_Rx_Sensitivity_Ave	-29,00	dBm	Average power receiver sensitivity @ BER 1e-3		
ITU_Rx_Sensitivity_Ave_OMA	-28,22	dBm	OMA receiver sensitivity (dBm) @ BER 1e-3		
ITU_Rx_Sensitivity_Ave_OMA	4,39	uW	OMA receiver sensitivity (uW) @ BER 1e-3		
IEEE_Rx_Stressed_Sensitivity_Ave	-28,00	dBm	Average stressed receiver sensitivity in IEEE formalism @ BER 1e-3		
IEEE_Rx_Stressed_Sensitivity_OMA	-27,22	dBm	OMA stressed receiver sensitivity in IEEE formalism (dBm) @ BER 1e-3		
IEEE_Rx_Stressed_Sensitivity_OMA	5,32	uW	OMA stressed receiver sensitivity in IEEE formalism (uW) @ BER 1e-3		
IEEE_Rx_Sen_OMA	-28,22	dBm	OMA ideal receiver sensitivity in IEEE formalism (dBm)		
IEEE_Rx_Sen_OMA	4,39	uW	OMA ideal receiver sensitivity in IEEE formalism (uW)		
Rx_Overload	-11,00	dBm	This is what the overload needs to be...		
<b>Check Conditions</b>					
Dispersion_Penalty <= ITU_Optical_Path_Penalty			PASSED		