

Features

- Compatible with X2 MSA Rev. 2.0b
- Compliant to IEEE 802.3ae 10GBASE-ER at 10.3125 Gbit/s
- Transmission distance up to 40km over single mode fiber
- Low Power Consumption 2.8 W (typ.)
- Temperature Range 0°C to + 70°C
- Laser Class 1 compliant
- External Modulated Laser (EML)
- SC duplex connector
- Hot pluggable 70-pin connector with XAUI electrical interface
- Management and control via MDIO 2-wire interface
- Compliant with the EU RoHS 6 environmental requirements



Applications

- SONET/SDH Equipment Interconnect
- 10GBASE-ER 10G Ethernet
- 1200-SM-LL-L 10G Fibre Channel
- 10GE over G.709 at 11.09Gbps
- OC192 over FEC at 10.709Gbps

Product Description

The SNR-X2-ER is a highly integrated, serial optical transponder module designed for high-speed, 10Gbit/s data transmission applications. The module is fully compliant to the IEEE 802.3ae standard for 10GBASE-ER making it ideally suited for 10GbE datacom applications. The transponder operates within a wide temperature range of 0°C to +70°C and offers optimum heat dissipation and excellent electromagnetic shielding which enables high port densities for 10GbE systems. A 70 pin electrical connector and a duplex SC connector optical interface assure that connectivity is compliant to the X2 and XENPAK MSA.

Absolute Maximum Ratings

Rating	Conditions/Remark	Symbol	Min.	Max.	Unit
Storage Ambient Temperature	non condensing	Jstg	-40	+85	°C
Powered Case Temperature	non condensing	Jc	0	+75	°C
Adaptable Power Supply (APS)	Voltage @ Pin APS Sense	VAPSense	-0.3	1.5	V
Supply Voltage 3.3V Rail		VCC3	-0.3	4.0	V
Supply Voltage 5V Rail		VCC5	0.5	6.0	V
Input Voltage Low Speed Signals	RESET, TxOn/Off, PRTADR4..0 MDIO, MDC,	VI	-0.5	3.6	V
LASI Voltage		VQ	-0.5	1.5	V
Differential XAUI Input Amplitude	AC coupled (UDC 6,3V)	VIDXAUI		2500	mV
Optical Receiver Input Power	Maximum receive power for damage	PRx		+4.0	dBm
Static Discharge Voltage	MIL STD 883 Method 3015.1			500	V

Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Temperature	Top	0		70	°C
Supply Voltage @ 3.3V	Vcc3	3.13		3.465	V
Supply Voltage @ 5V	Vcc5	4.75		5.25	V
Module Total Power	P			2.8	W

Optical Characteristics

(TOP = -5 to 70C, VCC5 = 3.15 to 3.45 Volts)

Parameter	Symbol	Min.	Typical	Max.	Unit
Transmitter					
Optical output Power	P	-4	-2	0	dBm
Optical Wavelength	λ	1530	1550	1565	nm
Optical Extinction Ratio	ER	8.2	9		dB
Sidemode Supression ratio	SSR	30			dB
Average Launch power of OFF transmitter	POFF	-30			dBm
Tx Jitter	Txj	Compliant with each standard requirements			
Receiver					
Receiver Sensitivity (OMA) @ 10.7Gb/s	RSSENS			-14.1	dBm
Relative Tolerance	Rrx	-100		100	ppm
LOS De-Assert	LOSD			-11.3	dBm
LOS Hysteresis		1			dB

GUARANTEE:



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