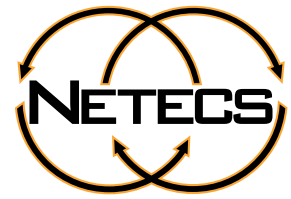


X2-10GB-LR-NT
X2-10GB-LR-NT 10GB Module
1310nm, 10km, SMF, SC RoHS6



X2-10GB-LR-NT

10GBASE X2 Transceiver

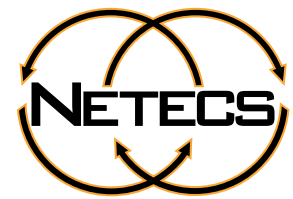
Features

- Hot pluggable X2 MSA form factor
- RoHS-6 compliant (lead-free)
- Temperature range 0°C to 70°C
- Transmission distance of 10km
- Uncooled 1310nm DFB laser
- SC connector, Single Mode fiber
- Full duplex transmission mode
- Digital Optics Monitoring (DOM)

General Description

10Gb/s X2 transceiver module X2-10GB-LR-NT is a hot pluggable module that is usable in typical switch or router line card applications that are compliant to X2 MSA standards. The X2-10GB-LR-NT is a fully integrated 10.3Gbit/s optical transceiver module that consists of a 10.3Gbit/x optical transmitter and receiver, XAUI interface, Mux and Demux with clock and data recovery (CDR). The X2-10GB-LR-NT transceiver uses an uncooled 1310nm DBF Laser Diode to achieve 10km over standard single mode fiber as per the IEEE 802.3ae specifications.

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Absolute Maximum Ratings

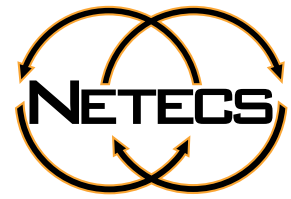
Parameter	Symbol	Min	Max	Unit
Storage Ambient Temperature	<i>TS</i>	-40	+85	°C
Operating Case Temperature	<i>TC</i>	0	+70	°C
Supply Voltage +3.3 V	<i>V3</i>	-.05	4	V
Supply Voltage APS	<i>Vaps</i>	0	1.5	V
Static Discharge Voltage, All Pins	<i>STd</i>		500	V
Average Receive Optical Power	<i>RxP</i> max		1.5	dBm

Exceeding any one of these values may permanently destroy the device.

Recommended Operating Conditions

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Operating Case Temperature	<i>TC</i>	0		+70	°C
Transponder Total Power Consumption	<i>P</i>			4.0	W
Supply Voltage +3.3 V	<i>VCC3</i>	3.14	3.3	3.47	V
Supply Current +3.3 V	<i>ICC3</i>			1000	mA

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Optical Characteristics

Parameter		Conditions	Symbol	Min	Typ	Max	Units
Transmitter							
Nominal Wavelength			λX	1270	1310	1355	nm
Spectral Width (RMS)						1	nm
Operating Range	9 μ m core diameter SMF			3		10	km
Nominal Signaling Speed			fOPT	9.95		10.31	GBd
Average Output Power			Pout	-6	-2.6	.5	dBm
Extinction Ratio			ER	3.5			dB
Receiver							
Center Wavelength			λX	1260		1600	nm
Receiver Sensitivity			Se	0.5		-14	dBm
LOS De-Assert			LOSd			-22	dBm
LOS Assert			LOSa	-35			dBm

DOM Parameters

Parameter	Values			Unit
	Min.	typ.	Max	
Laser Bias Current Monitor Accuracy	-10		10	%
Transmit Power Monitor Accuracy	-2		2	dB
Receive Power Monitor Accuracy	-2		2	dB