

Product Specification

XENPAK 10G ZR 80km SC Optical Transceiver



Features

- XAUI Electrical Interface: 4 Lanes @ 3.125Gbit/s
- Hot Z-Pluggable
- SC-Duplex Optical Receptacle
- MDIO, DOM Support
- APD Receiver
- Operating Case Temperature: 0°C to 70°C
- Compliant to IEEE 802.3ae 10GBASE-ZR Application
- Compliant to Xenpak MSA

Reference

- IEEE 802.3ae as 10GBASE-ZR, Xenpak MSA Release 3.0.

Product Description

A-GEAR's 10GbE XENPAK transceiver module XENPAK 10G ZR 80km SC is a hot pluggable in the Z-direction module that is usable in typical router line card applications, Storage, IP network and LAN and compliant to XENPAK MSA. The XENPAK 10G ZR 80km SC is a fully integrated 10.3Gbit/s optical transceiver module that consists of a 10.3Gbit/s optical transmitter and receiver, XAUI interface, Mux and Demux with clock and data recovery(CDR). This version of A-GEAR Inc. transceiver line uses an cooled EML Laser Diode to achieve 80km over standard single mode fiber as 1550nm 10GBASE-ZR of the IEEE 802.3ae.

Absolute Maximum Ratings

Stresses in excess of the Absolute Maximum Ratings can cause permanent damage to the transceiver.

Parameter	Symbol	Min.	Max.	Unit	Remarks
Supply Voltage	VCC1	0	+5.5	V	+5V
Supply Voltage	VCC2	0	+3.6	V	+3.3V
Supply Voltage	VCC3	0	+1.5	V	APS
Optical Receiver Input	PIMAX	-	+1.5	dBm	Average
Case Temperature	Tc	0	+70	°C	
Storage Temperature	TSTR	-40	+85	°C	

Operating Environment

Electrical and optical characteristics below are defined under this operating environment, unless otherwise specified.

Parameter	Symbol	Min.	Typ	Max	Unit	Remarks
Supply Voltage	VCC1	4.75	5	5.25	V	+5V
Supply Voltage	VCC2	3.135	3.3	3.465	V	+3.3V
Supply Voltage	VCC3	1.152	1.2	1.248	V	APS
Case Temperature	TC	0	25	70	°C	

Optical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Units
Center Wavelength (EOL)	λ_c	$\lambda_c - 25$	λ_c	$\lambda_c + 25$	nm ^[1]
Center Wavelength (EOL)	λ_c	$\lambda_c - 100$	λ_c	$\lambda_c + 100$	pm ^[2]
Signaling speed		-	10.3125	-	Gbit/s
Signaling speed variation from nominal		-100	-	+100	ppm
Optical modulation amplitude	OMA	0	-	-	dBm
Optical Output Power	Pf	0	-	+5	dBm ^[3]
Optical Waveform	-	-	-	-	
Side Mode Suppression Ratio	Sr	30	-	-	dB ^[3]
Extinction Ratio	Er	9	-	-	dB
Off Transmit Power	Poff	-	-	-30	dBm ^[3]
Receiver Sensitivity in OMA	OMArmin	-	-	-24	dBm
Receiver Overload	Rro	+0.5	-	-	dBm ^[3]

Parameter	Symbol	Min.	Typical	Max.	Units
Receiver Return Loss	RL	12	-	-	dB ^[3]

Notes:

- [1] +3.3 V
- [2] APS
- [3] Average

Power Supply Characteristics

Parameter	Symbol	Min.	Typical	Max.	Units
Supply Voltage	VCC1	4.75	5.00	5.25	V
Supply Voltage	VCC2	3.135	3.300	3.465	V
Supply Voltage	VCC3	1.15	1.20	1.25	V
Supply Current	ICC1	-	-	1.4	A ^[1]
Supply Current	ICC2	-	-	1.7	A ^[2]
Power Consumption	PDS	-	-	4.0	W

Notes:

- [1] +3.3 V
- [2] APS

Mechanical dimensions

