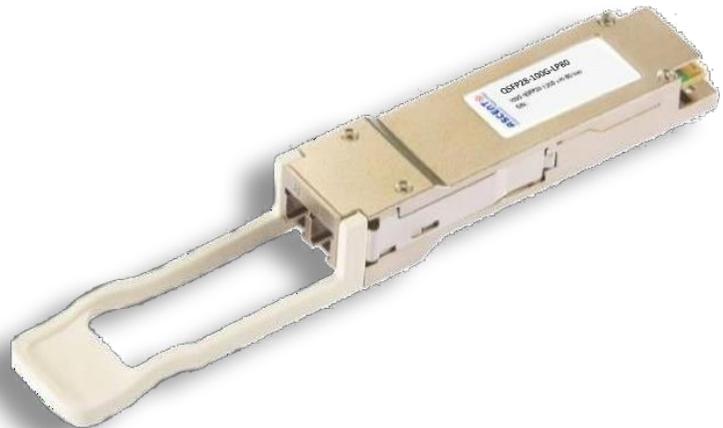


QSFP28 ZR4 100 Gb/s 80 km Transceiver

QSFP28 Series



Ascent's QSFP28-100G-LP80 is designed for 80km optical communication applications. This module contains 4-lane optical transmitter, 4-lane optical receiver and module management block including 2 wire serial interface. The optical signals are multiplexed to a single-mode fiber through an industry standard LC connector.

Ascent's QSFP28-100G-LP80 is MSA compatible 100GBASE- ZR4 QSFP28 (Quad Small Form-Factor Pluggable 28) transceiver, operating over a pair of single- mode optical fibers with four independent optical communication lanes separated from each other using LAN WDM technology. It is widely deployed by Internet Service Provider (ISP) Fiber to the Home Aggregation and Backbone, Mobile Operator Core Networks and Mobile Backhaul and Data Center networking site interconnections.

The module supports DDM/DOM optical diagnostics, which provide diagnostic information about the present operating conditions. Additionally, the module supports a KR4 FEC (Forward Error Correction) function which will help the receiving side detect and correct bit errors and improve the overall quality of the link, compliant with IEEE802.3ba standard.

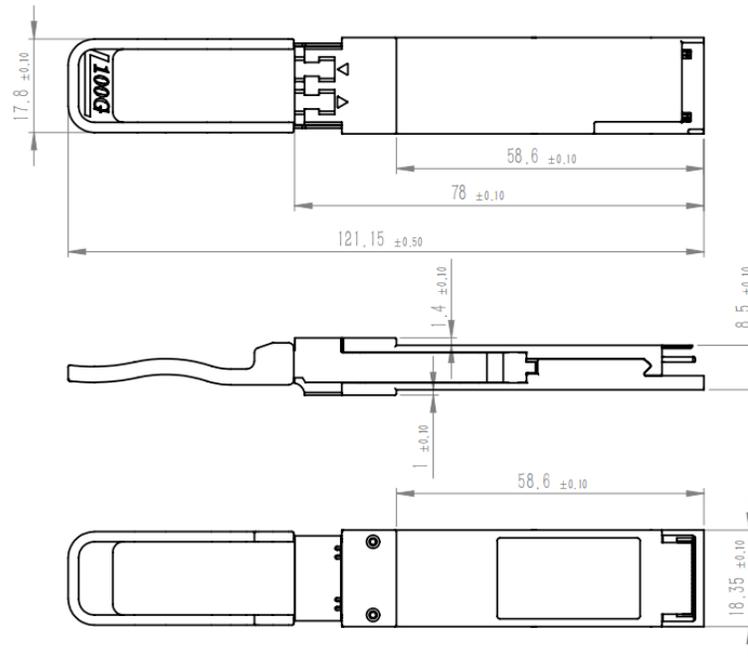
Key Features

- Support 100GE line rate (103.125 Gb/s)
- Up to 80 km transmission with KR4-FEC
- LAN-WDM EML laser with PIN receiver and SOA
- High-speed CAUI-4 electrical interface
- QSFP28 MSA package with duplex LC connector, hot-swappable
- Integrated Digital Diagnostic Monitoring (I²C)
- Low power consumption (<5.5W commercial / <6.5W industrial)
- Wide operating temperature: 0°C~70°C / -40°C~85°C

Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Operating Case Temperature	Top	0		+70	°C	
		-40		+85	°C	
Power Supply Voltage	V _{CC}	3.13	3.3	3.47	V	
Power Supply Current	I _{CC}			1.67	A	
				1.97	A	
Maximum Power Consumption	P _D			5.5	W	
				6.5	W	
Aggregate Bit Rate	BR _{Ave}		103.125		Gb/s	
Lane Bit Rate	BR _{Lane}		25.78125		Gb/s	
Signaling Speed per Lane			25.78125		Gbps	
Lane Wavelength	L0	1294.53	1295.56	1296.59	nm	
	L1	1299.02	1300.05	1301.09	nm	
	L2	1303.54	1304.58	1305.63	nm	
	L3	1308.09	1309.14	1310.19	nm	
Total Launch Power, 100GE	P _T	7		12.5	dBm	
Average Launch Power per Lane,	P _{avg}	1		6.5	dBm	
OMA, each Lane	P _{OMA}	2		6.5	dBm	
Average Output Power (Laser Turn off)	P _{off}			-30	dBm	
Center Wavelength Lane 0	λ ₀	1294.53	1295.56	1294.53	nm	
Center Wavelength Lane 1	λ ₁	1299.02	1300.05	1299.02	nm	
Center Wavelength Lane 2	λ ₂	1303.54	1304.58	1305.63	nm	
Center Wavelength Lane 3	λ ₃	1308.09	1309.14	1310.19	nm	
Damage Threshold , each Lane	P _{damage}	5.5			dBm	
Average Receive Power, each Lane		-28		-6	dBm	
Differential Voltage Pk-Pk	V _{pp}			900	mV	
Differential Output Voltage Swing	V _{out, pp}			900	mV	

Outline Diagram



Ordering Information

Product Name	Product Description
QSFP28-100G-LP80	QSFP28 Plug-in, compatible with QSFP-100G-ZR4 (with FEC), 80 km Optical Transceiver, Duplex LC, DOM
QSFP28-100G-L80A	QSFP28 Plug-in, compatible with QSFP-100G-ZR4 (with FEC), 80 km Optical Transceiver, Duplex LC, DOM, -40 to 85°C
JQ28-100G-LP80	QSFP28 Plug-in, compatible with QSFP-100G-ZR4 (with FEC), 80 km Optical Transceiver, Duplex LC, DOM, Compatible with Juniper
JQ28-100G-LP80A	QSFP28 Plug-in, compatible with QSFP-100G-ZR4 (with FEC), 80 km Optical Transceiver, Duplex LC, DOM, -40 to 85°C, Compatible with Juniper



Ascent Communication Technology Ltd

AUSTRALIA

140 William Street, Melbourne
Victoria 3000, AUSTRALIA
Phone: +61-3-8691 2902

Hong Kong SAR

Room 1210, 12th Floor, Wing Tuck Commercial Centre
181 Wing Lok Street, Sheung Wan , Hong Kong SAR
Phone: +852-2851 4722

CHINA

Unit 1933, 600 Luban Road
200023, Shanghai, CHINA
Phone: +86-21-60232616

USA

2710 Thomes Ave
Cheyenne, WY 82001, USA
Phone: +1 203 350 9822

EUROPE

Pfarrer-Bensheimer-Strasse 7a
55129 Mainz, GERMANY
Phone: +49 (0) 6136 926 3246

VIETNAM

11th Floor, Hoa Binh Office Tower
106 Hoang Quoc Viet Street, Nghia Do Ward
Cau Giay District, Hanoi 10649, VIETNAM
Phone: +84-24-37955917

WEB: www.ascentcomtec.com

EMAIL: sales@ascentcomtec.com

Specifications and product availability are subject to change without notice.
Copyright © 2026 Ascent Communication Technology Limited. All rights reserved.
Ver. ACT_QSFP28-100G-LP80_Overview_V2f_Sep_2020