

QSFP-100G-SWDM4

100GBase-SWDM4 QSFP28 Transceiver

Hot Pluggable, +3.3V, MMF, 850nm, up to 150m, Commercial Temperature

FEATURES

- Hot-pluggable QSFP28 form factor
- 4x25Gb/s 850nm VCSEL-based transmitter
- Supports 103.1Gbps aggregate bit rate
- Power dissipation < 3.5W
- Maximum link length of 150m on OM5 multimode Fibre
- Duplex LC receptacles
- CAUI-4 electrical interface
- Commercial Operating Temperature Range: 0°C to 70°C
- Compliant with QSFP28 MSA
- Compliant with SWDM MSA
- Compliant with IEEE802.3bm CAUI-4
- RoHS compliant

APPLICATIONS

- 100G Ethernet over Duplex MMF

DESCRIPTION

ATGBICS QSFP-100G-SWDM4 transceiver is designed for use in 100G Ethernet links over duplex multimode fibre. Four channels/lanes in the 850-940nm region at 25.78Gbps to transport the Ethernet signal. Digital diagnostics functions are available via an I2C interface, as specified by the QSFP28 MSA.

The transceiver is based on the SWDM4 industry standard having the target to enable existing 10Gbps Multimode fibre-pair infrastructure to be re-used for 40Gbps and 100Gbps without replacing it with SM fibre or ribbon fibre.

ABSOLUTE MAXIMUM RATINGS

The operation in excess of any absolute maximum ratings might cause permanent damage to this module.

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T _s	-40	85	°C
Relative Humidity (non-condensing)	RH	15	85	%
Operating Case Temperature	T _o	0	70	°C
Supply Voltage	V _{cc}	-0.5	3.6	V

RECOMMENDED OPERATING ENVIRONMENT AND SUPPLY REQUIREMENTS

Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	T _o	0		70	°C
Power Supply Voltage	V _{cc}	3.14	3.3	3.46	V
Power Consumption	P	-		3.5	W
Link Distance on OM3 Fibre				75	m
Link Distance on OM4 Fibre				100	m
Link Distance on OM5 Fibre				150	m

OPTICAL CHARACTERISTICS

All parameters are specified under the recommended operating conditions with PRBS31 data pattern unless otherwise specified.

Receiver Parameter	Lane	Min	Typical	Max	Unit	Note
Signalling rate, each lane		25.78125 ± 100ppm			Gb/s	
Lane Wavelength Range	Lane0	844		858	nm	
	Lane1	874		888		
	Lane2	904		918		
	Lane3	934		948		
Modulation Format		NRZ				
Damage Threshold		4.4			dBm	
Average Receive Power, each lane	Lane0	-9.5		2.4	dBm	
	Lane1	-9.4				
	Lane2	-9.4				
	Lane3	-9.4				
Receiver Power, each lane (OMA)				3	dBm	
Receiver Reflectance				-12	dB	
Unstressed Receiver Sensitivity (OMA)	Lane0			-8.2	dBm	1
	Lane1			-8.4		
	Lane2			-8.6		
	Lane3			-8.8		
RX_Los_Assert		-30			dBm	
RX_Los_De-ASSERT				-12	dBm	
RX_Los_Hysteresis		0.5			dBm	

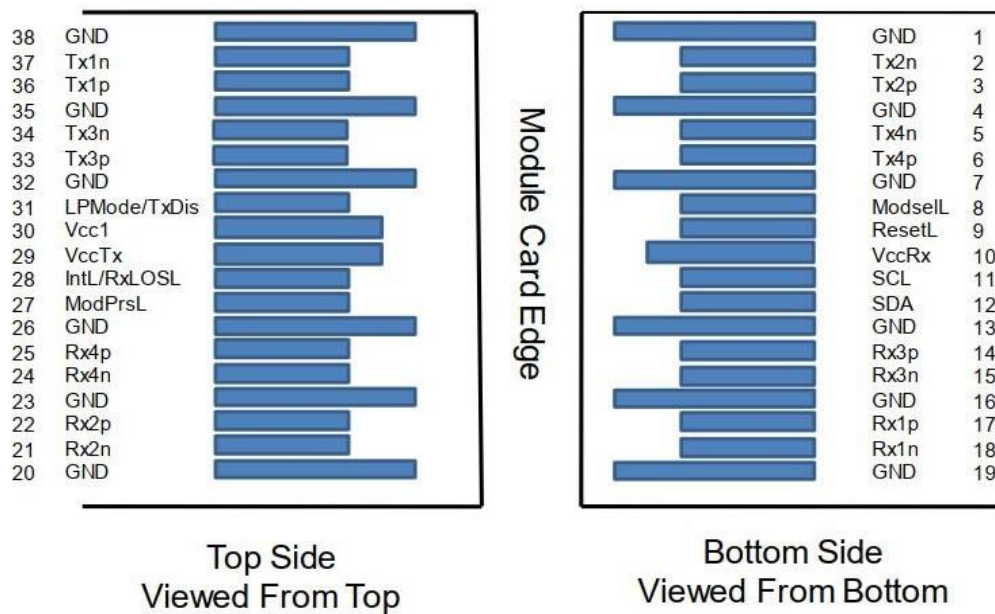
Notes:

1. Unstressed sensitivity at BER of 5E-5 (pre FEC).

DIGITAL DIAGNOSTIC MONITORING SPECIFICATIONS

Parameters	Unit	Specification
Temperature Monitor	°C	±3
Voltage Monitor	V	±5 %
I_bias Monitor	mA	±10 %
Received Power (Rx) Monitor	dB	±3.0
Transmit Power (Tx) Monitor	dB	±3.0

PIN ASSIGNMENT



MECHANICAL DIAGRAM (UNIT: mm)

