

40 Gb/s QSFP+ CSR4 Transceiver with DDM



QSFP+ Series

Product Overview

Ascent's QSFP-AQ-MP-85-03 QSFP transceivers are designed for use in 40 Gigabit per second links over multimode fiber. They are compliant with the QSFP+ MSA and IEEE 802.3ba 40GBASE-SR4.

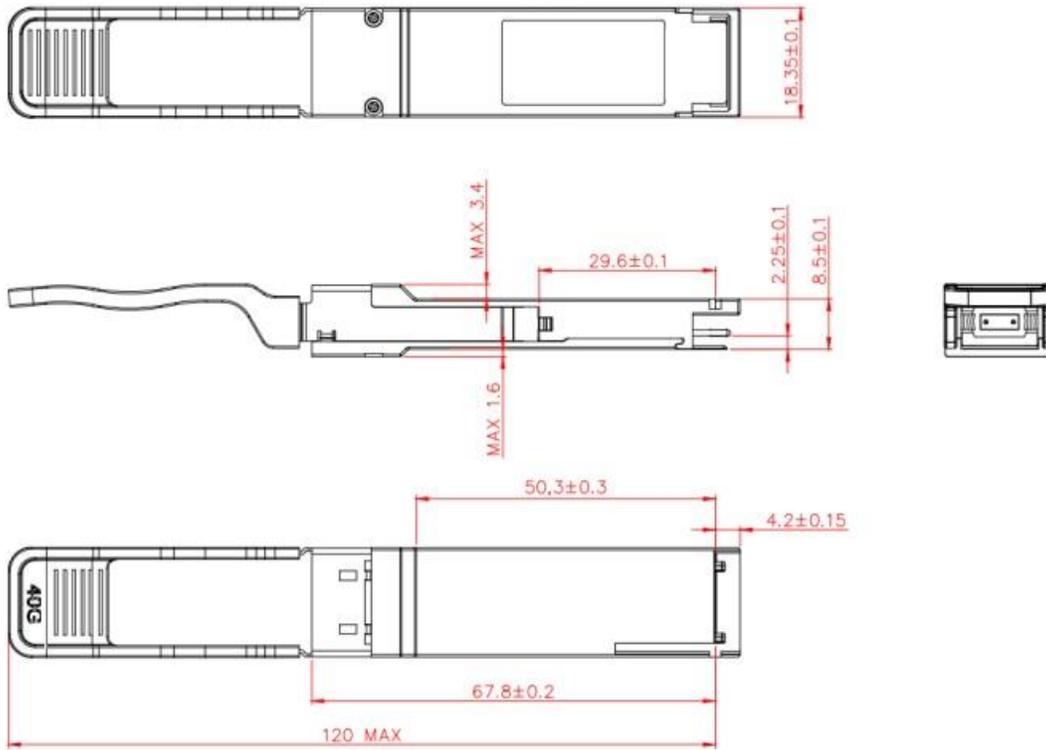
The optical transmitter portion of the transceiver incorporates a 4-channel VCSEL array, a 4-channel input buffer and laser driver, diagnostic monitors, control and bias blocks. For module control, the control interface incorporates a two-wire serial interface of clock and data signals. Diagnostic monitors for VCSEL bias, module temperature, transmitted optical power, received optical power and supply voltage are implemented and results are available through the TWS interface. Alarm and warning thresholds are established for the monitored attributes. Fault detection or channel deactivation through the TWS interface will disable the channel. Status, alarm/warning and fault information are available via the TWS interface.

The optical receiver portion of the transceiver incorporates a 4-channel PIN photodiode array, a 4-channel TIA array, a 4-channel output buffer, diagnostic monitors, and control and bias blocks. Diagnostic monitors for optical input power are implemented and results are available through the TWS interface. Alarm and warning thresholds are established for the monitored attributes.

Key Features

- Compliant with QSFP+ MSA Specification
- Operating Temperature(0°C to 70°C)
- 4x10Gbps 850nm VCSEL-based Transmitter
- Maximum Link Length of 300m via OM3 Multimode Fiber(MMF)
- Be compliant to the 40GbE XLPI electrical specification per IEEE 802.3ba-2010
- Be compliant to the IEEE 802.3ae 10GBASE-SR optical specification

Outline Diagram



Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Operating Case Temperature	Tc	0		70	°C	
Power Supply Voltage	Vcc	3.135	3.3	3.465	V	
Operating Distance	D			300	m	OM3 MMF
Signaling Rate, each lane (range)	GBb		10.3125		GBb	
Center Wavelength	λ	840	850	860	nm	
Average Launch Power, each Lane	Pf	-4		2.4	dBm	
Signaling rate, each lane (range)	GBb		10.3125		GBb	
Center Wavelength	λ	840		860	nm	
Damage threshold		3.4			dBm	
Average power at receiver input, each lane		-11.5		2.4	dBm	
Receive power, each lane (OMA)				3	dBm	

Ordering Information

Product Name

QSFP-AQ-MP-85-03

Product Description

QSFP+ Plug-in, 40 Gbps, 300 m OM3 fiber, 400 m OM4 fiber, TX/RX 850 nm SR4, with DDM on two multi-mode fibers, MPO connector

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