

Stratos

SPLC-20-8-1-B-R6 Optical Transceiver

Connectivity for
Business Critical Continuity™

Gigabit Ethernet
1x / 2x Fiber Channel Applications
850nm SFP – 2.125 / 1.25 / 1.0625 Gbaud



Product Overview

The Emerson Network Power Connectivity Solutions SPLC-20-8-1-B-R6 pluggable transceiver module is a high performance integrated duplex data link for bi-directional communication over multimode optical fiber. It is compliant with the MSA Small Form Factor Pluggable (SFP) specification. The SPLC-20-8-1-B-R6 is specifically designed for high speed data links up to 2.125Gbaud. The Stratos Lightwave SFP transceiver is a hot pluggable which allows a suitably designed enclosure to be changed from one type of external interface to another simply by plugging in a SFP having the alternative external interface. This optoelectronic transceiver module is a Class 1 Laser product compliant with FDA Radiation Performance Standards, 21 CFR Subchapter J. This component is also a Class 1 Laser compliant according to the International Safety Standard IEC-825-1.

Key Features & Benefits

- 2.125Gbaud Fiber Channel Compliant
- 1.25Gbaud Gigabit Ethernet Compliant
- 1.0625Gbaud Fiber Channel Compliant
- Compliant with MSA SFP Specification
- 100Ω AC Coupled CML Level Outputs
- Die Cast Metal Housing
- Serial ID Functionality
- Hot Pluggable
- Single +3.3V Power Supply
- RoHS Compliant

Ordering Information

SPLC - 20 - 8 - 2M - B - R6

Module Specifications – Electrical: $-5^{\circ}\text{C} < \text{Tc} < +80^{\circ}\text{C}$; $+3.0\text{V} < \text{Vcc} < +3.6\text{V}$

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Supply Current	Icc		180	250	mA	$\text{Tc} = 25^{\circ}\text{C}$, $\text{Vcc} = +3.3\text{V}$
Surge Current	Isurge			300 30	mA	$-5^{\circ}\text{C} < \text{Tc} < +80^{\circ}\text{C}$; $+3.15\text{V} < \text{Vcc} < +3.45\text{V}$ Surge above steady value
Transmitter						
PECL/CML Inputs (Differential)		400		2500	mVpp	AC Coupled Inputs
Input Impedance (Differential)	Zin	85	100	115	Ω	$\text{Rin} > 100\text{K}\Omega$ @ DC
TX_DISABLE Input Voltage – High	ViH	2		3.45	V	
TX_DISABLE Input Voltage – Low	ViL	0		0.8	V	
TX_FAULT Output Voltage – High	VtoH	Vcc-0.5		Vcc+0.3	V	$\text{Io} = 400\mu\text{A}$; Host Vcc
TX_FAULT Output Voltage – Low	VtoL	0		0.8	V	$\text{Io} = -4.0\text{mA}$

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Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Receiver						
CML Outputs (Differential)		400	800	1200	mVpp	AC Coupled Outputs
Output Impedance (Differential)	Zout	85	100	115	Ω	
RX_LOS Output Voltage – High	VroH	Vcc-0.5		Vcc+0.3	V	Io = 400µA; Host Vcc
RX_LOS Output Voltage – Low	VroL	0		0.8	V	Io = -4.0mA
Total Jitter	Tj			75 130	ps	2 ⁷ -1 PRBS @ 2.125GBaud 2 ⁷ -1 PRBS @ 1.25/1.0625GBaud
MOD_DEF (0:2)	VoH VoL	2.5 0		Vcc+0.3 0.5	V	

Module Specifications – Optical: -5°C < Tc < +80°C; +3.0V < Vcc < +3.6V

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
50µm Core Diameter MMF		300 550	500 1000		m	BER<1.0E-12 @ 2.125GBaud BER<1.0E-12 @ 1.25/1.0625GBaud
62.5µm Core Diameter MMF		200 300	300 500		m	BER<1.0E-12 @ 2.125GBaud BER<1.0E-12 @ 1.25/1.0625GBaud
Transmitter						
Optical Center Wavelength	λ	830	850	860	nm	
Spectral Width	Δλ			0.85	nm	RMS
Optical Transmit Power	Popt	-9.5		-3	dBm	
Optical Modulation Amplitude	OMA	225			µW	pk-pk
Extinction Ratio	ER	9			dB	P1/P0
Relative Intensity Noise	RIN			-117	dB/Hz	
Total Jitter [pk-pk]	Tj			85 170	ps	2 ⁷ -1 PRBS @ 2.125 GigaBaud 2 ⁷ -1 PRBS @ 1.25/1.0625 GigaBaud
Output Rise/Fall Time	t _R , t _F			160 260	ps	20-80%; unfiltered @ 2.125GBaud 20-80%; unfiltered @ 1.25/1.0625GBaud
Receiver						
Optical Input Wavelength	λ	770		860	nm	
Optical Input Power	Pr	-17		0	dBm	BER<1.0E-12 @ 1.25/1.0625GBaud
Optical Modulation Amplitude	OMA	31			µW	pk-pk
Optical Return Loss	ORL	12			dB	
RX_LOS – Asserted	Pa	-29			dBm	Measured on transition – Low to High
RX_LOS – Deasserted	Pd			-17	dBm	Measured on transition – High to Low
RX_LOS – Hysteresis	Pa-Pd		1.5	5	dB	

For more information on this product consult the SPLC-20-8-1-B-R6 product data sheet.

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