

Stratos

SPLC-20-4-1-B-R6 Optical Transceiver

Connectivity for
Business Critical Continuity™

Gigabit Ethernet / Fiber Channel Applications
850nm SFP – 1.25 / 1.0625 GBaud - +3.3V



Product Overview

The Emerson Network Power Connectivity Solutions SPLC-20-4-1-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-20-4-1-B-R6 is specifically designed for high speed Gigabit Ethernet/Fiber Channel applications. 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. The SPLC-20-4-2M-Bx-R6 operates at +3.3V. 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.

Ordering Information

SPLC - 20 - 4 - 1 - B - R6

Key Features & Benefits

- 1.25/1.0625 GBaud Gigabit Ethernet/Fiber Channel Compliant
- Compliant with IEEE 802.3z 1000BASE_SX Specification for Optical Links
- Compliant with ANSI X3T11 Fiber Channel Specification
- Compliant with MSA SFP Specification
- 100Ω Differential AC Coupled CML Outputs
- Die Cast Metal Housing
- Hot Pluggable
- Single +3.3V Power Supply
- Serial ID Functionality
- RoHS Compliant

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

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Supply Current	Icc		180	250	mA	Tc = 25°C, Vcc = +3.3V
Surge Current	I _{surge}			300 30	mA	-5°C<Tc<+80°C; +3.15V<Vcc<+3.45V Surge above steady value
Transmitter						
PECL/CML Inputs (Differential)		400		2500	mVpp	AC Coupled Inputs
Input Impedance (Differential)	Z _{in}	85	100	115	Ω	R _{in} > 100KΩ @ 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	I _o = 400μA; Host Vcc
TX_FAULT Output Voltage – Low	VtoL	0		0.8	V	I _o = -4.0mA

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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 [pk-pk]	Tj			130	pS	Measured with 2 ⁷ -1 PRBS
MOD_DEF (0:2)	VoH VoL	2.5 0		Vcc+0.3 0.5	V	With Serial ID

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

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
50μm Core Diameter MMF		550	1000		m	BER<1.0E-12 @ 1.25/1.0625GBaud
62.5μm Core Diameter MMF		300	500		m	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	Average power @ 850nm
Optical Modulation Amplitude	OMA	180			μW	pk-pk
Extinction Ratio	ER	9			dB	P1/P0
Relative Intensity Noise	RIN			-117	dB/Hz	
Total Jitter [pk-pk]	Tj			170	ps	Measured with 2 ⁷ -1 PRBS
Output Rise/Fall Time	t _r , t _f			260	ps	20%-80%; Measured unfiltered
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-20-4-1-B-R6 product data sheet.

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