## **Stratos**

# SPLC-20-2-2M-Bx-R6 Optical Transceiver

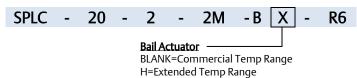


### SONET OC-3 / SDH STM-1 / Fast Ethernet Small Form Pluggable (SFP) – 155.52MBaud

#### **Product Overview**

The Emerson Network Power Connectivity Solutions SPLC-20-2-2M-Bx-R6 pluggable transceiver module is a high performance integrated duplex data link for bi-directional communication over single mode optical fiber. It is compliant with the MSA Small Form Factor Pluggable (SFP) specification. The SPLC-20-2-2M-Bx-R6 is specifically designed to be used in SONET OC-3/SDH STM-1 or Fast Ethernet applications. The Stratos Lightwave SFP transceiver is 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-20-2-2M-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 Class 1 Laser compliant according to the International Safety Standard IEC-825-1.

### **Ordering Information**



### **Key Features & Benefits**

- 155.52Mbps SONET OC-3/SDH STM-1 Performance
- Fast Ethernet Compliant
- Compliant with Bellcore GR-253 Specification
- Compliant with ITU-T G.957 Specification
- Compliant with MSA SFP Specification
- Die Cast Metal Housing
- Hot Pluggable
- Single +3.3V Power Supply
- Serial ID Functionality
- RoHS Compliant

Module Specifications – Flectrical: +3.0V<Vcc<+3.6V

Module Specifications – Electrical: +3.0V <vcc<+3.6v< th=""></vcc<+3.6v<>								
Parameter	Sym	MIN	Тур	MAX	Unit	Notes		
Supply Current	lcc		180	250	mA	Tc = 25°C, Vcc = +3.3V		
Surge Current	Isurge			300	mA	+3.0V <vcc<+3.6v< td=""></vcc<+3.6v<>		
				30		Surge above steady value		
Transmitter								
PECL Inputs (Differential)		400		2400	mVpp	AC Coupled Inputs		
Input Impedance (Differential)	Zin	95	100	105	Ω	Rin > 100K Ω @ 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	2		3.45	V	Io = 400μA		
TX_FAULT Output Voltage – Low	VtoL	0		0.5	V	Io = -4.0mA		
Receiver								
PECL Outputs (Differential)		600	1200	1860	mVpp	AC Coupled Outputs		
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		
MOD_DEF (0:2)	VoH	2.5		Vcc+0.3	V			
	VoL	0		0.5				





## **Stratos**

# SPLC-20-2-2M-Bx-R6 Optical Transceiver

### Module Specifications – Optical:

Compliant to GR 253 (IR-1) and ITU-T G.957 (S-1.1) Specifications

+3.0V<Vcc<+3.6V

Parameter	Sym	MIN	Тур	MAX	Unit	Notes		
Transmitter								
Optical Center Wavelength	λ	1266	1310	1360	nm			
RMS Spectral Width	Δλ			4	nm			
Optical Output Power	Pout	-15		-8	dBm	Average power @ 1310nm		
Extinction Ratio	ER	8.2			dB	P1/P0		
Jitter Generation				70	mUI	pk-pk; Measured with 2 <sup>23</sup> -1 PRBS		
				7		RMS; Measured with 2 <sup>23</sup> -1 PRBS		
Receiver								
Optical Input Wavelength	λ	1260		1610	nm			
Optical Input Power	Pr	-28		-8	dBm	Average power for BER<1.0E-10		
RX_LOS – Asserted	Pa	-38			dBm	Measured on transition – Low to High		
RX_LOS – Deasserted	Pd			-28	dBm	Measured on transition – High to Low		
RX_LOS – Hysteresis	Pa-Pd		1.5	5.0	dB			

### Module Specifications – Optical:

-ast Ethernet +3.0V<Vcc<+3.6V

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Parameter	Sym	MIN	Тур	MAX	Unit	Notes		
9.0μm Core Diameter SMF		15			Km	BER<1.0E-12 @ 125MBaud		
Transmitter								
Optical Center Wavelength	λ	1285	1310	1355	nm	Tcase = +25°C		
Spectral Width	Δλ			3	dBm	RMS		
Optical Transmit Power	Popt	-15		-8	dBm	Average @ 1310nm		
Extinction Ratio	ER	9			dBm	P1/P0		
Total Jitter [pk-pk]	Tj			1.8	ns	Measured with 2 <sup>7</sup> -1 PRBS		
Optical Rise/Fall Time	$t_R, t_F$			2	ns	20-80%; Measured unfiltered		
Receiver								
Optical Input Wavelength	λ	1270		1355	nm			
Optical Input Power	Pr	-28		-8	dBm	BER<1.0E-12 @ 1.25/1.0625GBaud		
Optical Return Loss	ORL	12			dB			
RX_LOS – Asserted	Pa	-38			dBm	Measured on transition – Low to High		
RX_LOS – Deasserted	Pd			-28	dBm	Measured on transition – High to Low		
RX_LOS – Hysteresis	Pa-Pd		1.5	5.0	dB			

For more information on this product consult the SPLC-20-2-2M-Bx-R6 product data sheet.

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