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SPLC-20-F-1-D
Optical Transceiver

4x / 2x / 1x Fiber Channel Applications

850nm SFP w/ DDMI 4.25 / 2.125 / 1.0625 GBaud

Applications

The Cinch Connectivity Solutions SPLC-20-F-1-D pluggable transceiver module is a high performance integrated duplex data link for bi-directional communication over multimode optical fiber. It is compliant with the Small Form Factor Pluggable (SFP) Multi-Source Agreement (MSA) transceiver specification. The SPLC-20-F-1-D is specifically designed for high speed data links up to 4.25GBaud.

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. 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 International Safety Standard IEC-825-1/EN 60825.

Features

- 4.25GBaud Fiber Channel Compliant
- 2.125GBaud Fiber Channel Compliant
- 1.0625GBaud Fiber Channel Compliant
- Digital Diagnostics Monitoring Interface (DDMI)
- Compliant with SFP MSA Specification
- 100 Differential AC Coupled Inputs/Outputs
- Metal Housing
- Serial ID Functionality
- Hot pluggable
- Single +3.3V Power Supply
- RoHS Compliant

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Ordering Information

SPLC - 20 - F - 1 - D

Module Specifications – Electrical: 0ºC<Tc<+70ºC;+3.0V<Vcc<+3.6V

Parameter	Symbol	MIN	Typical	MAX	Unit	Notes
Supply Current				300	mA	0ºC<Tc<+70ºC; +3.0V<Vcc<+3.6V
Transmitter						
Input Swing (Differential)	Vin	500		2400	mVpp	Rin > 100K Ω @ DC
Input Impedance (Differential)	Rin	85	100	115	Ω	
TX_DISABLE Input Voltage – High	V_{IH}	2		3.465	V	
TX_DISABLE Input Voltage – Low	V_{IL}	0		0.8	V	
TX_FAULT Output Voltage – High	VtoH	Vcc-0.5		V_{CC}+0.3	V	Io = 400µA; Host Vcc
TX_FAULT Output Voltage – Low	VtoL	0		0.8	V	Io = 4.0mA
Receiver						
Output Swing (Differential)		300		1200	mVpp	AC Coupled Outputs
Output Impedance (Differential)	Rout	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
Rate Select (1.0625GBaud)	RS_{LOW}	0		0.8	V	In Accordance to SFF Committee SFF-80-79
Rate Select (2 / 4 GBaud)	RS_{HIGH}	2		3.465	V	

Module Specifications – Optical: 0ºC<Tc<+70ºC;+3.0V<Vcc<+3.6V

Parameter	Symbol	MIN	Typical	MAX	Unit	Notes
50µm Core Diameter MMF		150	250			BER<1.0E-12 @ 4.25GBaud
		300	500		m	BER<1.0E-12 @ 2.125GBaud
		550	1000			BER<1.0E-12 @ 1.25/1.0625GBaud
62.5µm Core Diameter MMF		70	150			BER<1.0E-12 @ 4.25GBaud
		150	300		m	BER<1.0E-12 @ 2.125GBaud
		300	500			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		-3	dBm	Average @ 850nm
		247				pk-pk @ 4.125GBaud
Optical Modulation Amplitude	OMA	196			µW	pk-pk @ 2.125GBaud
		196				pk-pk @ 1.0625GBaud
Relative Intensity Noise	RIN			-118	dB/Hz	Measured with -12dB optical return loss
Output Eye	Complies with ANSI FC-PI specification and Class 1 Laser eye safety					
Receiver						
Optical Input Wavelength	λ	770		860	nm	
		-15		0		BER<1.0E-12 @ 4.25GBaud
Optical Input Power	Pr	-18		0	dBm	BER<1.0E-12 @ 2.125GBaud
		-20		0		BER<1.0E-12 @ 1.0625GBaud
Optical Return Loss	ORL	12			dB	
RX_LOS – Asserted	Pa	-29			dBm	Measured on transition – Low to High
				-15		High to Low @ 4.25GBaud
RX_LOS – Deasserted	Pd			-18	dBm	High to Low @ 2.125GBaud
				-20		High to Low @ 1.25/1.0625GBaud
RX_LOS – Hysteresis	Pa-Pd		1.5	5	dB	

For more information on this product consult the SPLC-20-F-1-D product data sheet.

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