

SFP+ Transceiver with DDMI (SFP-10G-LR)

Hot Pluggable Duplex LC (1310nm) Single Mode for 10GbE/10GFC

Features

- Operating Data Rate up to 10.3Gbps
- 1310nm DFB-LD Transmitter
- Distance up to 10km)
- Single 3.3V Power Supply and TTL Logic Interface
- Duplex LC Connector Interface
- Hot Pluggable
- Operating Case Temperature Standard: 0°C~+70°C Industrial: -40°C~+85°C
- Compliant with MSA SFP+ Specification SFF-8431
- Compliant with IEEE 802.3ae 10GBASE-LR
- Compliant with IEEE 802.3ae 10GBASE-LW
- Digital Diagnostic Monitor Interface
- Compliant with SFF-8472
- RoHS 6 Compliant

Applications

- 10GBASE-LR at 10.3125Gbps
- 10GBASE-LW at 9.953Gbps
- Other optical Links

Specification

Electrical Characteristics (Condition: Ta=TOP)

Parameter	Symbol	Min.	Typ	Max.	Unit	Notes
CML Inputs(Differential)	V _{IN}	150		1200	mV p-p	AC coupled inputs
Supply Current	I _{CC}			300	mA	
Input Impedance (Differential)	Z _{IN}	85	100	115	ohm	R _{IN} >100 kohm@DC
Tx_Disable Input Voltage – Low	V _{IL}	0		0.8	V	
Tx_Disable Input Voltage – High	V _{IH}	2.0		3.45	V	
Tx_Fault Output Voltage – Low	V _{OL}	0		0.5	V	
Tx_Fault Output Voltage – High	V _{OH}	2.0		V _{CC} +0.3	V	
CML Outputs (Differential)	V _{OUT}	350		700	mV pp	AC coupled outputs
Output Impedance (Differential)	Z _{OUT}	85	100	115	ohms	
Rx_LOS Output Voltage-Low	V _{OL}	0		0.5	V	
Rx_LOS Output Voltage-High	V _{OH}	2.5			V	



PRODUCT OVERVIEW

Optical Characteristics (Condition: Ta=TOP)

TX					
Parameter	Symbol	Min	Typ	Max	Unit
Data Rate		-	10.3	-	Gb/s
9µm Core Diameter SMF			300		km
Centre wavelength	λ_c	1270	1310	1355	nm
Output Spectral Width (-20dB)	$\Delta\lambda$	-	-	1	nm
Average Output Power	P_{out}	-8	-	+0,5	dBm
Extinction Ratio	ER	3.5	-	-	dB
Average Power of OFF Transmitter				-30	dBm
Side Mode Suppression Ratio	SMSR	30			dB
Input Differential Impedance	Z_{IN}	90	100	110	Ω
TX Diable	Disable	2.0		$V_{cc}+0.3$	V
	Enable	0		0.8	
TX Fault	Fault	2.0		$V_{cc}+0.3$	V
	Normal	0		0.8	
TX Disable Assert Time	t_{off}			10	us
RX					
Parameter	Symbol	Min	Typ	Max	Unit
Center Wavelenght	λ_c	1260		1565	nm
Receive Sensitivity	P_{IN}	-	-	-14	dBm
Maximum Input Power	P_{MAX}	-3	0	-	dBm
Signal Detect Threshold-Assertion	SD_{HIGH}	-	-	-15	dBm
Signal Detect Threshold-Deassertion	SD_{LOW}	-25	-	-	dBm
Output Differential Impedance	P_{IN}	90	100	110	Ω
Receiver Overload	P_{MAX}	0.5			dBm
Optical Return Loss	ORL			-12	dBm
LOS	High	2.0		$V_{cc}+0.3$	V
	LOW	0		0.8	

Absolute Maximum Ratings (T_c = 25°C)

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_{ST}	-40	+85	°C
Operating Temperature (Com)	T_{IP}	0	+70	°C
Operating Temperature (Ext)		-40	+85	
Input Voltage	T_{CC}	0	5	V



PRODUCT OVERVIEW

Recommended Operation Environment

Parameter	Symbol	Min	Typ	Max	Unit
Storage Temperature	Vcc	+3.15	3.3	+3.45	V
Operating Temperature (Com)	T _{OP}	0	-	+70	°C
Operating Temperature (Ext)		-40	-	+85	

Dimensions

(H x W x D): 8.5 x 13.4 x 56.5 mm

LINECARD



About Atlantik Systeme

Atlantik Systeme, a company of the Atlantik Networkx Group is value add distributor for Ethernet and Infiniband Infrastructures, data center management and M2M solutions. In addition Atlantik Systeme's sister company, the Allmos Electronic is an expert for cable testers, network testers and network analyzers for wired and wireless networks.



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