

10GBPS 1310NM 10KM SFP OPTICAL TRANSCEIVER



HIGH-SPEED & EXTENDED TRANSMISSION:

Supports a data rate of 10Gbps with a maximum link length of 300m on 2000MHz/km MMF. Ensures fast, stable, and extended data transmission capabilities.

The transceiver is compatible with major brands in the industry, ensuring seamless integration into existing network infrastructures.



ADVANCED DIGITAL DIAGNOSTIC FUNCTIONS:

Features a unique enhanced digital diagnostic monitoring interface, providing real-time access to vital device operating parameters. This includes monitoring of transceiver temperature, laser bias current, transmitted/received optical power, and supply voltage. A sophisticated system of alarm and warning flags alerts users to any deviations from normal operating parameters.



COMPREHENSIVE IDENTIFICATION INTELLIGENT CONTROLLER & COMPATIBILITY:

Adheres to the SFP MSA1, offering a standard serial ID that provides detailed identification information about the transceiver's capabilities, interfaces, and manufacturer details. The all-metal housing ensures superior EMI performance, and the transceiver is RoHS6 compliant.



SEAMLESS INTEGRATION:

Equipped with a Digital Diagnostics Transceiver Controller (DDTC) for monitoring and reporting. The 2-wire serial interface, in conjunction with the SFP MSA-defined memory map, ensures seamless integration and compatibility with host systems, allowing for efficient data transfer and management.

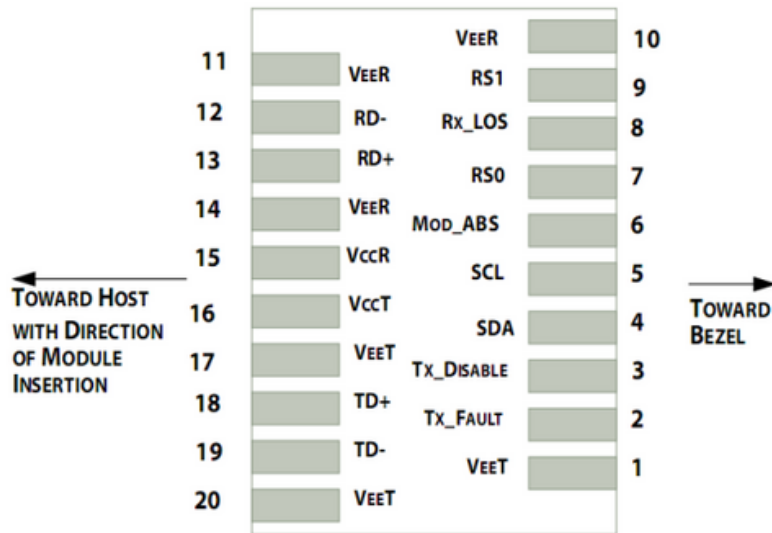
ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Supply Voltage	V _{cc}	3.14	3.3	3.46	V	
Supply Current	I _{cc}			250	mA	
Transmitter						
Input differential impedance	R _{in}		100		Ω	1
Single ended data input swing	V _{in,pp}	180		700	mV	
Transmit Disable Voltage	V _D	V _{cc} -1.3		V _{cc}	V	
Transmit Enable Voltage	V _{EN}	V _{ee}		V _{ee} + 0.8	V	2
Transmit Disable Assert Time				10	us	
Receiver						
Differential data output swing	V _{out,pp}	300		850	mV	3
Data output rise time	t _r	28			ps	4
Data output fall time	t _f	28			ps	4
LOS Fault	V _{LOS fault}	V _{cc} -1.3		V _{cc} HOST	V	5
LOS Normal	V _{LOS norm}	V _{ee}		V _{ee} +0.8	V	5
Power Supply Rejection	PSR	100			mVpp	6

OPTICAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Transmitter						
Output Opt. Pwr	POUT	-6		-1	dBm	1
Optical Wavelength	λ	840	850	860	nm	
Optical Extinction Ratio	ER	3.0			dB	
RIN	RIN			-128	dB/Hz	
Output Eye Mask	Compliant with IEEE 0802.3ae					
Receiver						
Rx Sensitivity	RSENS			-10	dBm	2
Input Saturation Power (Overload)	Psat	0.5			dBm	
Wavelength Range	λ_C	770	850	860	nm	
LOS De -Assert	LOSD			-14	dBm	
LOS Assert	LOSA	-30			dBm	
LOS Hysteresis		0.5			dB	

PIN DESCRIPTIONS



Pin	Symbol	Name/Description	Ref.
1	VEET	Transmitter Ground (Common with Receiver Ground)	1
2	TFAULT	Transmitter Fault.	2
3	TDIS	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	4
5	SCL	2-wire Serial Interface Clock Line	4
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	Rate Select 0	5
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation.	6
9	RS1	No connection required	1
10	VEER	Receiver Ground (Common with Transmitter Ground)	1
11	VEER	Receiver Ground (Common with Transmitter Ground)	1
12	RD-	Receiver Inverted DATA out. AC Coupled	
13	RD+	Receiver Non-inverted DATA out. AC Coupled	
14	VEER	Receiver Ground (Common with Transmitter Ground)	1
15	VCCR	Receiver Power Supply	
16	VCCT	Transmitter Power Supply	
17	VEET	Transmitter Ground (Common with Receiver Ground)	1
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled.	
19	TD-	Transmitter Inverted DATA in. AC Coupled.	
20	VEET	Transmitter Ground (Common with Receiver Ground)	1

[illegible]

REGULATORY COMPLIANCE

Feature	Reference	Performance
Electrostatic discharge (ESD)	IEC/EN 61000-4-2	Compatible with standards
Electromagnetic Interference (EMI)	FCC Part 15 Class B EN 55022 Class B (CISPR 22A)	Compatible with standards
Laser Eye Safety	FDA 21CFR 1040.10, 1040.11 IEC/EN 60825-1, 2	Class 1 laser product
Component Recognition	IEC/EN 60950, UL	Compatible with standards
ROHS	2002/95/EC	Compatible with standards
EMC	EN61000-3	Compatible with standards

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