Nexolight

Datasheet

NX-GE-T

SFP 1G RJ-45 100m

Features

- SFP Form Factor
- 1G bitrate
- Up to 100 m over Copper
- RJ45 connector
- Up to 1 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

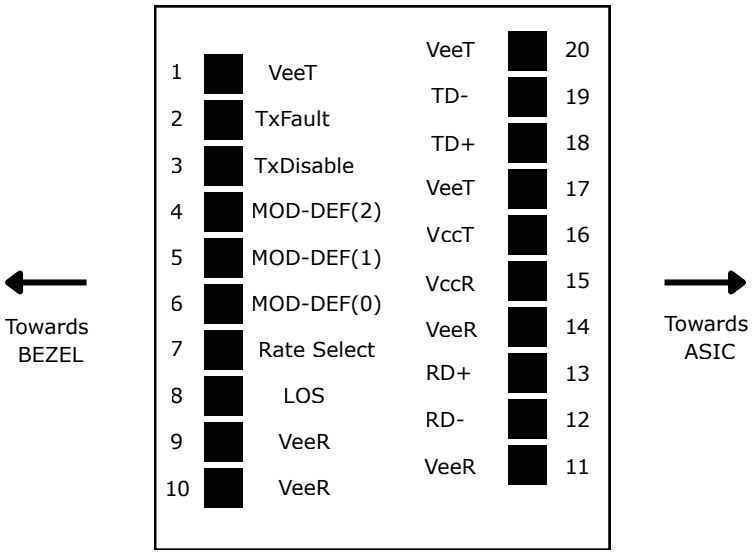
Applications

- Ethernet
- Access and Enterprise

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	+0/+70°C	°C
Operating case temperature	+0/+70°C	°C
Power supply voltage	3.3	V
Power supply current	300	mA
Power consumption	1	W

Transceiver electrical pad layout



Module electrical PIN definition

Pin	Symbol	Description	Note
1	VeeT	Transmitter Ground (Common with Receiver Ground)	
2	TxFault	Transmitter Fault.	1
3	TxDisable	Transmitter Disable. Laser output disabled on high or open.	2
4	MOD-DEF(2)	Module Definition 2. Data line for Serial ID.	3
5	MOD-DEF (1)	Module Definition 1. Clock line for Serial ID.	3
6	MOD-DEF (0)	Module Definition 0. Grounded within the module.	3
7	Rate Select	No connection required	
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation.	4
9	VeeR	Receiver Ground (Common with Transmitter Ground)	
10	VeeR	Receiver Ground (Common with Transmitter Ground)	
11	VeeR	Receiver Ground (Common with Transmitter Ground)	
12	RD-	Receiver Inverted DATA out. AC Coupled	5
13	RD+	Receiver Non-inverted DATA out. AC Coupled	5
14	VeeR	Receiver Ground (Common with Transmitter Ground)	
15	VccR	Receiver Power Supply	
16	VccT	Transmitter Power Supply	
17	VeeT	Transmitter Ground (Common with Receiver Ground)	
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled.	6
19	TD-	Transmitter Inverted DATA in. AC Coupled.	6
20	VeeT	Transmitter Ground (Common with Receiver Ground)	

Note

1. TxFault is an open collector output, which should be pulled up with a 4.7k - 10kΩ resistor on the host board to a voltage between 2.0V and Vcc+0.3V. Logic 0 indicates normal operation; logic 1 indicates a laser fault of some kind. In the low state, the output will be pulled to less than 0.8V.

2. TX Disable is an input that is used to shut down the transmitter optical output. It is pulled up within the module with a 4.7°C 10 K resistor. Its states are:

- Low (0 – 0.8V): Transmitter on
- (>0.8, < 2.0V): Undefined
- High (2.0 – 3.465V): Transmitter Disabled
- Open: Transmitter Disabled

3. Mod-Def 0,1,2. These are the module definition pins. They should be pulled up with a 4.7k - 10kΩ resistor on the host board. The pull-up voltage shall be VccT or VccR Mod-Def 0 is grounded by the module to indicate that the moduleis present Mod-Def 1 is the clock line of two wire serial interface for serial ID Mod-Def 2 is the data line of two wire serial interfacefor serial ID

4. LOS (Loss of Signal) is an open collector/drain output, which should be pulled up with a 4.7k - 10kΩ resistor. Pull up voltage between 2.0V and VccT, R+0.3V. When high, this output indicates the received optical power is below the worst-case receiver sensitivity (as definedby the standard in use).Low indicates normal operation. In the low state, the output will be pulled to <0.8V.

5. RD-/+: These are the differential receiver outputs. They are AC coupled 100 differential lines which shouldbe terminated with 100 (differential) at the user SERDES

6. TD-/+: These are the differential transmitter inputs. They are AC-coupled, differential lines with 100 differential termination inside the module.