Nexolight

Datasheet

NXDA-PP-15M

SFP+ 10GBASE-CR 1.5m DAC Twinax

Features

- SFP+ Form Factor
- 10 Gb/s bitrate
- Up to 1,5 m over DAC Twinax
- Up to 1W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

Applications

- 10G Ethernet
- Serial Data Transmission

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	-40/+85	°C
Operating case temperature	+0/+70	°C
Power supply voltage	3.3	V
Power consumption	1	W

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR		10.3125		Gbps	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Tc	0		70	°C	2
Storage Temperature	Tstg	-40		85	°C	3
Power Supply Voltage	Vcc	3.14	3.30	3.46	V	4

Notes:

1. IEEE 802.3ae.
2. Case Temperature.
3. Ambient Temperature.
4. For the electrical power interface.

Cable Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Wire Gauge			30AWG		AWG
Cable Impedance	Z	90	100	110	Ω
Cable Diameter	OD		4.2		mm
Minimum Bending Radius	R		25		mm
Tolerance Range ±			2		cm

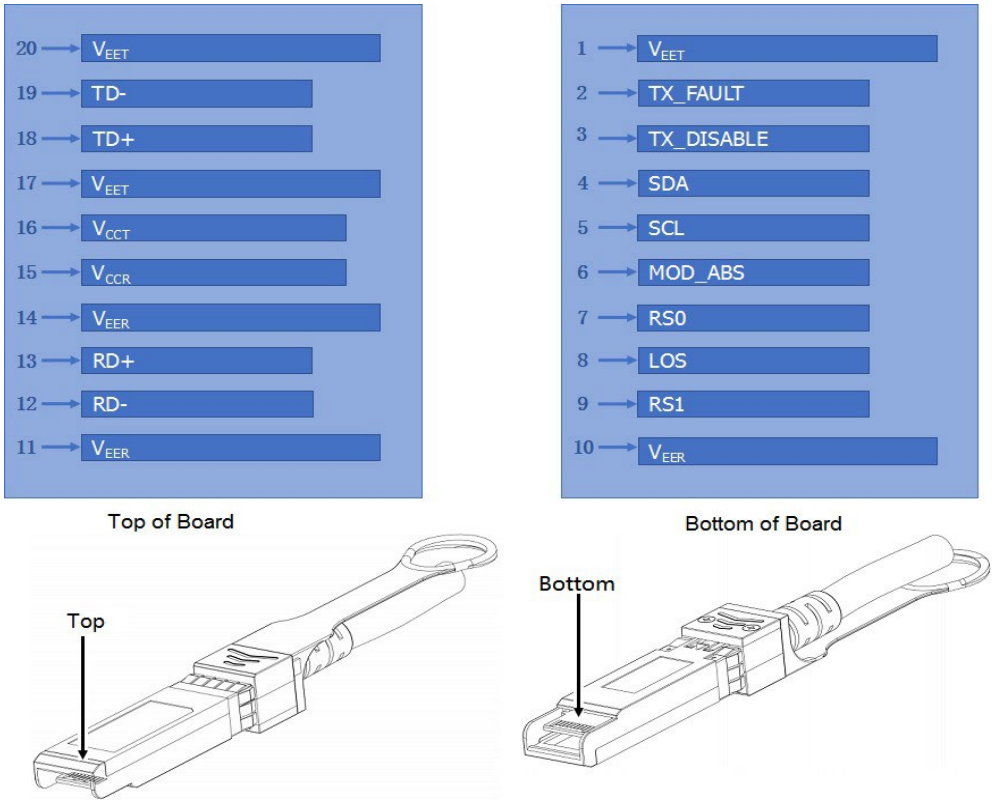
Pin Descriptions

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	Tx_Fault	Transmitter Failure Alarm. Not Used.	
3	Tx_Disable	Not Used. The signal turns off the module transmitter when it is “high” or “open.”	
4	SDA	Data Line for Serial ID.	2
5	SCL	Clock Line for Serial ID.	2
6	MOD_ABS	Module Absent. Grounded within the module.	2
7	RS0	No Connection Required.	
8	LOS	Loss of Signal Indication. “Logic 0” indicates normal operation.	
9	RS1	No Connection Required.	
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

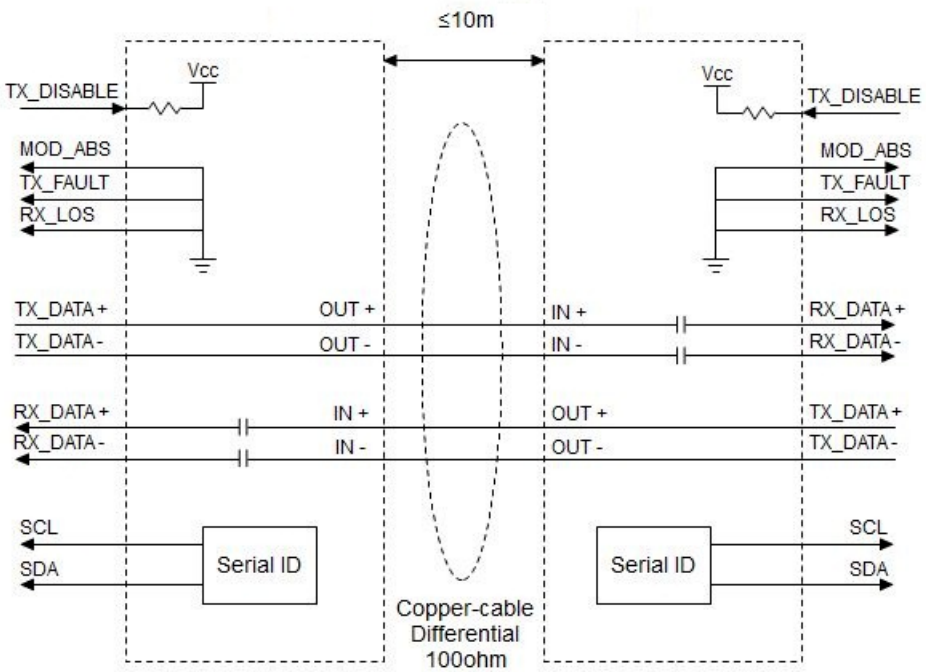
Notes:

1. The circuit ground is isolated from the chassis ground.
2. Should be pulled up with 4.7kΩ to 10kΩ on the host board to a voltage between 2V and 3.6V.

Electrical Pad Layout



Block Diagram of Transceiver



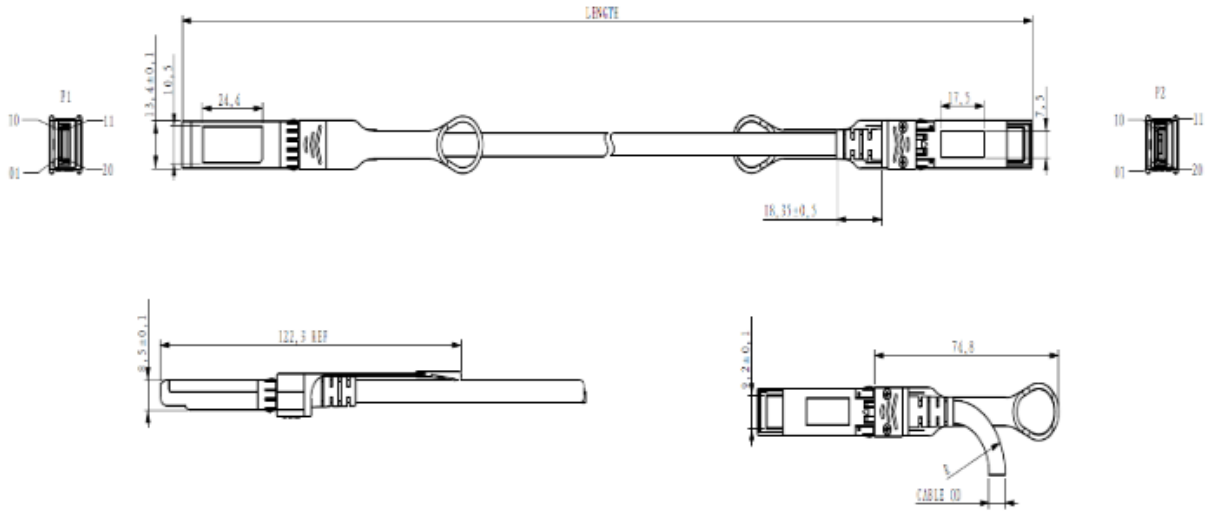
Weight

Parameter	Symbol	Typ.	Unit	Notes
30AWG Product Weight	GD30	72	g/PCS	1
30AWG Cable Weight	GC30	26	g/M	
Dust Cap Weight	GS	0.80	g/PCS	

Notes:

1. For example, the weight of a 6m cable with 30AWG is: 72+26*(6-1) + 0.80*2=203.6g.

Mechanical Specifications



All Dimensions are ±0.2mm Unless Otherwise Specified
Unit: mm