

# NXDA-PP28-2M

## SFP28 25GBASE-CR 2m DAC Twinax

### Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 2 m over DAC Twinax
- Up to 1W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring



### Applications

- 25GBase Ethernet

### 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
<b>Data Rate</b>	DR		25		Gbps	1
<b>Bit Error Rate</b>	BER			$10^{-12}$		
<b>Operating Temperature</b>	Tc	0		70	°C	2
<b>Storage Temperature</b>	Tstg	-40		85	°C	3
<b>Supply Current</b>	Icc			4	mA	4
<b>Input Voltage</b>	Vcc	3.14	3.3	3.46	V	4
<b>Cable Impedance</b>	Z	90	100	110	Ω	
<b>Product Weight</b>	GD		78		g/PCS	5
<b>Cable Weight</b>	GC		32		G/M	
<b>Dust Cap Weight</b>	GS		0.80		g/PCS	

### Notes:

1. IEEE 802.3by.
2. Case temperature.
3. Ambient temperature.
4. For electrical power interface.

## Cable Dimensions and Insertion Loss Level

Length	Standard Wire Gauge AWG	Cable Diameter OD (mm)	Minimum Bending Radius R (mm)	Insertion Loss Level (Note 1)	Tolerance Range (±cm)
2m	30AWG	4.6	26	CA-25G-N	2

### Notes:

1. Cable insertion loss classification standard IEEE 802.3by 110-10.

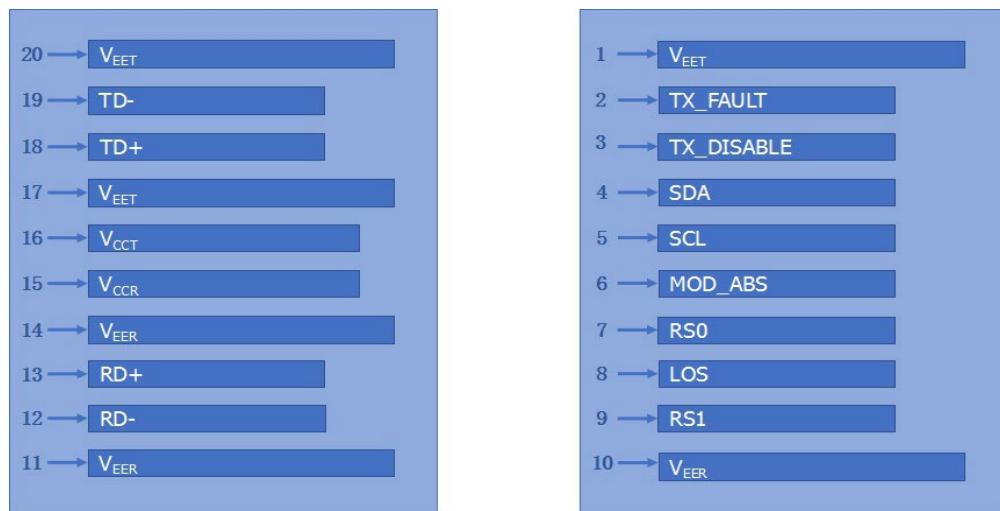
## Pin Descriptions

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:

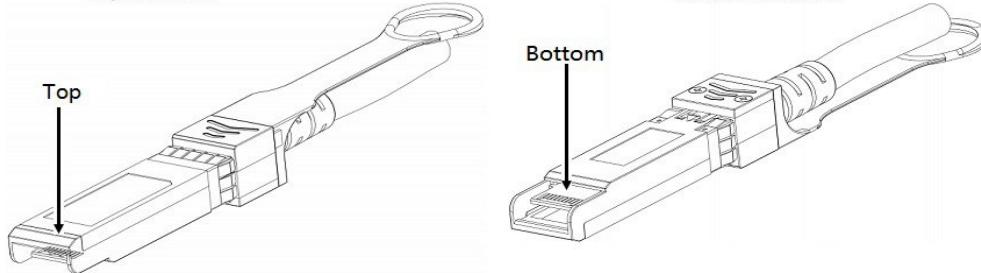
1. The circuit ground is isolated from the chassis ground.
2. Should be pulled up with  $4.7\text{k}\Omega$  to  $10\text{k}\Omega$  on the host board to a voltage between 2V and 3.6V.

## Electrical Pad Layout

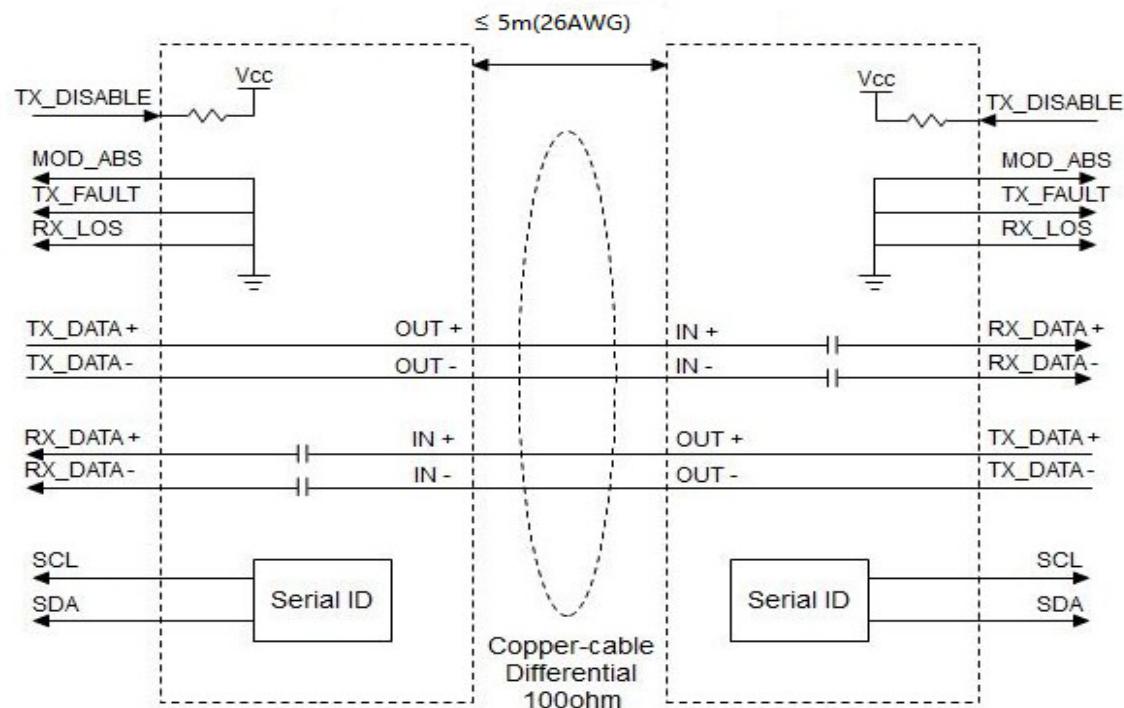


Top of Board

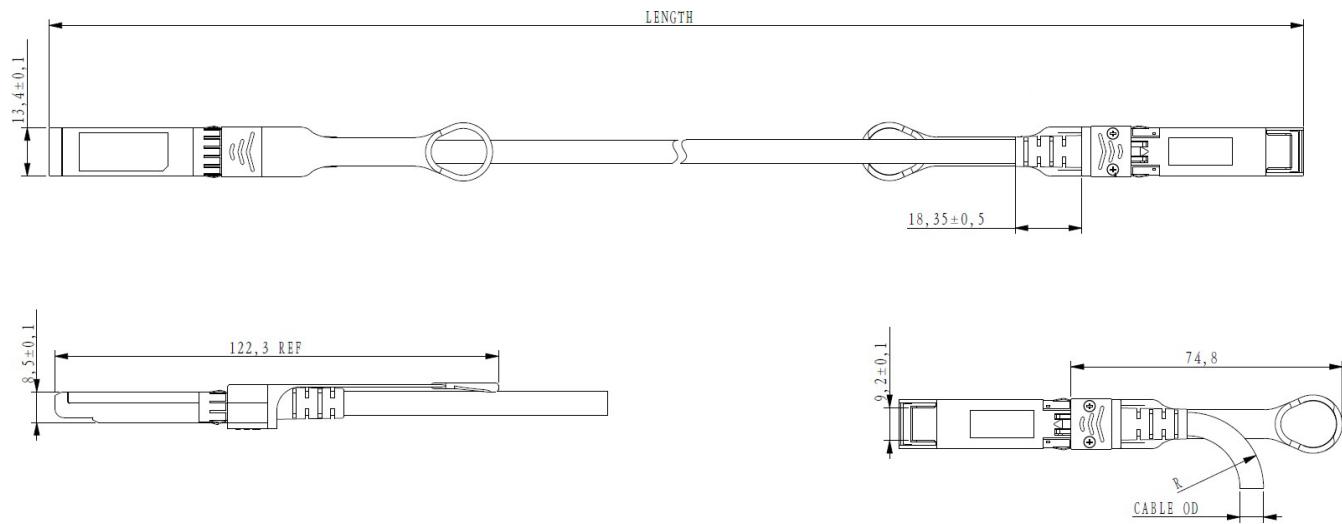
Bottom of Board



## Block Diagram of Transceiver



## Mechanical Specifications



Unmarked Tolerance  $\pm 0.2$   
Unit: mm