

NXDA-QQ28-05M

QSFP28 100GBASE-CR4 0.5m DAC Twinax

Features

- QSFP28 Form Factor
- 100 Gb/s bitrate
- Up to 0,5 m over DAC Twinax
- Up to 2,5W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring



Applications

- 100GBase 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	2,5	W

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Tc	0		70	°C	1
Storage Temperature	Tstg	-40		85	°C	2
Input Voltage	Vcc	3.14	3.3	3.46	V	3
Cable Impedance	Z	90	100	110	Ω	
Product Weight	GD		145	g/PCS		4
Cable Weight	GC		64	g/M		
Dust Cap Weight	GQ		1.40	g/PCS		

Notes:

1. Case temperature.
2. Ambient temperature.
3. For electrical power interface.
4. For example, the weight of a 5m cable with 26AWG is: $190 + 110 * (5-1) + 1.40 * 2 = 632.8g$.

Cable Dimensions and Insertion Loss Level

Length	Wire Gauge AWG	Cable Diameter OD (mm)	Minimum Bending Radius R (mm)	Insertion Loss Level
0.5m	30WG	6.9	35	CA-25G-N

Note:

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

Length Tolerance

Nominal Length L1 (m)	Tolerance Range $\pm$ (cm)
$L1 \leq 3$	2

Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
1	GND	Module Ground.	5
2	Tx2-	Transmitter Inverted Data Input. LAN2.	
3	Tx2+	Transmitter Non-Inverted Data Input. LAN2.	
4	GND	Module Ground.	5
5	Tx4-	Transmitter Inverted Data Input. LAN4.	
6	Tx4+	Transmitter Non-Inverted Data Input. LAN4.	
7	GND	Module Ground.	5
8	ModSelL	Module Select Pin. The module responds to 2-wire serial communication when low level.	1
9	ResetL	Module Reset.	2
10	VccRx	+3.3V Receiver Power Supply.	
11	SCL	2-Wire Serial Interface Clock.	
12	SDA	2-Wire Serial Interface Data.	
13	GND	Module Ground.	5
14	Rx3+	Receiver Non-Inverted Data Output. LAN3.	
15	Rx3-	Receiver Inverted Data Output. LAN3.	
16	GND	Module Ground.	5
17	Rx1+	Receiver Non-Inverted Data Output. LAN1.	
18	Rx1-	Receiver Inverted Data Output. LAN1.	
19	GND	Module Ground.	5
20	GND	Module Ground.	5
21	Rx2-	Receiver Inverted Data Output. LAN2.	
22	Rx2+	Receiver Non-Inverted Data Output. LAN2.	
23	GND	Module Ground.	5
24	Rx4-	Receiver Inverted Data Output. LAN4.	
25	Rx4+	Receiver Non-Inverted Data Output. LAN4.	
26	GND	Module Ground.	5
27	ModPrsL	The module is inserted into the indicator pin and grounded in the module.	3
28	IntL	Interrupt.	4
29	VccTx	+3.3V Transmitter Power Supply.	
30	Vcc1	+3.3V Power Supply.	
31	LPMODE	Low-Power Mode.	5
32	GND	Module Ground.	5
33	Tx3+	Transmitter Non-Inverted Data Input. LAN3.	
34	Tx3-	Transmitter Inverted Data Input. LAN3.	

35	GND	Module Ground.	5
36	Tx1+	Transmitter Non-Inverted Data Input. LAN1.	
37	Tx1-	Transmitter Inverted Data Input. LAN1.	
38	GND	Module Ground.	5

Notes:

1. ModSelL is the input pin. The module responds to 2-wire serial communication commands when it is held low by the host. ModSelL allows multiple QSFP modules to be used on a single 2-wire interface bus. If ModSelL is "high," the module will not respond to any 2-wire interface communication from the host. ModSelL has internal pull-up resistors in the module.
2. The module restart pin, when the low level on the ResetL pin lasts longer than the minimum pulse length, resets the module and restores all user modules to their default state. When performing reset device, the host should ignore all status bits. Until the module reset interrupt is completed, please note that during hot plugging, the module will issue this information to complete the reset interrupt without resetting.
3. This pin is active "high," indicating that the module is running under a low-power module.
4. IntL is the output pin, which is the open collector output and must be pulled up to Vcc on the motherboard. When it is "low," it indicates that the module may malfunction. The host uses a 2-wire serial interface to identify the interrupt source.
5. The circuit ground is internally isolated from the chassis ground.

Electrical Pad Layout



Mechanical Specification



All dimensions are ± 0.2 mm unless otherwise specified.
Unit: mm