

# NXQ4-1310-S1D

## QSFP+ 40GBASE-LR4 1310nm 10km Singlemode

### Features

- QSFP+ Form Factor
- 40 Gb/s bitrate
- Up to 10 km over Singlemode
- LC connector
- 1310 nm, DFB laser, PIN photodiode
- Up to 3.5 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring



### Applications

- 40GBase Ethernet
- Access and Enterprise

### Optical specifications

**Optical budget EOL : 6.7 dB**

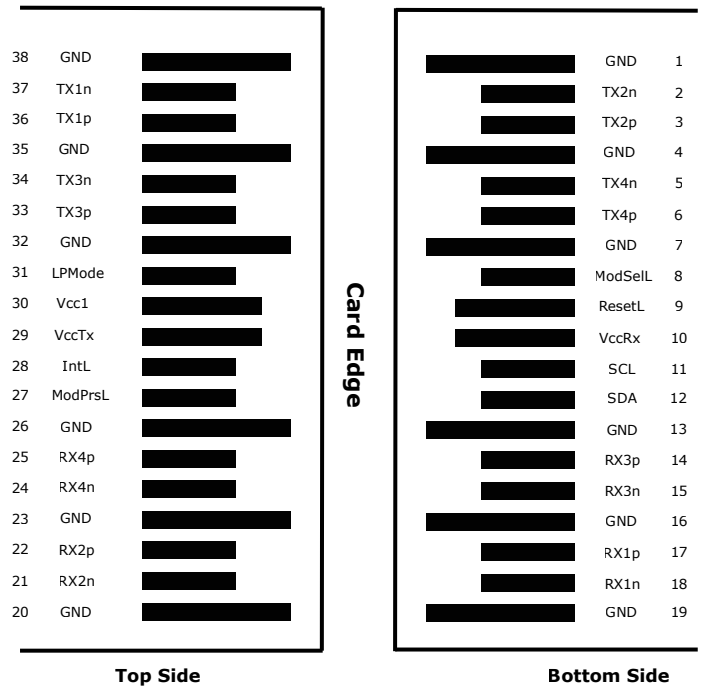
### Transmitter & Receiver optical Specifications

Parameter	Min	Max	Unit
Tx Power	-7	3.2	dBm
Rx Sensitivity	-13.7	2.3	dBm

### Electrical & Environmental Specifications

Parameter	Value	Unit
Power supply voltage	3.3	V
Power supply current	1060.61	mA
MTBF	1863724.47	hrs
Relative humidity	5~85	%

## Transceiver electrical pad layout



## Module electrical PIN definition

QSFP+ - SFF-8436

Pin	Symbol	Description	Note
1	GND	Ground	1
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non-Inverted Data output	
4	GND	Ground	1
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non-Inverted Data output	
7	GND	Ground	1
8	ModSelL	Module Select	
9	ResetL	Module Reset	
10	VccRx	3.3V Power Supply Receiver	2
11	SCL	2-Wire serial Interface Clock	
12	SDA	2-Wire serial Interface Data	
13	GND	Ground	1
14	Rx3p	Receiver Non-Inverted Data Output	
15	Rx3n	Receiver Inverted Data Output	
16	GND	Ground	1
17	Rx1p	Receiver Non-Inverted Data Output	
18	Rx1n	Receiver Inverted Data Output	
19	GND	Ground	1
20	GND	Ground	1

Pin	Symbol	Description	Note
21	Rx2n	Receiver Inverted Data Output	
22	Rx2p	Receiver Non-Inverted Data Output	
23	GND	Ground	1
24	Rx4n	Receiver Inverted Data Output	1
25	Rx4p	Receiver Non-Inverted Data Output	
26	GND	Ground	1
27	ModPrsl	Module Present	
28	IntL	Interrupt	
29	VccTx	3.3V power supply transmitter	2
30	Vcc1	3.3V power supply	2
31	LPMODE	Low Power Mode	
32	GND	Ground	1
33	Tx3p	Transmitter Non-Inverted Data Input	
34	Tx3n	Transmitter Inverted Data Output	
35	GND	Ground	1
36	Tx1p	Transmitter Non-Inverted Data Input	
37	Tx1n	Transmitter Inverted Data Output	
38	GND	Ground	1

### Note

1. GND is the symbol for signal and supply (power) common for QSFP+ modules. All are common within the QSFP+ module and all module voltages are referenced to this potential unless otherwise noted. Connect these directly to the host board signal common ground plane.
2. VccRx, Vcc1 and VccTx are the receiving and transmission power suppliers and shall be applied concurrently. Recommended host board power supply filtering is shown below. VccRx, Vcc1 and VccTx may be internally connected with in the QSFP+ transceiver module in any combination. The connector pins are each rated for a maximum current of 500mA.