

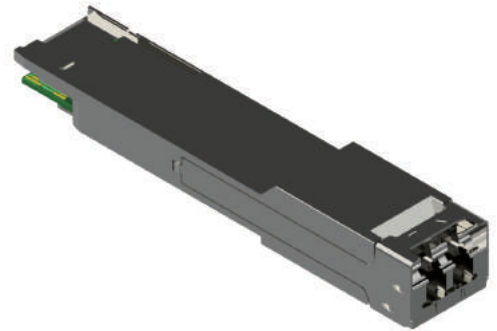
Low cost

400G PAM4 Optical Transceiver



Summary

NEON Photonics' 400G PAM4 optical transceiver is designed for 400 Gigabit Ethernet interface, QSFP-DD MSA over single mode fiber 2km. The specifications are compliant with the 400G FR4 Technical Specification of 100G Lambda MSA. Its key differentiator is a highly compact optical and electrical design technology.



Key Features

- 100G x 4ch PAM4 optical I/F
- 50G x 8ch PAM4 Electrical I/F
- Lens-less optical coupling technology
- Compact package technology
- QSFP-DD compatible
- Cost competitiveness
- Capacity(multi-channel) scalability
- Availability to user defined design

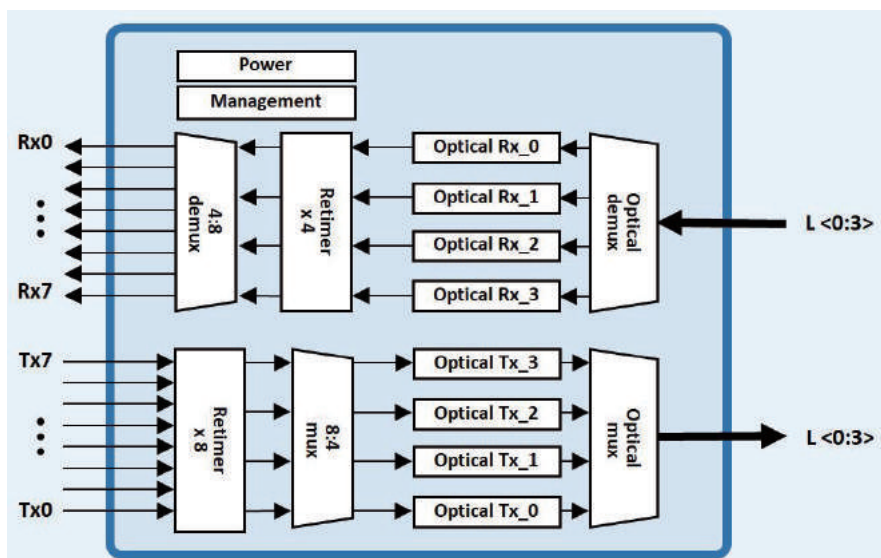


Application

- Datacenter (400G FR-4)
- Optical connectivity



Block Diagram





Specification

TX Parameter	Unit	Specification
PAM4 Signaling rate, each lane (range)	GBd	53.125 ± 100 ppm
Lane wavelengths (range)	nm	1264.5 to 1277.5
		1284.5 to 1297.5
		1304.5 to 1317.5
		1324.5 to 1337.5
Average launch power, each lane (min)	dBm	-3.3
Transmitter and dispersion penalty eye closure for PAM4 (TDECQ), each lane (max)	dB	3.4
Extinction ratio (min)	dB	3.5
RIN _{17.1} OMA (max)	dB/Hz	-136
Optical return loss tolerance (max)	dB	17.1

*Available for customized specification.

RX Parameter	Unit	Specification
PAM4 Signaling rate, each lane (range)	GBd	53.125 ± 100 ppm
Lane wavelengths (range)	nm	1264.5 to 1277.5
		1284.5 to 1297.5
		1304.5 to 1317.5
		1324.5 to 1337.5
Damage threshold, each lane (min)	dBm	4.5
Average receive power, each lane (max)	dBm	3.5
Average receive power, each lane (min)	dBm	-7.5
Receiver sensitivity (OMA outer), each lane (max)		
Stressed receiver sensitivity (OMA outer), each lane (max)	dBm	-2.6

*Available for customized specification.