800G OSFP112DD MMF MPO 850nm

Variants

50M -OM4 100M-OM4

Details

Product Overview

The **800G OSFP112DD SR8** transceiver is an advanced parallel-optics module designed for ultra-high-density data center links.
It supports **8×100 Gbps PAM4 channels** in each direction, offering a total bandwidth of **800 Gbps** over **OM4 multimode fiber**.
Based on the **OSFP112 Double-Density (DD)** platform, it delivers outstanding electrical performance, efficient heat dissipation, and full CMIS management compatibility.
This module is ideal for short-reach interconnects between switches, routers, and AI/ML clusters where bandwidth and density are critical.

Main Features

800 Gbps total bandwidth (8×100 Gbps lanes, PAM4 modulation)

Supports IEEE 802.3db 800GBASE-SR8 optical interface

850 nm VCSEL laser and high-sensitivity PIN photodiodes

Dual **MTP/MPO-12** optical connectors

Up to **100 m over OM4 multimode fiber** (optimized for 50 m / 100 m applications)

Low power consumption — typically **? 16 W**

Hot-pluggable OSFP112DD form factor

Integrated digital diagnostics via CMIS v4/5

Reliable operation in **0 °C ~ 70 °C** case temperature range

Industry-standard I²C management interface

RoHS and IEC 60825-1 Class 1 laser compliant

Applications

800 Gigabit Ethernet short-reach links

Spine-to-leaf and TOR connections in hyperscale data centers

AI and HPC cluster interconnects

InfiniBand NDR / 2×NDR parallel transmission

Cloud and enterprise aggregation networks

Technical Highlights

Parameter	Description
Form Factor	OSFP112 Double Density
Optical Interface	Dual MPO-12 (SR8, 2×SR4 internal layout)
Transmission Rate	8 × 106.25 Gbps (PAM4)
Wavelength	850 nm
Modulation Format	PAM4
Fiber Type	OM4 / OM5 Multimode
Maximum Reach	50 m (OM4) / 100 m (OM4, typical)
TX Type	VCSEL array
RX Type	PIN photodiode array
Power Supply	3.3 V ± 5 %
Power Consumption	? 16 W (typical 14 W)
Case Operating Temperature	0 °C ~ 70 °C
FEC Requirement	RS-(544, 514) FEC on host
Management Interface	CMIS v4.0 / v5.0 over I²C
DDM / DOM	Supported (TX power, RX power, temp, voltage)

Optical Characteristics (Per Lane)

Parameter	Min	Typical	Max	Unit
Central Wavelength	840	850	860	nm
Average Launch Power	–4.6	—	+4.0	dBm
OMA (Outer Modulation Amplitude)	–2.6	—	+3.5	dBm
Extinction Ratio	2.5	—	—	dB

Transmitter Dispersion (TDECQ)	—	—	4.4	dB
Receiver Sensitivity (OMA)	—	—	–4.4 to –6.2	dBm
Receiver Overload	—	—	+4.0	dBm