800G OSFP112DD SMF (OS2) MPO 1310 nm

Variants

2km 1km 500M

Details

800G OSFP112-DD Optical Transceiver | SMF (OS2) | MPO | 1310 nm

The 800G OSFP112-DD optical transceiver is a high-performance, hot-pluggable module designed for ultra-high bandwidth data center, AI/ML clusters, and DCI applications. It supports parallel transmission using 8 × 100 Gbps PAM4 lanes over single-mode fiber.

Operating in the 1310 nm O-band, this module ensures low latency, high efficiency, and reliable performance for short to medium reach optical links. It uses an MPO-16 APC interface for structured and high-density fiber connectivity.

General Overview

OSFP112 Dual-Density hot-pluggable optical module

Parallel 8 × 100 Gbps lanes using PAM4 modulation (106.25 Gb/s per lane)

Operates at 1310 nm O-band wavelength

MPO-16 (APC) interface with 8 Tx and 8 Rx fibers

Supports IEEE 802.3df and CMIS 5.x management

Optimized for AI/ML workloads and high-capacity DCI interconnects

Key Highlights

Hot-pluggable OSFP form factor with integrated heatsink design

Electrical interface: 8 × CAUI-112 (100 ? AC coupled)

Power supply: 3.3 V (±5%)

Power consumption: ? 14–16 W (depending on variant)

Operating temperature: 0°C to +70°C

Compliant with RoHS 2.0 and IEC Class 1 laser safety

Optical Performance

Wavelength	1310 nm (O-band)
Modulation Format	PAM4, 53 GBd per lane
Tx OMA (Outer)	–2.9 to +4.0 dBm
Receiver Sensitivity	–5.9 dBm (DR8) / –4.5 dBm (FR8)
Tx Dispersion Penalty	? 3.5 dB
Extinction Ratio	? 3.5 dB

Distance Variants

Variant	Optical Type	Fiber	Reach	Application
DR8	1310 nm Parallel SMF	OS2	500 m	Rack-to-rack / Row links
XDR8	Extended DR8	OS2	1 km	Building / Campus links
FR8	1310 nm Parallel SMF	OS2	2 km	Aggregation / Metro DC links

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