

Optical Interconnect Standard Module



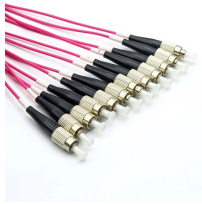
Overview

The OCI specification is architected to be power, latency and cost optimized. It combines non-return to zero (NRZ) modulation and wavelength division multiplexing (WDM) optical technology and shifts the connectivity paradigm from a module-centric to a silicon-centric model. XPO represents a new class of optical pluggable module designed specifically for next-generation AI data center fabrics. 8Tbps of bandwidth using 64 electrical lanes and incorporates an integrated liquid-cooled cold plate capable of supporting 400W+ module power. Amphenol XPO-LPO optical transceiver delivers next-generation 12.8T Ethernet connectivity with 224 Gb/s per lane. This OpenVPX series of active. Traditional high-speed interconnect solutions typically rely on digital signal processors (DSP) and clock data recovery circuits (CDR) to perform signal equalization, retiming, and compensation to counteract attenuation and distortion during long-distance electrical transmission.

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We begin by identifying where optical links are most beneficial in AI compute architectures. This is followed by an overview of key link types and their respective strengths.



Exploring optical interconnects for AI data centers: LPO for low-power, short-distance links, NPO for high-density, near-package connections, and CPO for ultra-high-bandwidth co ...



Each XPO module delivers 12.8Tbps of bandwidth using 64 electrical lanes and incorporates an integrated liquid-cooled cold plate capable of supporting 400W+ module power consumption.



The ELS pluggable module houses high-power continuous-wave lasers coupled to CPO optical engines via optical fibers, supporting reliable ELS optical connectivity.



This low cost, dense optical interconnect technology combined with recent advances next generation, high bandwidth, SM, silicon photonic based Tx/Rx devices is enabling unprecedented bandwidth ...



Active blind mate optical interconnect for VPX systems that includes a fixed plug-in module connector and a floating backplane connector compatible with proposed ...



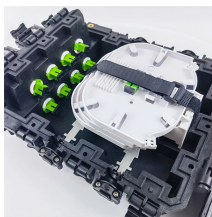
Leveraging LPO technology, the module provides ultra-low-latency, power-efficient optical links tailored for AI, high-performance computing, and hyperscale data center applications.



The Marvell data center interconnect portfolio includes COLORZ®, COLORZ® 400 and COLORZ® 800 modules in multiple form factors to connect regional data centers.



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Efficient cost-effective optical integration approaches are necessary for optical interconnects to realize their potential for improved power efficiency at higher data rates



Cisco offers a comprehensive range of pluggable optical modules for the Cisco ONS family of multiservice platforms. The wide variety of modules gives ...

Contact Us

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