

Price list for high-temperature resistant LPO optical modules for data center interconnection



AI Overview

High-temperature resistant tunable optical modules for data center interconnection range from \$2,000 for short-reach 400G modules to over \$130,000 for OEM coherent ZR+ modules, with industrial-grade SFP+ and QSFP-DD options available for harsh environments.

Overview of High-Temperature Tunable Modules

High-temperature or industrial-grade optical transceivers are designed to operate reliably in extreme environments, including outdoor cabinets, vehicles, and unprotected sites, where temperatures can exceed standard data center ranges. These modules maintain data integrity and stable connectivity under thermal stress, vibration, and electromagnetic interference. Common types include:

- SFP/SFP+:** Typically support 1-10 Gbps, widely available in industrial-grade variants, with operating case temperatures often exceeding standard ranges.
- QSFP28/QSFP-DD:** Support 100G-400G, with tunable options for C-band wavelengths (1528-1566 nm) and ± 2.5 GHz stability.
- 400G/800G QSFP-DD:** Used for high-speed DCI, with prices ranging from \$1,400-\$1,800 for short-reach SR8 modules to over \$130,000 for OEM coherent ZR+ modules.

Price Ranges

- Short-Reach 400G SR8 Modules:** \$1,400-\$1,800 from third-party vendors, suitable for in-rack or cross-row connections.
- DR4/FR4 Modules:** Mid-range modules bridging data center rows, with competitive third-party pricing.
- LR4, ZR, ZR+ Modules:** Long-reach coherent optics for DCI, OEM prices can exceed \$10,000-\$130,000 depending on distance and performance.
- 800G QSFP-DD Modules:** Early-stage market, third-party options cost roughly 60-70% of OEM list prices, with thermal and DSP constraints affecting deployment.

Industrial-Grade Considerations...

Article Content

Arista LPO-800G-2DR4 Compatible 800G OSFP

NADDOD OSFP-800LPO-2DR4 is a cost-effective module with high performance, which is optimized for AI Datacenter, supporting data rate of 8x112Gb/s PAM4

Price list for LPO optical routers for data center interconnection ...

It includes historical shipment data and forecasts for units, prices, and sales of these products to each of the three main market segments: Cloud data centers, Enterprise and Telecom networks.

Built for Interop: LPO+ Link Training for the Data Center

Higher level integration drives NP innovation Linear pluggable optics adoption will make major strides this year as more hyperscalers and the data

CPO (Co-Packaged Optics): A Key Technology Path for

Co-Packaged Optics (CPO) is emerging as a critical technological path for optical interconnects in AI data centers. This article delves into the

Broadcom CPO: Highest Power Efficiency and

Co-Packaged Optics (CPO) is an advanced integration of optics and silicon on a single packaged substrate addressing interconnect bandwidth and

LightCounting :: March 2025 Ethernet Optics

It includes historical shipment data and forecasts for units, prices, and sales of these products to each of the three main market segments: Cloud data centers, Enterprise and Telecom networks.

Linear Optics and CPO Support Power Conservation in

Linear optics and CPO offer new strategies in efforts to manage the environmental impact of AI data centers.

Data Center Optical Interconnects: LPO and CPO

LPO is poised to dominate short-reach, cost-sensitive applications within data centers, while CPO will lead in high-performance, long-haul scenarios. As the

LPO MSA Announces Release of Specification for Linear Pluggable Optical ...

OFC2025, San Francisco -- The LPO MSA (Linear Pluggable Optics Multi-Source Agreement) Group announced today the completion and availability of the 100 Gb/s per lane Linear

Comparing DAC/AOC Cables vs. DSP/LPO Optical

Explore the differences between DAC/AOC cables and DSP/LPO optical modules for data center network interconnects. Learn about the

Adtran sets intra-data center benchmark with all-new

Adtran today launched LiteWave800™, an ultra-low-power 800Gbit/s DR8 linear pluggable optics (LPO) module engineered to help data centers

FiberEdge® & DirectEdge™ | Signal Integrity

With Semtech's FiberEdge® and DirectEdge™ portfolios™, module manufacturers can deploy high-bandwidth connectivity solutions into current and next

What is LPO Optical Module? | FiberMall

As the AIGC wave progresses, the data center optical network will advance to 800G. The golden age of LPO is approaching.

Exploring LPO Linear-Drive Optical Modules: A Modern

LPO (Linear-Drive Pluggable Optics) optical modules utilize linear drive technology to enhance data transmission efficiency while lowering power

Co Packaged Optics (CPO) – Scaling with Light for the Next Wave of ...

Co-Packaged Optics (CPO) has long promised to transform datacenter connectivity, but it has taken a long time for the

LPO vs CPO: Understanding the Future of Data Center Optical ...

LPO, or Linear Drive Pluggable Optics, simplifies optical modules by removing the DSP entirely, relying on host ASICs for analog signal processing. It retains the traditional pluggable form

High Quality Optical Module Wholesaler

By seamlessly integrating advanced silicon photonics, ultra high speed circuit and packaging designs, Hyper Photonix offers a comprehensive range of high-speed optical transceivers – with data rate

What is LPO (Linear-drive Pluggable Optics)?

LPO is short for Linear Pluggable Optics (or Linear-drive Pluggable Optics), it is a potential technology to satisfy the low power consumption and high bandwidth

What Is LPO Optical Transceiver Module? 2024 Complete Guide

Learn what LPO optical transceiver modules are, their advantages over DSP/CPO, challenges, and how Weunion's LPO solutions power 800G data center deployments.

XPO-LPO Optical Transceiver | Optical Interconnect

Amphenol XPO-LPO optical transceiver delivers next-generation 12.8T Ethernet connectivity with 224 Gb/s per lane. Leveraging LPO technology,

CPO vs LPO: A Comprehensive Comparison for Next

This article provides a detailed technical comparison between CPO and LPO technologies, exploring their working principles, advantages,

OCP 2025: FiberMall Showcases Advances in 1.6T and

FiberMall provided comprehensive support for optical connectors and fiber components under CPO architectures, encompassing CPO/NPO

Linear pluggable optics for data centers

Half-Retimed Linear Optics creates an easier composite channel, allowing greater margin and robustness Shorter electrical Establishing compliant interfaces allows multiple vendors to

LPO: Leading Low-Power 800G Optical Communication

LPO (Linear-drive Pluggable Optics) refers to a pluggable optical module that uses only linear analog components in the data link, eliminating the

Price list for LPO high-speed optical and electrical connections for ...

The LPO MSA develops electrical and optical interoperability specifications for a diversity of high-density networking equipment and pluggable optical modules based on LPO technology

LPO and CPO: A Pivotal Shift and Synergistic Evolution

Optical transceivers, optical DSPs (oDSPs), and switch ASICs are the core components of data center optical interconnects. The emergence of LPO

Webinar Recap: Linear Pluggable Optics – The low

Discover the advantages of Linear Pluggable Optics (LPO) for AI and data centers, focusing on lower power consumption, reduced latency, and cost

LPO & Low-Power Optics Guide 2025 | Data Center

Complete guide to Linear Pluggable Optics (LPO) for data centers. Learn how LPO reduces power in 400G/800G networks for AI/ML workloads.

Contact Us

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