

Price list for low-noise active optical modules for data center interconnects



Article Overview

Low-noise, low-power active optical modules for data center interconnects typically range from \$200–\$1,500 per module depending on speed, reach, and form factor, with LPO modules offering the lowest power consumption at 3–5W per 400G/800G module.

Overview of Low-Power Active Optical Modules

Linear Pluggable Optics (LPO) are designed for energy-efficient, high-speed interconnects in hyperscale and AI/ML data centers. LPO modules eliminate onboard DSPs, relying on switch ASICs for signal processing, which reduces power consumption by up to 50% compared to traditional DSP-based optics. Typical power draw for 400G/800G LPO modules is 3–5W, compared to 8–12W for conventional DSP optics, making them ideal for dense rack-to-rack or pod-to-pod interconnects within the same facility (VitexTech). Cisco Coherent Pluggable Optics provide low-noise, long-reach connectivity for data center interconnects over distances from 40 km to over 1,000 km. These modules integrate silicon photonics and low-power DSP ASICs to reduce energy use, cooling, and footprint by over 80%, while supporting 400G signals in QSFP-DD form factors (Cisco). Standard Active Optical Modules (AOC) and optical transceivers (SFP28, QSFP28, QSFP-DD, OSFP) are available for short- to medium-range links (1–30 m for AOCs, 100 m to multi-km for fiber-based modules). Prices vary by speed and reach:

- 100G QSFP28 AOC: ~\$200–\$400 per module...

Article Content

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But 400G optical modules will be focused on the needs of the data center and its associated challenges: high faceplate

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Key Takeaways: Optical Modules Market Global optical modules market valued at \$14.8 billion in 2025 Expected to reach \$39.6

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The Cisco Advantage Cisco offers a vertically integrated solution from the optical interconnects to data center

Optical Interconnect Market Size, Share & Trends

Optical interconnects, which use light to transmit data between components in computing systems, are becoming

How optical interconnect and optical processing are changing data centers

Optical communication has the advantage of high bandwidth, low latency, and low energy loss. Although it was initially

Co-packaged datacenter optics: Opportunities and challenges

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The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics

800G Data Center Interconnect Guide: DAC, AEC, AOC & Optical

DAC · ACC · AEC · AOC · Optical Transceivers — the complete engineer's framework for choosing the right

aaai data center optical module: 2026 Guide

Find top aaoi data center optical modules with 100G/400G support, low power, and DDM. Verified suppliers, MOQ <

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Opportunities in networking optics: Boosting supply for data centers Potential shortfalls in networking optics supply could hinder data

Recent advances in optical technologies for data centers: a review

Modern data centers increasingly rely on interconnects for delivering critical communications connectivity among numerous servers,

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Lowers equipment costs by replacing stand-alone optical networking devices with a pluggable coherent optical

Optical Interconnect in AI Data Centers Market Forecast 2035

Rising Demand for High-Speed, Energy-Efficient Pluggable Optical Modules in AI and Data Centers Pluggable optical

Optical Switching Data Center Networks: Understanding Techniques

This paper first summarizes the topologies and traffic characteristics in data centers and analyzes the reasons and importance of

QSFP-DD Price Guide 2026: 400G/800G Costs & TCO Analysis

QSFP-DD price guide with 400G/800G module costs, OEM vs third-party comparison, volume discounts, and 3-year

What is Data Center Interconnect (DCI) and Why Optical Modules Are ...

Discover what DCI is and how optical modules deliver high-speed, secure, and reliable connectivity between data

Optical interconnect research program

Optical interconnects: pre-competitive, long-term research program Imec's optical interconnect research program develops the key

Dac Vs Aoc Vs Optical Modules: Cost & Performance Comparison For

This comparison focuses on three dominant choices— DAC/AOC pairings (Direct Attach Copper and Active Optical Cables) and

Silicon Photonics Market Size, Share and Trends

The silicon photonics market share has been growing strongly as demands for high-bandwidth, low-latency and energy-efficient data

Semtech Data Center Solutions | High-Speed Optical

Our solutions support both single-mode and multi-mode fiber for AI and cloud data centers, delivering up to

Skyworks | Data Center

Get a quote for the specific products and quantities you need. Consult with your Skyworks' sales representative or distributor to find

800G Optical Module Cost Analysis | TCO Optimization Guide

Complete guide to 800G optical module costs and TCO optimization for AI data centers. Includes pricing analysis,

Optical Interconnect Technology Analysis: LPO, NPO,

Exploring optical interconnects for AI data centers: LPO for low-power, short-distance links,

Understanding LPO Transceivers in Modern Data Centers

LPO transceivers cut power use, lower latency, and boost reliability in data centers, making

Infraeo: AI Cluster Connectivity Solution Engineering

Swappable optical modules for flexible connectivity. Great for scalable network design. Low power LPO

Beyond 200-Gb/s O-band intensity modulation and direct detection optics ...

The experimental results reveal that the joint LUT-based predistortion and DRE effectively mitigate the PDE and

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

Best audio cables 2026: our expert picks of quality interconnects

This trio represents the best-value audio cables our expert in-house reviews team has tested and span various

Top Optical Transceiver Modules for Data Center Applications

Introduction: Why Optical Modules Are Critical to Data Center Infrastructure In today's cloud-first, AI-driven, and 5G

Data Center Interconnect with Cisco Coherent Pluggable Optics

The solution simplifies transport between data centers by replacing stand-alone optical transponders with the Cisco® portfolio of

Optical Interconnects Optimize Datacenters | DigiKey

The need for optical interconnects is growing to support the demands for reliable and low latency communications in

MOSAIC MicroLED Optical Interconnects For Data Centers

Through architectural restructuring and component-level innovations, the technology is expected to break the inherent

Scale-Up and Scale-Out IP for Optical Interconnect for Accelerated ...

Optical connectivity is foundational to modern data centers, enabling high-bandwidth, low-latency data movement

Linear pluggable optics for data centers

Half-Retimed Linear Optics creates an easier composite channel, allowing greater margin and robustness Shorter electrical

FS Transceivers | Premium Optical Transceivers & Fiber Solutions

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