

How much does a pluggable optical module cost



AI Overview

Plug-in optical modules range from around \$20 for basic 1G SFP modules to several thousand dollars for high-speed 400G and coherent long-haul modules. Typical Price Ranges

1G SFP modules: Basic single-mode or multi-mode SFP modules typically cost \$20-\$50 per unit, suitable for short-distance connections in enterprise networks.

10G SFP+ modules: These modules generally range from \$50-\$150, depending on distance and vendor compatibility.

25G SFP28 modules: Prices are higher, usually \$100-\$300, reflecting higher bandwidth and data center deployment requirements.

40G QSFP/QSFP+ modules: These modules cost approximately \$200-\$500, depending on reach and optical type.

100G CFP/QSFP28 modules: Prices range from \$500-\$1,500, with variations for short-reach, long-reach, or coherent optics.

400G QSFP-DD and 800G modules: High-speed modules for hyperscale data centers or telecom networks can cost \$2,000-\$10,000+, especially for coherent or long-haul variants.

Factors Affecting Price

Form Factor and Speed: Higher-speed modules (100G, 400G, 800G) and newer form factors like QSFP-DD or OSFP are more expensive due to advanced design and higher bandwidth capabilities.

Distance and Reach: Modules designed for long-haul or coherent transmission (e.g., ZR, Open ZR+) cost significantly more than short-reach modules.

Vendor and Compatibility: Branded modules from Cisco, Huawei, or Juniper often carry a premium, while third-party compatible modules may be cheaper.

Technology Integration: Modules with silicon photonics, co-packaged optics, or advanced modulation formats (PAM4) are priced higher due to enhanced performance and energy efficiency.

Market Context

The global pluggable optical module market was valued at \$9.8 billion in 2025 and is projected to reach \$26.4 billion by 2034, growing at a CAGR of 11.6%. This growth i...

Article Content

Co-packaged optics (CPO): status, challenges, and

Furthermore, nearly three-fourths of the datacenter traffic resides within datacenters. The conventional pluggable optics increases at a much

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 TCO analysis for data center buyers.

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Boost Connectivity with Reliable pluggable optic module Solutions for ...

Various pluggable optic module kinds, including single- and multi-mode fibers, serve distinct purposes. Because of their low attenuation, single-mode fibers are best for long-distance communication; multi

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LRO, LPO, and Silicon Photonics: Reducing Power Consumption in Optical ...

What is LPO (Linear Pluggable Optics)? LPO (Linear Pluggable Optics) transceivers lack full retiming (DSP) circuitry that is common in all prior generations of 400G, 800G and 1.6T optical

Optical Transceiver Modules Prices & Specifications

Optical Transceiver Modules/SFP, also called fiber optic transceiver or optical

The Rise of Co-Packaged Optics (CPO) and Silicon Photonics in

As generative AI models scale, traditional pluggable optical transceivers face a power-performance wall. Co-packaged Optics (CPO) and Silicon Photonics address this by integrating

Goldman Sachs sees 900% growth for AI optical

CPO and Pluggables to Coexist A key technology enabling this growth is Co-packaged Optics (CPO), which moves the optical engine next to the

Transceiver CBO AFCT-89WJDDZ QSFP28 100G fiber optic

Short description CBO AFCT-89WJDDZ is a QSFP28 fiber optic transceiver supporting 100G data rates. Designed for high-speed network links, it provides a compact module format for use in switches,

Goldman Sachs sees 900% growth for AI optical

Goldman projects CPO will contribute \$91 billion to the market by 2028. However, its adoption is not a zero-sum game against traditional pluggable

Fiber optic transceiver BlueOptics XCVR-010M31 | AiO.lv

The BlueOptics XCVR-010M31 1250 Mbit/s SFP 1310 nm is a single-port fiber optic transceiver module designed for use in standard SFP slots. Operating at a wavelength of 1310 nm and supporting a

Are Photonic Components the Next AI Data Center Bottleneck? The Optical ...

Lumentum Reports \$808 Million in Q3 FY2026 Revenue, Up 90% Year-over-Year; Photonic Components Shift from Peripheral Parts to Core Bottleneck in AI Data Centers. Analyzing

All AI Data Center Interconnects Will Be Optical Within

InP and SiPho join CMOS as critical technologies. Lasers, CPO and OCS will be everywhere (indium phosphide, silicon photonics, co-packaged

Coherent's \$23B Opportunity Lifted by NVIDIA's Optical

Coherent's market on track to reach \$23 billion as NVIDIA's Spectrum-6 and Kyber drive structural demand for co-packaged optics components.

Market Insights: 800G & 1.6T Silicon Photonics Optical

LPO is very cost-effective because it removes the DSP from the optical modules and transfers this function to the switch's DSP. This requires a

Transceiver CBO SFP-10G-BX-U 10G 1310 nm | AiO.lv

Short description CBO SFP-10G-BX-U is a 10G fiber optic SFP+ transceiver operating at 1310 nm. Designed for use in SFP+ compatible switches and routers, it enables high-speed single-mode links

200G/400G/800G Optical Transceiver Modules | FiberMall

200G/400G/800G optical module features up to 40km transmission distances using QSFP56/QSFP-DD footprints for data center interconnect applications - FiberMall

SFP+ CBO SFP-AOC-10G-15M 10Gbps 15m | AiO.lv

Active Optical Cable CBO SFP-AOC-10G-15M is a factory-assembled SFP+ direct-attach solution that delivers 10 Gbps connectivity over a 15-meter optical link. Built for data center and network

SFP Transceiver CBO SFP-1G-LH 1G 1310nm | AiO.lv

CBO SFP-1G-LH is a 1 Gigabit SFP transceiver module designed for single-mode fiber links at a wavelength of 1310 nm. The module provides a compact, hot-pluggable interface compatible with

Telecom Transceivers – pluggable modules, fiber-optic

This article introduces optical telecom transceivers — modules that integrate a transmitter (TOSA) and receiver (ROSA) to provide the complete physical-layer

Pluggable Optical Modules – GIGALIGHT

GIGALIGHT offers 10G to 800G rates immersion pluggable optical modules with SFP+, SFP28, QSFP+, QSFP28, QSFP56, OSFP-RHS, QSFP112, QSFP-DD and OSFP

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High-Speed Interconnects: Backend network requires high speed 100G/200G or 800G optics to connect servers and network switches. These high bandwidth connections are essential for handling the data

AI demand strains supplies of lasers, fiber, and other optical tech

Pluggable optical transceivers are a prime example. These stick-like modules connect servers together to enable high-speed communication between them, and AI data centers need

Optical Component Startup Tracker

The number of venture-backed optical component startups has exploded - the Optical Component Start-Up Tracker identifies these companies

Pluggable Optical Modules Market : Global Industry Analysis and ...

Explore the global Pluggable Optical Modules market with expert analysis on growth drivers, trends, key insights, and forecast outlook to 2036.

Optical Transceiver Pricing: Cost Ranges by Speed and

This article compares typical cost ranges across speeds and transceiver types, explains why prices vary, and gives practical guidance for choosing the right

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