How much does an optical module cost



Overview

100G QSFP28 Module Cost: Pricing Guide & Factors | VitexWe explained how cost is calculated for 100G QSFP28 optical modules based on a wide range of engine.

Key Takeaways

Optical module prices vary widely, typically ranging from a few dollars for basic 1G SFPs to over $1,500 for high-speed 800G modules, depending on speed, reach, and brand. Price Ranges by Module Type1G SFP Modules: Generic or compatible modules can cost $5–$25, while OEM-branded or industrial-grade modules may range $60–$120+ for short-reach enterprise links. 10G SFP+ Modules: Prices typically fall between $10 and $300, influenced by transmission distance, optical technology, and brand.

Short-range S

R modules are at the lower end, while long-range LR modules are more expensive. 100G Modules: Compatible modules often cost $200–$500, while OEM modules can command higher premiums due to quality assurance and support. 400G Modules: Prices generally range $600–$800 for QSFP-DD modules, with OEM modules costing more depending on vendor and warranty.

800G Modules: High-end modules such as OSFP-FR4 can cost $1,500–$1,900, while lower-cost LPO modules without DSP are around $700–$900. Volume discounts are common for large orders.

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Factors Influencing Cost

Technology and Speed: Higher-speed modules (100G, 400G, 800G) require advanced DSPs, lasers, and photonic integration, increasing R&D and material costs.

Brand and OE

M Premium: Major vendors like Cisco or Juniper charge 20–50% more than third-party modules due to rigorous quality control, warranties, and support infrastructure. Transmission Distance and Reach: Long-reach modules (LR, ER, FR4) require precise optics and higher-quality components, raising prices. Market Dynamics: Supply chain disruptions, chip shortages, and demand surges can temporarily increase prices.

Volume Discounts: Large-scale purchases often receive 10–30% discounts depending on order size.

Practical Considerations

While OE

M modules are more expensive upfront, they may reduce total cost of ownership by minimizing downtime and maintenance. Compatible or third-party modules offer cost savings but may carry higher risk if warranties or support are limited. Planning purchases in advance and selecting vendors with certified products can help optimize cost-effectiveness.

Article Content

100G QSFP28 Module Cost: Pricing Guide & Factors | Vitex

We explained how cost is calculated for 100G QSFP28 optical modules based on a wide range of engineering, production, business, and external considerations. It''s best if you have a

Cost of optical module electronic chips | Weyland

In low-speed optical modules, their cost share is relatively low. However, in 400G, 800G, and future 1.6T optical modules, electronic chips can account for 20%–40% or more of total cost,

QSFP28 Price Guide 2026: 100G Transceiver Costs & TCO

How much does a QSFP28 module cost? The price of a QSFP28 module depends on the module type, reach, coding, temperature grade, warranty, order quantity, and supplier.

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

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This guide delivers clear, accurate pricing data. It breaks down the current costs for 400G and 800G modules, provides an objective comparison between OEM and third-party products,

Optical Module Procurement Guide

Purchasing an optical module means balancing the upfront price with whatever reliability exists should the module fail or require replacement. A focus on price can lead to undue stress on

Cost structure of optical module chips | Weyland

The overall cost of an optical module chip depends on material choices, design complexity, manufacturing processes, packaging, testing, and integration, all of which play a role in the final

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, cost comparison, vendor strategies, and ROI calculations for informed

Optical Transceiver Modules Prices & Specifications

Optical Transceiver Modules/SFP, also called fiber optic transceiver or optical transceiver, is a typically hot-pluggable device used in high-bandwidth data communications applications.

Optical Transceiver Pricing: Cost Ranges by Speed and Type

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

10G SFP Price Guide: How Much Does a 10G SFP Module Cost

Each category reflects a clear trade-off between distance capability, optical complexity, and cost, which directly shapes its market price. Below is a breakdown of the most common 10G SFP module types

Everything You Need to Know About Optical Modules

Optical modules are electronic devices used in communication systems to transmit optical signals. These modules convert electrical signals into optical

What Is An Optical Module?

Picking the right module depends on distance, speed, and system fit. Optical modules save energy and lower costs for growing networks. Industries like telecom, healthcare, and cloud

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Optical Module: A Comprehensive Analysis from Source

In conclusion, the choice of modulation method needs to take into account multiple factors, including transmission requirements, optical chip

Optical Module Market Size, Competitors & Forecast to 2032

The Optical Module Market, valued at USD 30.01B in 2026, is projected to reach USD 66.94B by 2032, growing at a 14.1% CAGR.

Deep Dive: Optical Module Market

Powering next-gen connectivity: How optical modules enable fast, reliable data transfer, and What are the opportunities for investors?

10G SFP+ Optical Module Costs And Technology

ETU-Link 10G SFP+ module excel in compatibility. Its optical modules are compatible with mainstream global network equipment brands and can be widely used in data centers,

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical modules typically have an electrical interface on the side that

The Evolution of Optical Modules: Powering the Future

We''ll examine Linear Pluggable Optics (LPO) and Linear Receive Optics (LRO) as cost-effective, low-power alternatives, discuss advanced cooling

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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