How much does a router s optical module cost

Overview

Optical Transceiver Pricing: Cost Ranges by Speed and TypeThis article compares typical cost ranges across speeds and transceiver types, explains why price.

Key Takeaways

Router optical modules typically range from $5 for basic 1G SFPs to several hundred dollars for high-speed 100G QSFP28 modules, depending on type, reach, and brand. Cost Overview by Module Type1G SFP Modules: Basic compatible modules can cost $5–$25, while OEM-branded or industrial-grade modules may range from $60–$120. 10G SFP+ Modules: Compatible short-reach modules often sell for tens of dollars, whereas OEM long-reach or special-spec modules can cost hundreds of dollars.

40G QSFP+ Modules: Prices vary widely depending on reach and vendor, typically ranging from $100 to $500 for standard modules, with longer-reach or OEM modules costing more. 100G QSFP28 Modules: OEM modules can cost $780–$2,200 per unit, while compatible third-party modules may be available for $35–$280, depending on reach and coding requirements.

Factors Affecting Price

Branding: OEM modules (Cisco, HPE, Juniper) are significantly more expensive than third-party compatible modules due to warranty, support, and verified compatibility. Speed and Reach: Higher-speed modules (40G, 100G) and long-reach or extended-temperature modules cost more due to advanced optics and design. Volume and Procurement: Bulk purchases can reduce per-unit cost, especially for third-party modules, while OEM discounts may be limited.

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Special Features: Coherent optics, DWDM compatibility, and software-configurable line rates increase module cost.

Practical Considerations

Compatibility: Third-party modules can offer substantial savings but require verification for switch/router compatibility. Warranty and Support: OEM modules often include full vendor support, which may be critical for enterprise or data center deployments. Deployment Scale: For large-scale deployments, third-party modules can reduce CAPEX by 70–90% without compromising performance.

In summary, router optical module costs vary widely, from a few dollars for basic 1G SFPs to over $2,000 for high-end 100G OEM modules, with third-party alternatives providing significant cost savings while maintaining similar performance.

Article Content

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

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

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,

What factors influence 400G optical transceiver modules price

Discover the key factors that drive 400G optical transceiver pricing—from form-factor and component costs to market dynamics and sustainability.

Why is There Such a Huge Variability in SFP+ Module Prices?

You can find SFP optical transceiver for as low as $10 or as high as several hundred dollars. When prices for seemingly similar products vary so much, buyers frequently ask themselves,

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

Optical Transceiver Modules Prices & Specifications

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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 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

Armored Fiber Optic Cables

Get diverse armored fiber patch cables for stronger protection of the optical fibers and stable transmission to support fiber optic cabling in harsh environments.

What is Optical Module A Simple Guide for Beginners

Fiber optic communication solves these problems by transmitting data using light signals through optical fiber. At the heart of this technology is the

Analyze The Cost Structure Of Optical Transceivers: Understand The ...

Summary: This article analyzes the cost components of optical transceivers, including material costs, manufacturing costs, R&D costs, and market costs. Understanding the cost structure of optical

Optical Transceiver Pricing: Cost Ranges by Speed and Type

See practical price ranges for 1G–100G optical transceivers, DAC/AOC options, and why cost varies by speed, reach and technology — buying tips included.

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

The price of a 10G SFP+ module typically ranges from low double digits to several hundred dollars, and in some cases even higher. This wide gap is not random—it is mainly driven by transmission

How Much Does a 10G SFP+ Optical Module Cost? Technology

Svelol 10G SFP+ Optical Modules: High Performance & Cost-Effective Solutions for Modern Networks Description: Explore Svelol''s 10G SFP+ optical modules —engineered for superior

How Much is a New Router? Your Complete Guide to Pricing and

Factors Influencing Router Prices When determining how much a new router will cost, several factors come into play. Understanding these will help you make a more informed decision: 1.

The 3 Best Budget And Cheap Routers of 2026

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The TP-Link Archer AX55 is the best budget router that we''ve tested. It''s a dual-band Wi-Fi 6 router with a businesslike design and compact size that

How Much Does It Cost to Run Fiber Optic Cable per

How Much Does Fiber Optic Installation Cost Per Foot? Cable Material Costs: Standard single mode fiber: $0.09-$1.49 per foot Multimode fiber

What Is An Optical Module?

An optical module converts electrical signals to light for fast, reliable data transfer in networks, essential for cloud computing, telecom, and data centers.

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

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

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