Price of optical module chips

Article Overview

Optical module chip prices range from around $15 for low-end 100G modules to over $1,300 for high-performance 800G modules.

Price Ranges by Module Type

o Low-end 100G modules: Starting at approximately $15-$20 per chip for procurement-friendly or prototype options, suitable for small-scale or industrial applications (e.g., 100G QSFP AOC) .
o Standard 400G modules: Typically priced between $600-$800 per chip, depending on vendor, technology, and volume .
o High-end 800G modules: Prices range from $700-$1,900, with premium options for AI data centers or long-reach applications (e.g., OSFP-FR4 or QSFP-DD-DR8) .

Factors Influencing Price
o Technology and Speed: Higher-speed chips (400G-800G) require advanced photonic integrated circuits, tunable lasers, and digital signal processing, which significantly increase cost .
o Vendor Tier: OEM modules from brands like Cisco or Arista can command a 30-50% premium over third-party compatible modules .
o Volume Discounts: Bulk orders reduce per-unit cost, with discounts of 10-30% for orders exceeding 1,000-5,000 units .
o R&D and Materials: Costs of wafers, lasers, modulators, and precision manufacturing contribute heavily to the final price, especially for cutting-edge silicon photonics chips .
o Customization: Special wavelengths, extended temperature ranges, or additional testing can add 15-30% to the base price .

Summary

For a single optical module chip, prices vary widely based on speed, technology, vendor, and order volume. Low-end 100G chips can be as inexpensive as $15-$20, mid-range 400G chips around $600-$800, and high-performance 800G chips can exceed $1,300, particularly for AI or long-reach applications . Understanding these factors is essential for budgeting and procurement planning in data centers or telecom networks.

With strong in-house capabilities in optical chip design and packaging, the company delivers 100G to 800G modules and coherent

Behind them, Hisense Broadband holds a full chain from optical chips to terminal devices, HG Genuine has secured

FS provides 50/25/10/1G transceivers modules in SFP/SFP28/SFP56/QSFP28 form factor, supporting transmission distances from

The overall cost of an optical module chip depends on material choices, design complexity, manufacturing processes,

The optical module DSP chip market ran as a tight oligopoly in 2025, with dominant vendors leaning on two

However, price sensitivity in developing markets often delays the adoption of premium optical solutions, and trade restrictions

The competitiveness of optical modules also largely hinges on the synergy of the complete upstream industrial chain,

The global market for Optical Module DSP Chip was valued at US$ 364 million in the year 2024 and is projected to reach a revised

The Global Optical Module DSP Chip Market size was estimated at USD 341 million in 2023 and is projected to reach USD 616.45

What is Optical Transceiver Modules/SFP? Optical Transceiver Modules/SFP, also called fiber optic

This report will assist Optical Module DSP Chip manufacturers, new entrants, and companies across the industry

Optical Module Chip Base Market Insights The global Optical Module Chip Base market was valued at USD 1,846

According to TrendForce"s latest memory spot price trend report, regarding DRAM, while DDR4 and DDR5 spot

The global optical transceiver market size is projected to grow from $17.15 billion in 2026 to $46.12 billion by 2034,

Optical Module Procurement guide to pricing trends, OEM vs aftermarket insights, and strategic buying tactics to

This guide explores optical chips, their types, applications, their impact on optical module performance, and

the

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