Silicon Photonics Price for OSFP Optical Modules for Local Area Networks CIF

Article Overview

CIF prices for Silicon Photonics OSFP optical modules typically range from $1,500 to $5,000 per unit, depending on speed, reach, and volume, with 400G modules being the most common for LAN deployments.

Price Overview

Silicon photonics OSFP modules, used in high-bandwidth Local Area Networks, are priced based on data rate, form factor, and technical specifications. For example, 400G OSFP modules generally cost $1,500-$3,000 per unit, while higher-end 800G or 1.6T modules can reach $4,000-$5,000 per unit CIF, depending on volume and supplier . Prices are influenced by the integration of silicon photonics PICs, advanced DSP ASICs, and support for coherent transmission, which improve bandwidth and power efficiency .

Key Cost Drivers

o Form Factor and Compatibility: OSFP modules have a larger footprint than QSFP-DD, which adds tooling and housing costs, typically a 5-15% premium over smaller form factors .

o Optical Components: Use of EML/DFB lasers for longer reach (FR4/LR4) adds $100-$200 per module, while VCSELs for short-reach modules are lower cost .

o Supply Chain and Volume: Silicon wafer shortages, regional logistics, and urgent orders can introduce spot-buy premiums up to 25% .

o Testing and Compliance: BER testing, eye-diagram analysis, temperature cycling, and regulatory compliance add 3-15% to the module cost .

o Technological Integration: Modules with co-packaged silicon photonics and advanced DSPs (e.g., 9th Gen Delphi or Greylock ASICs) command higher prices due to performance and interoperability benefits .

Market Trends

The OSFP market is growing rapidly, driven by LAN and data center upgrades from 100G to 400G/800G speeds. North America and Asia Pacific lead adoption due to heavy investment in cloud and enterprise networks . Silicon photonics modules simplify design and improve energy efficiency, which offsets higher initial costs over the module lifecycle .

Practical Considerations

o Volume Discounts: Bulk orders can significantly reduce CIF pricing.

o Customization: Modules with specific tuning or extended reach may cost more.

o Supplier Selection: Major suppliers like Broadcom, Cisco, Arista, and specialized vendors like InnoLight or GIGALIGHT offer competitive pricing and support . In summary, for LAN deployments, expect CIF pricing

for silicon photonics OSFP modules to start around $1,500 for 400G short-reach modules and rise to $5,000 for high-speed, long-reach 800G or 1.6T modules, with final costs influenced by volume, technical features, and supply chain conditions.

The Silicon Photonics Optical Module Market was valued at USD 540 Million in 2025 and is projected to grow to USD 3.34 Billion by

When hyperscale data center operators start deploying a new generation of client optics, they immediately require massive volumes

Silicon Photonics Solutions for AI/Data Center Applications Rang-Chen Yu, Dong Pan SiFotonics Technologies ECOC 2023, Market

Sales of silicon photonics chips will increase from $0.8 billion in 2023 to just above $3 billion in 2029. Sales of PICs with TFLN

OSFP Optical Module demand accelerates driven by AI, cloud services, and data center expansion. Market projected at

This in-depth guide explores the three major optical module standards--SFP, QSFP, and OSFP--highlighting their

OSFP (Octal Small Formfactor Pluggable) is a high-speed optical module packaging technology designed to meet the

The 800G transceiver modules are ideal choice for AI data centers, enterprise networks and service

This article details 400G, 100G PAM4, and 100G optical transceiver modules as well as Silicon Photonics Technology.

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Many network operators compare OSFP vs. QSFP-DD when evaluating transceiver options for 400G and 800G deployments. While

Silicon photonics is gaining traction in high-speed optical modules, particularly in data

We have experimentally demonstrated the performance of the silicon-photonics-based 800GBASE-DR8 OSFP

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LPO

Discover how OSFP modules provide high-speed optical connectivity for data center applications. Learn about the

This partnership leverages Cisco"s proven ability to scale coherent silicon photonics for data center volumes with

The silicon photonics module is based on silicon photonics integration technology and uses industry-leading chips. It changes the

Web: https://supremeacademicresearch.co.za