What are some brands of high-end silicon photonics modules



Overview

The top 6 silicon photonics companies in 2026, including Cisco Systems, Intel, IBM, NeoPhotonics, Hamamatsu Photonics, and STMicroelectronics globally.

Key Takeaways

Top silicon photonics module brands include Cisco Systems, Intel, IBM, Marvell, STMicroelectronics, NeoPhotonics, and Hamamatsu Photonics, recognized for high-performance optical interconnects and AI-ready data center solutions.

Leading Brands and Their Strengths

Cisco Systems – Offers 1. 6T optical transceivers, 800G linear pluggables, and AI networking solutions built on its silicon photonics platform acquired through Acacia and Luxtera, making it a strong player in AI data center optical connectivity. Intel Corporation – A pioneer in CMOS-based silicon photonics, Intel develops cloud infrastructure and data center optical transceivers, integrating photonics with electronic components for high-speed, power-efficient data processing.

IB

M – Provides advanced silicon photonics solutions for high-bandwidth data centers, leveraging its extensive R&D and integration capabilities to support scalable optical interconnects. Marvell Technology – Focuses on 1. 6T optical DSP platforms and AI-data-center interconnects, including collaborations on optical circuit switching, emphasizing high-speed, low-power solutions.

ST

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Microelectronics – Specializes in co-packaged optics for next-generation AI and data centers, delivering optical interconnects above 400 Gbit/s with reduced power dissipation.

Neo

Photonics – Known for high-performance optical modules and components, particularly in telecommunications and data center networking, offering solutions optimized for speed and integration. Hamamatsu Photonics – Provides innovative photonic devices and laser technologies, including fiber and optical components, with a strong presence in research and industrial applications.

Additional Notable Companies

Other reputable players include MACOM, GlobalFoundries, Lumentum, Coherent, Rockley Photonics, and Ayar Labs, which focus on specialized applications such as AI, healthcare, and high-speed data centers, often leveraging vertical specialization or niche photonic solutions.

Considerations for Selection

When choosing a silicon photonics module brand, consider: Data rate and bandwidth requirements (e.g., 400G, 800G, 1. 6T)Integration with existing networking infrastructurePower efficiency and thermal managementSupport for AI and hyperscale data center applicationsVendor R&D and long-term roadmap for photonics innovation These brands are widely recognized for their reliability, performance, and innovation in silicon photonics, making them suitable for high-speed optical networking, AI data centers, and next-generation computing infrastructure.

Article Content

Silicon Photonics Companies

List of the top Silicon Photonics companies based on extensive research conducted by Mordor Intelligence analysts and expert advisors that identified these brands to be the leaders and major

Top 6 Silicon Photonics Companies Worldwide 2026

The top 6 silicon photonics companies in 2026, including Cisco Systems, Intel, IBM, NeoPhotonics, Hamamatsu Photonics, and STMicroelectronics globally.

Top 100 Silicon Photonics Companies in 2026 | ensun

Analog Photonics specializes in developing photonic circuits and disruptive technologies, particularly in silicon photonics. Their focus on innovative LiDAR and optical communications solutions highlights

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Silicon Photonics Companies

The dominant strategies in the silicon photonics industry are vertical specialization and integration. Intel and Cisco are pursuing integration, focusing on merging electronic and photonic components onto

Top Silicon Photonics Modules Companies & How to Compare

Acacia Communications: Specializes in coherent optical modules for long-haul and metro networks. InnoLight Technology: Focused on cost-effective, high-capacity silicon photonics solutions.

Top 10 companies in Silicon Photonics Market in 2023

For high-volume optics applications, Rockley Photonics is a fabless supplier of silicon photonics chipsets, IP, and custom designs. Rockley''s fundamental technological platform was

Top 100 Photonic Chip Companies in 2026 | ensun

DustPhotonics specializes in Silicon Photonics solutions, providing high-speed modulators and detectors that support a wide range of wavelengths and high data rates, making it highly relevant for the

Top Photonic Quantum Computing Companies in 2026

A global group of companies including PsiQuantum, Xanadu, and Quandela are advancing distinct photonic strategies spanning silicon photonics, squeezed light, and single-photon

Optical Component Startup Tracker

Enosemi ( ), founded by a team from Luminous Computing and Elenion (acquired by Nokia in 2020), provides silicon photonics based chiplets, custom silicon, and

Top 10 Photonics Companies Revolutionizing Light-Based Technologies

Explore the top 10 photonics companies driving innovation in light-based technologies, from optical communications to quantum computing and beyond.

Silicon Photonics

Silicon photonics is defined as an optical technology that integrates photonics and electronics to enhance high-speed communications and is considered a strategically important systems technology

Top 10 companies in Silicon Photonics Market in 2023

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Top 10 Companies In Silicon Photonics Market Rise in adoption of 2.5D integrated onboard silicon photonics by data centers and rising demand for high bandwidth, high data transfer,

Beyond Chips: Unveiling the Future of the Global Silicon Photonics ...

Current challenges in silicon photonics manufacturing include controlling photonic device yields, stabilizing coupling efficiency, ensuring material thermal stability during high-temperature

What is Silicon Photonics? : Hitachi High-Tech Corporation

What is Silicon Photonics? Silicon photonics is a technology for fabricating optical and electronic integrated circuit on silicon microchip. Since the 2000s, research and development has

Silicon Photonics in Pluggable Optics White Paper

Example of a silicon photonics based 100-Gbps optical module Benefits of silicon photonics Manufacturing efficiency and automation Reduction

Intel® Silicon Photonics

What Is Silicon Photonics? Silicon Photonics is a combination of two of the most important inventions of the 20th century—the silicon integrated circuit and the semiconductor laser. It enables faster data

The perspective of all-silicon photonics and systems

While integrating diverse materials with silicon has enhanced the functionality of photonic integrated circuits, these hybrid approaches often face

Silicon Photonics in Pluggable Optics White Paper

Silicon photonics technology has long been of interest in the optical networking industry and in recent years has gained a major foothold in the data center network. This technology is increasingly used

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