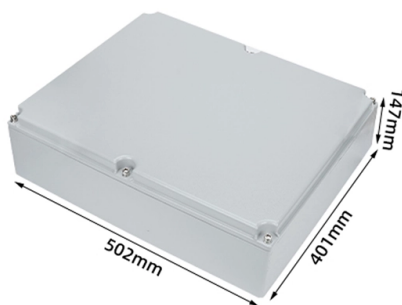


Which companies are working on silicon photonics technology



Overview

Silicon photonics (SiPho) technology leverages silicon-based materials to develop photonic circuits, which use light to transmit data.

Key Takeaways

Leading companies in silicon photonics include Intel, Cisco, IBM, NeoPhotonics, Hamamatsu Photonics, STMicroelectronics, and several startups advancing optical and quantum photonics solutions.

- Major Global Players
- Intel: Pioneering silicon photonics for data centers and high-speed optical interconnects, with advanced wafer-level manufacturing and integrated transceivers .
 - Cisco Systems: Integrates silicon photonics into networking solutions, co-packaged optics, and AI data center infrastructure .
 - IBM: Active in silicon photonics research and development, focusing on optical interconnects and high-speed data applications .
 - NeoPhotonics: Specializes in coherent optical modules and high-speed transceivers for telecom and enterprise networks .
 - Hamamatsu Photonics: Provides optical components and photonic devices leveraging silicon photonics for telecommunications and sensing .

- STMicroelectronics: Develops integrated photonic chips and optical components for data communication and industrial applications .

Startups and Emerging Companies

- PsiQuantum, Xanadu, Quandela: Focus on photonic quantum computing, using silicon photonics for integrated photonic chips and single-photon systems .

- Fotonix: Offers silicon photonics chips and foundry-agnostic photonic IC design for AI and data center applications .

- Other startups: Include companies developing optical engines for AI infrastructure, thin-film lithium niobate modulators, and photonic computing platforms .

Industry Trends

Silicon photonics is increasingly adopted in AI data centers, optical interconnects, and high-speed networking, with hyperscalers and chipmakers investing in 1.6T transceivers, optical I/O chiplets, and co-packaged optics . The technology is also expanding into consumer electronics, telecom lasers, and photonic quantum computing, reflecting a broadening market beyond traditional data centers . These companies collectively represent the core ecosystem of silicon photonics, spanning established semiconductor giants, optical networking leaders, and innovative startups driving next-generation photonic solutions.

Article Content

52 Photonic Computing Companies in 2026 | Compute Compass

52 companies building photonic computing. Light-based processors using photons instead of electrons for ultra-fast, energy-efficient

Silicon photonics

Silicon photonics (SiPho) technology leverages silicon-based materials to develop photonic circuits, which use light to transmit data.

Silicon Photonics Company Evaluation Report 2025

Silicon photonics is a technology that enables data transfer between computer chips using optical rays, which can

Silicon photonics

Silicon photonics is the study and application of photonic systems which use silicon as an optical medium. The silicon is

Optical Component Startup Tracker

The founders' research focused on silicon photonics, so the technology is likely aimed at coherent pluggables (less

New Investments Flowing Into Photonics—Part 2: Where Investors are ...

Within that scope, one sub-sector which has been receiving massive investments is Silicon Photonics and Optical

Roadmapping the next generation of silicon photonics

Silicon photonics has developed into a mainstream technology driven by advances in optical communications. The

6 Companies Working with Photonic Quantum Computing 2024

Consisting of a team of quantum-photonics engineers, some with a background in integrated photonics and some in

Optics & Photonics News

Feature Silicon Photonics' Fab Future Edwin Cartlidge CMOS manufacturing has been harnessed for optical transceivers, and some

Who is making photonic chips?

Discover leading photonic chip manufacturers from semiconductor giants to specialized firms. Learn how InP, SiN,

Top 10 Photonics Companies Revolutionizing Light-Based Technologies

Explore the top 10 photonics companies driving innovation in light-based technologies, from optical communications

Integrated Photonics | Transitioning to End-to-End Optical I/O

Photonics offers superior reach, bandwidth density, power consumption, and latency in high-speed networks and provides rack-to

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