Adicor Photonics Europe S.A.

Silicon Photonics Hybrid Interconnect Technology

Overview

A 3D electronic-photonic interconnect platform on an active optical interposer featuring vertical optical channels with Through Silicon Optical Vias (TSOV) can be a solution by bringing a global optical interconnect to every high-speed communication node directly in a. A 3D electronic-photonic interconnect platform on an active optical interposer featuring vertical optical channels with Through Silicon Optical Vias (TSOV) can be a solution by bringing a global optical interconnect to every high-speed communication node directly in a. 3D interconnects have emerged as a solution to address the scaling issues of interconnect bandwidth and the memory wall problem in high-performance computing (HPC), such as High-Bandwidth Memory (HBM). However, the copper-based electrical interconnect retains fundamental limitations. Dense I/O for. Silicon photonics, serving as a cornerstone technology in modern information technology, demonstrates significant application potential in critical scenarios such as high-speed data center interconnects and integrated optical communication systems.

Article Content

3D Electronic-Photonic Heterogenous Interconnect Platforms

A 3D heterogeneously integrated hybrid electronic-photonic interconnect platform, integrated over a silicon active optical interposer, can bridge this critical performance gap.

Hybrid Silicon Photonic Integrated Circuit Technology

In this paper, we review the current status of the hybrid silicon photonic integration platform with emphasis on its prospects for increased integration complexity.

ST silicon photonics and BiCMOS technologies: the winning portfolio

This whitepaper describes STMicroelectronics'' advancements in silicon photonics and BiCMOS technologies, essential for addressing the energy eficiency and performance demands of AI optical

Industry insight: photonics to scale AI data centers

This paper explores the adoption of photonic technologies, including co-packaged optics (CPO), optical circuit switches (OCS), and silicon photonics in general, to address critical challenges

Silicon Photonics & Co-Packaged Optics: 2026 Analysis

Why co-packaged optics and silicon photonics are reshaping AI data centers in 2026 — the bandwidth wall, power math, incumbents, and what it means.

Where co-packaged optics (CPO) technology stands in

Co-packaged optics (CPO) technology, a key enabler for next-generation data center architectures, promises unprecedented bandwidth density

World''s First AI Silicon Photonics Chip Listed Company ...

About 70% of the fund are earmarked for R& D over the next five years, split evenly between optical interconnect technologies—such as advanced silicon photonics design and high

Photonics

Photonics Spectra is a global photonics resource and magazine with news, products, research, and applications covering optics, lasers, imaging, and sensing.

Intel® Silicon Photonics

Our US-based high-volume Silicon Photonics platform offers proven industry-leading quality and field reliability while providing geographical diversification. Our hybrid laser-on-wafer technology with

Co-Packaged Optics (CPO) 2026-2036: Technologies,

Co-packaged optics overcomes these limitations by placing the optical engine much closer to the switching silicon. Its success depends on advanced semiconductor

Nvidia Unveils Silicon Photonics Cpo Technology For Ai Data Centers ...

Discover NVIDIA''s groundbreaking silicon photonics CPO technology, transforming AI data center networks. Learn about the Spectrum-X and Quantum-X switches that enhance performance,

NLM Photonics Advances Silicon-Organic Hybrid PICs

At the core of NLM''s approach is its silicon-organic hybrid modulator technology, which integrates high-performance organic electro-optic materials into standard silicon photonics flows.

AI Data Center Interconnect 2026: CPO, Optical Interconnect and ...

AI is reshaping optical interconnect. This article explores CPO, silicon photonics, OCS, and the real bottlenecks facing AI data center infrastructure in 2026. The Shift: AI Is Redefining

Photonic Integrated Circuits: Research Advances and Challenges in ...

By synthesizing and summarizing recent research advances, this paper aims to provide researchers in related fields with a systematic understanding of photonic integrated circuit technology.

Roadmapping the next generation of silicon photonics

We chart the generational trends in silicon photonics technology, drawing parallels from the generational definitions of CMOS technology. We

CoWoS®

CoWoS ® -L technology service, combining Chip on Wafer on Substrate with RDL-based interposer and embedded local silicon interconnect (LSI), improves product design flexibility by integrating a variety

Silicon-organic Hybrid Electro-optic Modulators for Next Generation ...

The core innovation of SilOriX lies in its Silicon-Organic Hybrid (SOH) integration architecture, which combines high-performance organic electro-optic materials with a mature silicon photonics platform.

Hybrid Silicon Photonics for Optical Interconnects

In this paper, we review the hybrid silicon photonic integration platform and its use for optical links. In this platform, a III/V layer is bonded to a fully processed silicon-on-insulator wafer.

Corning Highlights Glass Bridge for CPO and Glass-Core Packaging

Corning has highlighted a next-generation glass-based optical interconnect technology designed to connect optical semiconductors and optical fibers. The technology targets emerging co

Silicon Photonics

Silicon Photonics Uncover the latest and most impactful research in Silicon Photonics. Explore pioneering discoveries, insightful ideas and new methods from leading researchers in the field.

Packaging Technologies Redefine AI And HPC Scalability Limits At

The 2026 IEEE Electronic Components and Technology Conference (ECTC) showcased how advanced packaging can redefine the scalability limits of artificial intelligence (AI) and high

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: https://adicor.eu
Email: info@adicor.eu
Phone: +33 6 48 37 92 15
Address: 12 Rue de la Paix, 75002 Paris, France

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