OIO Optical Communication Products

Overview

OIO is a chiplet-based optical interconnect solution integrated in the same package as the compute chips (CPUs, GPUs, XPUs), and designed to enable seamless communication among them in a distributed compute system (across boards, racks and compute rows) at the bandwidth density . OIO is a chiplet-based optical interconnect solution integrated in the same package as the compute chips (CPUs, GPUs, XPUs), and designed to enable seamless communication among them in a distributed compute system (across boards, racks and compute rows) at the bandwidth density . The latest development in the optoelectronic industry — a series of emerging Optical Input & Output (OIO) technologies — may offer a way to overcome these problems. These technologies use high-bandwidth and high-density optical interfaces to address the I/O interface interconnection challenge of. Imec's pre-competitive research program unites material and tool suppliers, foundries, IDMs, OSATs, fabless and system companies in the exploration of future optical interconnect technologies. Optical links provide increased bandwidths, longer reaches, and lower latencies compared to electrical. On February 17, 2022 (EST), the Global Advanced Optoelectronic Technology Webinar was successfully co-hosted by the International Photonics & Electronics Committee (IPEC), China International Optoelectronic Exposition (CIOE), and European Photonics Industry Consortium (EPIC). The webinar was themed. 3*13 Lens Array with Alignment Slot developed by SUNA-opto is a high-precision micro lens array product for OIO Application. Prepared by wafer-level lithography process, it features ±1% ROC uniformity within the array, ±0. 3um pitch accuracy, and supports customized spherical/aspherical surfaces and. Ayar Labs' optical engines eliminate data transfer bottlenecks caused by copper interconnects. By enabling compute nodes to efficiently function as a single, giant GPU, optical I/O technology powers today's AI workloads—and tomorrow's.

Article Content

Optical I/O Solutions Optimized for AI Workloads | Ayar Labs

Explore optical I/O technology that combines our in-package optical I/O chiplet with our industry-first multi-wavelength, multiple port

Optical Communication Products | ProcureInc

Optical Communication Products, Inc. (OCP) is a leading designer and manufacturer of fiber-optic communication components and

Optical interconnect research program

This research program unites material and tool suppliers, foundries, IDMs, OSATs, fabless and system companies in the exploration

SiFotonics

Ge/Si PIN Ge-on-Si PIN photodiode converts optical signal to electrical signal at receiver side of optical communication. Based on

Analysis of CPO/Silicon Photonics/LPO/OIO Technology Routes: The ...

Optical I/O (OIO) addresses the chip-to-chip interconnect problem between computing chips (CPUs, GPUs, and XPUs), leveraging

Optical Communications Products | Products for Communication

Corning offers a wide variety of products and solutions for your network needs. Our on-line catalog will help you find the products you

Optical interconnect research program

Optical interconnects: pre-competitive, long-term research program Imec''s optical interconnect research program develops the key

Optical Interconnection OIO

Addresses the significant divergence angle difference between fast and slow axes by controlling the X/Y axis spot to improve optical

Evolution from Pluggable to OIO, Enabling Ultra-Broadband Optical ...

Notably, the industry has initiated the introduction of new Optical Input/Output (OIO) technology. Compared with the mature Electrical

Co-Packaged Optics at the IPEC

Optical connection and optical sensing for intelligent world. Industry Patents 1300+. Provide competitive optoelectronic solutions.

Focus on Cutting-Edge Technologies and Spearhead the Innovation

To meet the requirements of data center switching networks for lower power consumption and lower costs, IPEC proposed a new

Optical Interconnect Market Size & Share Report, 2025-2030

Optical interconnect market size was valued at $16.1B in 2024 and is projected to grow from $20.0B in 2026 to $34.5B by 2030, at a

Products

The SCOT135 is your Scalable Optical Communication Terminal (SCOT) for Multi-Orbit connectivity in MEO and GEO applications.

Contact Us

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