What is an OIO optical module

Overview

What exactly is integrated Optical I/O (OIO)?

OIO refers to chiplet-based optical interconnect technology that integrates directly with the computing chips (CPUs, GPUs, xPUs, ASICs, etc.) and utilizes the die-to-die (D2D) lower speed, higher radix connectivity. They provide board-to-board and rack-to-rack level connectivity and are used to easily insert and remove a fiber optic cable from a board faceplate, providing a connection between the electrical interconnects inside the board and optical fiber outside the board. Another benefit of pluggable optics. Silicon Photonics: Silicon photonics is a technology process that combines optical components with silicon-based electronics to create integrated circuits (ICs) that transmit and process data using light. Our commitment is to provide EDA solutions that expedite the specialty semiconductor design process. © 2025 Latitude Design Systems PTE. At the webinar, experts from different companies and academic institutions, including Arista Networks, Meta (formerly Facebook), Intel, Broadcom, TE Connectivity, UC Santa Barbara, Baidu, Alibaba, and Huawei, had.

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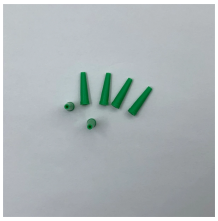

In a data chip system, optical connectivity requires a physical optical module. Therefore, OIO can also be extended to mean an optical module used for I/O functions. This term is often ...

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While pluggable optics and CPOs are optical modules connecting different network components, optical I/O is a chiplet-based optical interconnect packaged into a single IC. These five ...

OIO integrates optical and electrical technologies and packages optical engines and switching chips. Therefore, the entire industry chain, from the switching chip to the optical engine and ...

Explore the working principles, structures, and performance metrics of optical modules, essential components of optical fiber communication systems. Learn ...

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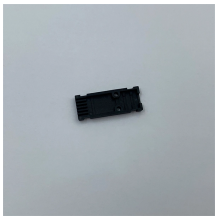
Optical Input/Output (OIO) embeds optical transceivers into chip packages, enabling direct optical links between processors, memory, and storage. By bypassing board-level conversions, OIO ...

What exactly is integrated Optical I/O (OIO)? OIO refers to chiplet-based optical interconnect technology that integrates directly with the computing chips (CPUs, GPUs, xPUs, ...

OIO envisions bringing optical connections directly onto the chip package or potentially even the chip itself, enabling extremely high bandwidth density and further reducing power ...



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In-package optical I/O integrates optical interconnect into the same package as the chips used for compute functions. This approach enables chip-to-chip ...

	In-package optical I/O integrates optical interconnect into the same package as the chips used for compute functions. This approach enables chip-to-chip connectivity based on photons instead of ...
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