

Optoelectronic Fusion for High-Precision Data Center Interconnection

In this chapter we begin with an overview of the recent trends in HPC and warehouse scale data centers. We briefly review the challenges due to the slowing of Moores law and the emergence of ...

Our interconnect solutions enable high-bandwidth, low-power communication between switching silicon and compute silicon, compatible with PCIe, Ethernet, and various proprietary protocols--significantly ...

Intel's OCI chiplet represents a leap forward in high-bandwidth interconnect by enabling co-packaged optical input/output (I/O) in emerging AI infrastructure for data centers and high ...

We refer to this approach as Co-Packaged Optics (CPO) when applied to networking applications and Optical Compute Interconnect (OCI) when applied to compute fabrics

As AI and HPC data centers evolve towards ultra-large scale and high computing density, optical interconnect technology is gradually moving from pluggable modules to packaged ...

We review several key components on TFLN platform for high-speed optical interconnects, include EO modulators, wavelength (de)multiplexers and self-coherent receivers with polarization controllers, ...

Photonics offers superior reach, bandwidth density, power consumption, and latency in high-speed networks and provides rack-to-rack connectivity for data center applications, including optical ...

Novel Optical Waveguide and Integrated Interconnect Technologies Enabling scalable co-packaged optics through high-precision glass structuring and photonic integration on panel-level ...

This article reviews and analyzes recent design challenges and advances of optical transceiver, phase-locked loop (PLL), and clock and data recovery (CDR) for data center applications with a distance of ...

Over the coming days, we will be publishing a series of Optical Connection updates to help readers quickly understand the most important developments--from photonic integration to data ...

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