Intelligent Selection Guide for Supercomputing Center-Grade Active Optical Devices

Research goals include overcoming the limits of electrical input/output (I/O) and integrating optical I/O throughout the compute system to expand the possibilities for data center workloads and beyond.

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

We introduce methods to design scalable, area-efficient, and energy-efficient integrated photonic computing chips for computing and artificial intelligence acceleration with experimental demonstrations.

ucture systems to optimize capacity and heterogeneity without inflating costs or power consumption. Data centers can apply supercomputing topologies using off-the-shelf pluggable optical transceivers

Our high-performance, power-efficient products form the foundation for a smarter, more connected world, enabling devices from smartphones, smart homes and AI PCs to high-performance ...

Broadcom"s 5nm PCIe and CXL PHY portfolio offers industry"s lowest power, lowest latency and best performing retimer products, enabling Data Center Server and Storage manufacturers to build most ...

Announced the establishment of a PCIe Optical Working Group in August 2023 to study the possibility of introducing optical transmission interfaces into the PCIe specification, and may develop new form ...

In summary, optical technologies are not widely used in today"s large-scale supercomputing systems, particularly for short-reach interconnects. The main reasons are high costs ...

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