

CPO optical modules and computing chips



Overview

This article provides a comprehensive overview of CPO optical modules, exploring their technology, benefits, challenges, and the pivotal role they play in future data centers and AI infrastructure. CPO optical modules put optical and electronic parts together. This helps data move faster and saves. At the SC25 SuperComputing conference in November, NVIDIA announced that GPU computing facility operators, including Lambda and CoreWeave, as well as the Texas Advanced Data Center (TACC), will adopt its Quantum-X Photonics CPO switches. In response to NVIDIA's strong push in the CPO field. Today, data centers use a separate approach for optics and electronics, in which optical modules are connected to switches and routers through high-speed electrical interfaces. Realizing these benefits will also require a fundamental transformation in the way computing and switching assets are. AI bottlenecks drive the adoption of optical interconnects for next-generation HPC systems. Broadcom remains the last CPO supplier.



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