

Is the optoelectronic fusion chip a CPO



Overview

A representative technology of optoelectronic fusion is CPO (co-packaged optical circuit integration). ASIC (application-specific integrated circuit) and GPU and other processors have light engines (laser, modulator, photo detector, etc.) integrated very close to them (in the same. In 2022, Xiong Yinjiang, together with another young entrepreneur under 30 named Cheng Tangsheng, returned to China to found "OptiFoundry," targeting the then-niche and cutting-edge field of optical chips. Just two years after its establishment, the company successfully taped out what is regarded. 2026 will mark the year when co-packaged optics (CPO), a form of optoelectronic integration, enters the full-scale mass production and practical roll-out phase.

Figure 1: Traditional Solution with DSP vs. LPO Solution without DSP

Traditional high-speed optical modules rely heavily on Digital. Co-packaged optics (CPO) is a disruptive approach to increasing the interconnecting bandwidth density and energy efficiency by dramatically shortening the electrical link length through advanced packaging and co-optimization of electronics and photonics.

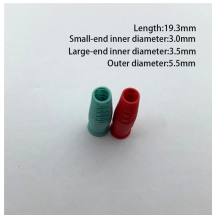
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Today, its first-generation optoelectronic fusion computing card, based on this 128×128 optical chip, has secured a large-scale order from a vertical large language model company and...



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CPO (Chip-on-Poly) achieves millimeter-level interconnects by integrating the optical engine and electrical chips on a silicon interposer or organic interposer, fundamentally optimizing ...



Co-Packaged Optics (CPO) is a highly integrated optoelectronic interconnect technology evolved from NPO. The core concept is to directly integrate the optical engine with a switch ASIC or ...



The optical-to-electrical conversion that is performed by the optical transceiver is still needed in a CPO system, but it moves from a pluggable module located at the faceplate of the ...



Co-packaged optics (CPO) has evolved as a solution to meet the growing demand for data. Compared to typical optoelectronic connectivity technology, CPO presents distinct benefits in ...



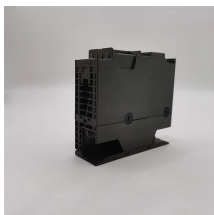
We refer to this approach as Co-Packaged Optics (CPO) when applied to networking applications and Optical Compute Interconnect (OCI) when applied to compute fabrics



Co-packaged Optics (CPO) is an advanced packaging technology for optoelectronic devices that involves upgrades in system architecture, chip fabrication, and packaging.



In recent years, CPO, a type of optoelectronic integration technology, has attracted particular attention.



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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 ...

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