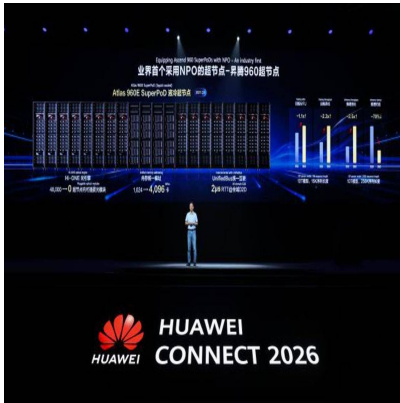




Huawei Unveils the Industry's First NPO Optical Engine with Built-in Light Source, Hi-ONE, Leading the Way in High-Speed Optical Interconnect Technology Innovation

Descrizione

COMUNICATO STAMPA - CONTENUTO PROMOZIONALE

Summary:

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- 17 September 2026 - At HUAWEI CONNECT 2026, Huawei unveiled the industry's first NPO optical engine with Built-in Light Source, Hi-ONE, offering a total capacity of 7.2 TB/s and enabling Huawei to be the first to mass produce such an optical engine. The Ascend 960 SuperPoD, built on the UnifiedBus plus Hi-ONE architecture, has already adopted the Hi-ONE optical engine powered by NPO. Hi-ONE is the industry's first-ever optical engine to adopt a built-in light source architecture, achieving high-density, high-speed optical interconnect while significantly reducing power consumption and latency for signal transmission. The launch of Hi-ONE marks the beginning of NPO technology's transition from industry consensus to large-scale commercial use, injecting new momentum into the AI computing industry.

NPO technology path: Balancing innovation and ecosystem continuity

NPO technology realizes close interaction between optical and electrical signals but maintains the independence of the optical engine, thus maximizing the continuity of customer usage habits and

industry ecosystems. By following this technology path, Huawei has developed the innovative Hi-ONE optical engine, which currently stands as the NPO product with the highest transmission capacity in the industry and the first NPO product to adopt a built-in light source architecture. Rooted in self-developed technologies, Huawei has achieved breakthroughs in key areas such as bandwidth, reliability, power consumption, and latency.

High bandwidth and high reliability: Hi-ONE is the first optical engine to integrate 36 channels of optical transceivers, significantly reducing the number of discrete components and lowering failure rates at the very source. Hi-ONE integrates key technologies, including compound optical chips, silicon photonic chips, and optoelectronic RF chips. Through a balanced design of optical, mechanical, electrical, magnetic, and thermal elements, Hi-ONE supports a transmission capacity of 7.2 TB/s on a single optical engine, and makes built-in light sources a reality in the NPO engine. As a result, overall reliability is improved by 10 times, ensuring the stable operation of long-duration training tasks.

Low power consumption and low latency: With the adoption of a linear direct-drive architecture, Hi-ONE eliminates the need for high-power oDSP chips, cutting power consumption by approximately 66% and latency by about 90%. This both lowers energy costs and boosts communications efficiency.

Standards and ecosystems drive industry consensus

Alongside product innovation, Huawei has also made progress in NPO standards and industry ecosystem development. In May 2026, the standard proposal for "12.8 TB/s NPO Module", jointly submitted by the China Academy of Information and Communications Technology (CAICT), Huawei, and other companies, was officially initiated by the OIF, with support from more than 40 industry chain vendors worldwide.

From technological breakthroughs to product application, and from international standards to industry ecosystem development, Huawei is driving NPO from industry consensus to large-scale commercial use. It is achieving this through a combination of strong technological innovation and open collaboration with global industry partners, with the ultimate goal of shaping a new AI computing industry landscape.

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