Category Award

NVIDIA Quantum-X Photonics InfiniBand Switch Systems

NVIDIA Corporation

香港商輝達香港控股有限公司台灣分公司

[Company Website](#)

Winning Reason

NVIDIA Quantum-X Photonics is a groundbreaking network technology that leverages the advantages of silicon photonics. By collaborating with leading manufacturers like TSMC, it provides the necessary bandwidth, scalability, and efficiency for building the next generation of large-scale AI factories. It features low power consumption, high scalability, rapid deployment, low latency, cost reduction, and easy maintenance. Supporting large-scale AI workloads, it accelerates AI innovation in research and applications by laying the foundation for building larger and more powerful AI clusters.

Product Feature

NVIDIA is revolutionizing networking for the era of agentic AI by introducing the NVIDIA Quantum-X Photonics switch, the world's first InfiniBand switch featuring co-packaged optics. NVIDIA co-packaged optics (CPO) replace the pluggable transceiver with optical engines that are situated on the same package as the switch application-specific integrated circuit (ASIC). The fiber plugs directly into the switch, and the optical engine processes the incoming data. These engines are made up of tightly coupled silicon photonics chiplets that enable light to travel over silicon. As a result of this design, the single-mode cable can connect directly to the package, eliminating the need for transceiver ICs and additional digital signal processor (DSP) retimers, which add power and latency penalties.