Will copper cable interconnects replace optical modules

Overview

At the GTC 2026 conference, Nvidia CEO Jensen Huang explicitly corrected the market misconception of "optics replacing copper," stating that copper cables remain indispensable inside AI server racks due to their physical advantages like zero power consumption and low latency, while. At the GTC 2026 conference, Nvidia CEO Jensen Huang explicitly corrected the market misconception of "optics replacing copper," stating that copper cables remain indispensable inside AI server racks due to their physical advantages like zero power consumption and low latency, while. With the advent of optical interconnects, there is a promising alternative that could reshape the landscape of electronic design. Learn how a third option promises to enable scaling up AI clusters in data centers for years to come. Let's take a deeper look at their. Several startups have recently developed fiber interconnects on standard chiplets. If you pack too many copper wires together, eventually you'll run out of space—if they don't melt together first. AI data centers are encountering similar limitations with the electronic interconnects that shuttle. This report constructs a hypothetical layered architecture model for the Rubin platform, based on NVIDIA's emphasis on interconnect trends in the Blackwell architecture and industry focus on interconnect bottlenecks, to explore the potential challenges and changes brought by optical interconnect.

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