Will the supply of optical modules be cut off

Overview

To move the massive amounts of data required for AI training and inferencing, hyperscalers and other data center operators need increased access to optical transceivers capable of rates of 800 gigabits per second (Gbps) or even 1. 6 terabits (Tbps) per second and higher. 1 But these. A diagram of hardware components within an NVIDIA photonics co-packaged optics switch system showing optical sub-assemblies and switch ASIC. com The AI infrastructure boom has created its next supply chain crisis. Having already driven shortages in GPUs, high-bandwidth memory, and advanced. Ranking of upstream shortages in optical modules in 2026: the further upstream you go, the higher the profits, and the more likely you are to be held hostage! - iMedia Supply chain disruption! Ranking of upstream shortages in optical modules in 2026: the further upstream you go, the higher the. Demand for optical connectivity remains strong, but component shortages hobbled growth in sales of optical transceivers in Q4 2024. Alphabet, Amazon, Meta, Microsoft and Oracle continued to spend significantly more in 2024 than in 2023, with their. TrendForce's recent research indicates that high-speed optical interconnects are now central to performance and scalability, especially as AI data centers grow into large clusters. The report predicts that worldwide shipments of optical transceivers of 800G and higher will hit 24 million units in. A recent report released by McKinsey, an internationally renowned research organization, pointed out that the supply chain bottleneck of optical transceivers (optical modules) may become a key obstacle to the expansion of network infrastructure in the era of artificial intelligence. The report said. Optical modules are no longer peripheral connectivity components; they are becoming one of the gating factors in how quickly AI infrastructure can scale.

Article Content

Report: In 2029, 800G Optical Modules Will Occupy

A recent report released by McKinsey, an internationally renowned research organization, pointed out that the supply chain bottleneck of optical transceivers

From optical modules to chips: China''s tech supply chains sustain ...

Huagong Tech, an optical module manufacturer based in central China''s Wuhan, launched the world''s first 12.8-terabit XPO module in March, bundling the capacity of eight 1.6T modules into a

Lumentum Undersupplies Optical Components by 30% as AI

The 30% supply shortfall indicates that hyperscalers and cloud infrastructure providers are unable to obtain sufficient components to meet their AI deployment timelines. The supply constraint

Optical Module Market Size, Competitors & Forecast to

Long-term advantage in the optical module market depends on integrating technical innovation with validation discipline and resilient, adaptable supply models.

AI Data Center Optical Component Shortage: Nvidia''s

The lockup has forced optical module manufacturers and cloud service providers to search for secondary suppliers and alternative designs.

Nvidia CEO Jensen Huang believes that Marvell Technology could

What''s worth noting is that the demand for the optical networking components that Marvell designs is already exceeding supply.

LightCounting :: Component shortages limit growth in

Chinese optical module manufacturers will report Q4 results together with the full year results in April, but several of them have already released very high net

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Economic Watch: From optical modules to chips -

The competitiveness of optical modules also largely hinges on the synergy of the complete upstream industrial chain, covering optical chips, ceramic packages and precision structural

Opinion: optical transceivers at the chokepoint of AI

In this Opinion Series, Yole Group explores how the optical transceiver ecosystem is evolving under the combined pressures of hyperscale

Opinion: optical transceivers at the chokepoint of AI

As AI infrastructure accelerates at an unprecedented pace, optical connectivity has become one of the defining enablers and constraints of next

Optical Module Evolution: From 400G to 3.2T

Optical Module Evolution: From 400G to 3.2T Driven by the explosive growth of artificial intelligence (AI), cloud computing, 5G, and emerging immersive applications, data centers are

Supply Chain Resilience for Optical Modules: Failure Analysis

Why Supply Chain Resilience for Optical Modules Fails at Hyperscale The industry-standard approach—maintaining an approved vendor list (AVL) and relying on compliance testing for

Supply chain disruption! Ranking of upstream shortages in optical ...

Optical module supply disruptions, factory shutdowns due to wafer shortages, and atomic arrangement bottlenecks hindering AI computing power. In May 2026, life was tough for those

Chinese Optical Modules Own 7 of the Top 10 Seats. So Why Are

In the span of a decade, Chinese optical module companies have claimed 7 of the top 10 seats and secured core supplier status in the AI demand segment. Thanks to the 800G capacity

Optical Modules Market Research Report 2034

Optical Modules Market Outlook 2025-2034 The global optical modules market was valued at $14.8 billion in 2025 and is projected to reach $39.6 billion by 2034,

Why Are Used Optical Modules Returning to the

In the optical communication industry, the resale of used optical modules is no secret. Data centers, large enterprises, and operators are all

AI Data Centers Ignite a Laser Shortage Wave;

Nvidia''s silicon photonics and CPO development plans have advanced more slowly than anticipated, leading to ongoing dependence on pluggable modules for GPU

LightCounting :: Component shortages limit growth in transceiver sales

Demand for optical connectivity remains strong, but component shortages hobbled growth in sales of optical transceivers in Q4 2024. The first half of 2025 will be impacted as well.

Data center networking optics supply shortages | McKinsey

Networking optics are mission critical to advance AI and data center infrastructure and are facing imminent supply shortages.

Optical Modules Market Size, Growth Trends & Forecast

The Optical Modules Market encompasses the design, manufacturing, and deployment of compact, high-performance devices that

2025 Optical Module Market Share and Demand Report

The 2025 optical communication industry is driven by AI data centers (AIDCs) and 5G rollouts, with high-speed optical modules (400G/800G/1.6T)

800G Optical Modules Drive Market Recovery in 2025

800G modules drive optical market recovery in Q2 2025, with initial 1.6T shipments. This article highlights key trends in data center optics and AI

From optical modules to chips -

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Optical Communication Industry Trends 2026: AI, 800G/1.6T Optical ...

Explore optical communication industry trends in 2026, driven by AI infrastructure, 800G and 1.6T optical modules, silicon photonics, and next-generation data center connectivity solutions.

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Contribute to CaiQiuL/SpellChecker development by creating an account on GitHub.

LightCounting :: Demand for optical connectivity continues to surprise

The current demand is exceeding supply by 30%, but the shortages should be going away by the end of 2026. Production of GPUs and other types of accelerators (XPUs) is a more critical bottleneck for the

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