

How high can the price of optical modules rise



Article Overview

High-speed optical modules, particularly 800G, have increased in price by 50% to 100% compared to 400G modules due to supply constraints and rising production costs.

Price Trends

The price of 800G optical modules has surged 50%-100% higher than 400G modules, while emerging 1.6T modules are also entering the market at premium prices due to limited production capacity and technological complexity . In 2024, the average price of optical modules ranged from \$150 to \$200 per unit, but high-speed modules for AI and cloud data centers are significantly more expensive . Despite competition in lower-speed segments (100G/200G), which has led to 15-20% annual price declines, the high-speed segment remains under upward pressure .

Factors Driving Price Increases

- **Supply-Demand Imbalance:** Exploding demand for AI computing and cloud data center expansion has created shortages, especially for 800G and 1.6T modules .
- **Technological Barriers:** Advanced modules require high-speed optical chips and co-packaged optics (CPO), which are in short supply and costly to produce .
- **Raw Material Costs:** Prices of key materials like indium phosphide (InP) have risen sharply, with 2-inch substrates increasing by 50% .
- **Limited Advanced Packaging Capacity:** Only a few manufacturers, such as TSMC and ASE, can produce high-end modules, restricting supply .

Article Content

How AI Revolutionizes the Optical Module Industry

1. Introduction: The Rise of AI Elevates Optical Modules to Strategic Importance With the rapid rise of AI technologies,

The reasons behind the recent sharp price increase of optical modules

In general, the price increase of optical modules is the inevitable result of strong demand (the AI computing power race)

Analysis and Forecast of the Optical Module Market in 2026

Overall, in 2026, the optical module industry will be in a dual dividend period of technological iteration and demand explosion. The

Why Is the Whole World Betting on Optical Modules: From Wall Street

Light can travel dozens of kilometers in an optical fiber with little signal loss, which is why AI has driven the demand

Why Fiber Optic Prices Are Rising in 2026

1. Core Drivers Behind Fiber Optic Price Increases 1.1 Rising Raw Material Costs The primary cost component in fiber optic cable

Contact Us

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