

Cost of Customizing Gigabit Multimode Optical Modules



Overview

Cost of Customizing a Gigabit Multimode Optical Module What factors influence 400G optical transceiver modules Discover the key factors that drive 400G opti.

Key Takeaways

Customizing a gigabit multimode SFP module typically costs more than standard modules, with prices influenced by features like wavelength, EEPROM coding, industrial temperature range, and order volume. Standard 1G Multimode SFP Pricing

Commercial off-the-shelf 1G multimode SFP modules generally range from \$10 to \$50 per unit, depending on the manufacturer, quality, and quantity purchased. Third-party vendors like QSFPTEK offer competitive pricing, often 30-50% lower than OEM modules, with bulk discounts available for orders exceeding 10 units . Standard modules operate at 850nm for short-range multimode fiber links up to 550 meters and are suitable for enterprise LANs, campus networks, and industrial applications .

Customization Factors Affecting Cost

Customizing a gigabit multimode SFP module involves additional engineering and manufacturing steps, which increase the cost. Key factors include:

- Wavelength Selection: Custom CWDM/DWDM wavelengths for multiplexing or legacy system compatibility.



- EEPROM Coding: Tailored coding for specific switch or network equipment interoperability.
- Temperature Grades: Industrial-grade modules (-40°C to 85°C) for outdoor or harsh environments.
- Pull-Tab Colors and Branding: Custom physical identifiers for inventory or operational purposes.
- BiDi or Long-Reach Options: Modules designed for single-fiber bidirectional transmission or extended distances. According to WolonTek, fully customized 1.25G SFP modules with these features are manufactured in cleanroom facilities and tested for interoperability, with pricing typically higher than standard modules due to R&D, coding, and testing efforts .

Estimated Cost Range for Customized Modules

While exact pricing depends on specifications and order volume, customized gigabit multimode SFP modules can range from \$50 to \$150 per unit for small to medium orders. Large-volume orders or highly specialized features may reduce per-unit cost through economies of scale, but bespoke features like industrial temperature tolerance or specific wavelength coding will always add a premium .

Practical Considerations

- Order Volume: Bulk orders often receive discounts; some vendors offer additional 5% off for 10+ units .
- Vendor Selection: Factory-direct OEM/ODM manufacturers provide more flexibility and lower costs for customization compared to standard OEM modules.
- Testing and Certification: Customized modules require rigorous testing to ensure compatibility and reliability, which is factored into the cost. In summary, customizing a gigabit multimode SFP module is significantly more expensive than purchasing standard modules, but it provides precise compatibility, industrial-grade performance, and tailored features for enterprise or specialized network deployments .

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Transmission Technology: The module is designed for bidirectional data transmission over a single multimode fiber

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