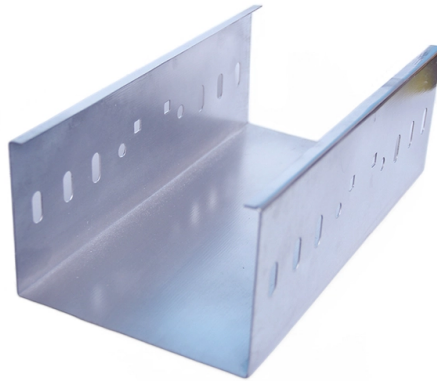


Can gigabit optical modules and 10-gigabit optical modules be used interchangeably



Article Overview

Gigabit optical modules and 10-gigabit optical modules are generally not fully interchangeable; 1G SFP modules can often run in 10G SFP+ ports at reduced speed, but 10G SFP+ modules cannot operate in 1G SFP ports.

Key Differences

- **Transmission Rate:** Gigabit optical modules operate at 1 Gbps, while 10-gigabit modules operate at 10 Gbps .
- **Form Factor:** Gigabit modules typically use SFP or GBIC, whereas 10G modules use SFP+, XFP, or X2 .
- **Standards:** Gigabit modules support 1000BASE-X Ethernet and SONET/SDH rates, while 10G modules support 10G Ethernet, 10G Fibre Channel, and higher SONET rates .

Compatibility Scenarios

- **1G SFP in 10G SFP+ Port:** Most 10G SFP+ ports can accept 1G SFP modules, but the port must be configured to operate at 1 Gbps. This allows backward compatibility but does not utilize the full 10G speed .
- **10G SFP+ in 1G SFP Port:** This is not possible, as 1G SFP ports lack the hardware to handle 10 Gbps speeds. The link will fail to establish .

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Product overview The Cisco® 10GBASE SFP+ modules (Figure 1) give you a wide variety of 10 Gigabit Ethernet connectivity options

Contact Us

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