ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Gigabit Optical Module Specifications and Models



Overview

Cisco SFP Modules for Gigabit Ethernet Applications This data sheet describes the benefits, specifications, and ordering information for the Cisco Optics |.

Key Takeaways

Gigabit optical modules come in various types, primarily categorized by fiber type, connector type, and form factor, including SFP, GBIC, and single-mode or multimode modules.Categories by Fiber Type
• Single-mode modules: Use a single optical fiber for transmission, typically with LC or SC connectors. They support long-distance transmission, up to 160 km with OS2 fiber .

• Multimode modules: Use two fibers (duplex) for transmitting and receiving signals, commonly with duplex LC connectors. They are suitable for shorter distances, up to 550 meters with OM2 fiber .
Categories by Form Factor
• GBIC (Gigabit Interface Converter): The first-generation pluggable module, supporting 1 Gbps with SC connectors. It is hot-swappable but large in size, limiting port density .

• SFP (Small Form-factor Pluggable): Also called mini-GBIC, smaller than GBIC while maintaining 1 Gbps performance. Supports multiple optical reaches: SX (850 nm, up to 550 m), LX (1310 nm, up to 10 km), and ZX (1550 nm, up to 80 km), .

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

• SFP+: Primarily for 10 Gbps, backward compatible with SFP ports but not vice versa .

• Copper SFP (RJ45): Supports 1 Gbps over Cat5/Cat6 cabling for short-range connections .
Specialized Modules
• 1000BASE-BX10-D/U: Single-fiber bidirectional modules, where one device transmits at 1490 nm and receives at 1310 nm, and the other device does the reverse, supporting up to 10 km .

• Industrial or extended temperature modules: Designed for outdoor or harsh environments, with operating ranges from -40℃ to 85℃ for industrial or -20℃ to 85℃ for extended applications .
Applications

Gigabit optical modules are widely used in switches, routers, servers, firewalls, and storage devices, supporting both Ethernet and Fibre Channel standards. They allow flexible network expansion and high-speed data transmission in enterprise and data center environments . By selecting the appropriate module type based on distance, fiber type, connector, and environmental conditions, network designers can optimize performance and reliability for specific applications.

Article Content

Cisco SFP Modules for Gigabit Ethernet Applications

This data sheet describes the benefits, specifications, and ordering information for the

Cisco Optics | Transform Your Network

Get the highest quality, performance-leading optical transceivers for any network architecture. Find the transceiver model to fit your

Gigabit SFP Module: A Complete Guide to 1G SFP

Learn what a gigabit SFP module is, how it works, main types, key specifications, and common use cases

Gigabit Optical Transceiver: Technical Specifications, Production ...

This guide explores the most common types of gigabit optical transceivers, their technical capabilities, use cases, and

Cisco SFP Modules for Gigabit Ethernet Applications

Table 1 provides cabling specifications for the SFPs that you install in the Gigabit Ethernet port. Note that all SFP ports have LC-type

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Specifications for Gigabit SFP optical transceiver modules

Specifications for Gigabit SFP optical transceiver modules

Cisco SFP Modules for Gigabit Ethernet Applications

Product overview The industry-standard Cisco Small Form-Factor Pluggable (SFP) Gigabit Interface Converter (Figure 1) links your

SFP Optical Module Specifications: Standards

A practical guide to SFP Optical Module Specifications, covering data rates, optical budget, Tx/Rx power,

What Are The Types Of Gigabit Optical Modules

Gigabyte optical module has been a very mature series of products, the common transmission rate is 1.25G, 2.5G,

Cisco Compatible Optical Modules Catalog

TECHNICAL SPECIFICATIONS ing table encapsulates the primary classifications an capabilities of the catalog. For detailed, model

K6097: Specifications of the Fiber Gigabit Ethernet SFP, XFP, SFP+ ...

Topic The following specifications are for the available Fiber Gigabit Ethernet modules and the platforms that support

Cisco Gigabit Ethernet Network Module

Read this data sheet to learn the benefits, specifications, and ordering information for the Cisco Gigabit Ethernet

Cisco 10GBASE SFP+ Modules Data Sheet

This data sheet describes the benefits, specifications, and ordering information for the Cisco

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics

Cisco SFP Modules for Gigabit Ethernet Applications

Optical and copper models can be used on a wide variety of Cisco products and intermixed in combinations of 1000BASE-T,

Cisco Switch Selector

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Applications have been transitioning over time to a less monolithic, scale-out, multinode model. IT infrastructure that supports this

100 Gigabit Ethernet

The 40/100 Gigabit Ethernet standards encompass a number of different Ethernet physical layer (PHY) specifications. A networking

Cisco 4000 Series Integrated Services Router Gigabit Ethernet WAN ...

Product Overview Cisco ® Gigabit Ethernet WAN Modules bring high-density Small Form-Factor Pluggable (SFP) and

Cisco 25 Gigabit Modules

The Cisco ® 25GBASE SFP28 (Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low

Everything You Need to Know About Optical Modules

Optical modules are electronic devices used in communication systems to transmit optical signals. These modules

Cisco Catalyst 6500 Series Mixed Media Gigabit Ethernet Modules

This data sheet describes the benefits, specifications, and ordering information for the Cisco Catalyst 6500 Series

Cisco Gigabit Ethernet Gbic Sfp Modules Data Sheet

The industry-standard Cisco® Small Form-Factor Pluggable (SFP) Gigabit Interface Converter (Figure 1) links your switches and

Cisco Gigabit Ethernet GBIC/SFP Modules

Cisco offers a range of GBIC transceivers and Small Form-factor Pluggables (SFP) transceivers for Gigabit Ethernet and Fibre

Intel® Ethernet SFP+ SR Optics and LR Optics

For instance, customers can remove the optical modules that come installed on the adapter and replace them with an Intel® Ethernet

What are the characteristics of Gigabit optical modules?

At the same time, Gigabit optical modules are also well compatible with various brands and models of network equipment. Easy to

Arista Optics Modules and Cables

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

25 Gigabit Ethernet SFP25 Optical Specifications ... When connecting 25G-MR-XSR/LR optics to legacy fixed rate 10G optics,

Cisco SFP Modules for Gigabit Ethernet Applications

Product overview The industry-standard Cisco Small Form-Factor Pluggable (SFP) Gigabit Interface Converter (Figure 1) links your

SFP Optical Module Specifications: Standards

A practical guide to SFP Optical Module Specifications, covering data rates, optical budget, Tx/Rx power,

What Are The Types Of Gigabit Optical Modules

Gigabyte optical module has been a very mature series of products, the common transmission rate is 1.25G, 2.5G,

Cisco Compatible Optical Modules Catalog

TECHNICAL SPECIFICATIONS ing table encapsulates the primary classifications an capabilities of the catalog. For detailed, model

K6097: Specifications of the Fiber Gigabit Ethernet SFP, XFP, SFP+ ...

Topic The following specifications are for the available Fiber Gigabit Ethernet modules and the platforms that support

Cisco Gigabit Ethernet Network Module

Read this data sheet to learn the benefits, specifications, and ordering information for the Cisco Gigabit Ethernet

Cisco MGE SFP Modules Cisco Small Business Network

These transceivers can support Gigabit Ethernet applications. Figures 1 and 2 show the fiber-optic and copper transceivers. Table 1

Optical Module Package Types Overview

Optical transceiver module (optical transceiver), referred to as optical module, is an important device in optical

Optic Modules Datasheet

Features and Benefits The following table lists the different pluggable optic modules and supported platforms, along with the

Optical Transceivers

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Optical transceivers have revolutionized data transmission, providing high-speed, long-distance, and secure data transmission

Cisco 10GBASE SFP+ Modules Data Sheet

This data sheet describes the benefits, specifications, and ordering information for the Cisco 10GBASE SFP+

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right

Cisco SFP Modules for Gigabit Ethernet Applications

Optical and copper models can be used on a wide variety of Cisco products and intermixed in combinations of 1000BASE-T,

Cisco Switch Selector

Applications have been transitioning over time to a less monolithic, scale-out, multinode model. IT infrastructure that supports this

Cisco SFP Modules for Gigabit Ethernet Applications

This data sheet describes the benefits, specifications, and ordering information for the

Cisco Optics | Transform Your Network

Get the highest quality, performance-leading optical transceivers for any network architecture. Find the transceiver model to fit your

Gigabit SFP Module: A Complete Guide to 1G SFP

Learn what a gigabit SFP module is, how it works, main types, key specifications, and common use cases

Gigabit Optical Transceiver: Technical Specifications, Production ...

This guide explores the most common types of gigabit optical transceivers, their technical capabilities, use cases, and

Cisco SFP Modules for Gigabit Ethernet Applications

Table 1 provides cabling specifications for the SFPs that you install in the Gigabit Ethernet port. Note that all SFP ports have LC-type

Specifications for Gigabit SFP optical transceiver modules

Specifications for Gigabit SFP optical transceiver modules

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Cisco SFP Modules for Gigabit Ethernet Applications

Optical and copper models can be used on a wide variety of Cisco products and intermixed in combinations of 1000BASE-T,

Gigabit Fiber SFP Optical Transceiver Module

Compatibility in your network is everything, and the Intellinet SFP Transceiver Module (model 545006)

Optic Modules Datasheet

datasheet is intended to guide the user through the various options available when choosing an optic module for a given platform

Ultimate Guide to 1G SFP Module Selection

Learn how to choose the right 1G SFP module for your network. Our guide covers compatibility, distance, fiber type, cost, and vendor

Cisco SFP Modules for Gigabit Ethernet Applications

This data sheet describes the benefits, specifications, and ordering information for the

Cisco Optics | Transform Your Network

Get the highest quality, performance-leading optical transceivers for any network architecture. Find the transceiver model to fit your

Gigabit SFP Module: A Complete Guide to 1G SFP

Learn what a gigabit SFP module is, how it works, main types, key specifications, and common use cases

Gigabit Optical Transceiver: Technical Specifications, Production ...

This guide explores the most common types of gigabit optical transceivers, their technical capabilities, use cases, and

Cisco SFP Modules for Gigabit Ethernet Applications

Table 1 provides cabling specifications for the SFPs that you install in the Gigabit Ethernet port. Note that all SFP ports have LC-type

Specifications for Gigabit SFP optical transceiver modules

Specifications for Gigabit SFP optical transceiver modules

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Contact Us

Continue your research online:

Website: https://zithatech.co.za
Technical inquiry: https://zithatech.co.za/contact.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved