

What does SX stand for in an optical module

Article Overview

An SX optical module is a short-wavelength (850nm) transceiver designed for short-distance data transmission over multimode fiber.

Definition and Function

SX stands for Short Wavelength, referring to the use of an 850nm laser for optical signal transmission . SX modules are typically Small Form-factor Pluggable (SFP) transceivers, which are hot-swappable devices that convert electrical signals from switches or routers into optical signals for fiber optic communication and vice versa . They are specifically designed for Gigabit Ethernet (1000BASE-SX) applications, providing high-bandwidth, low-latency connections over short distances .

Fiber Type and Compatibility

SX modules are strictly compatible with multimode fiber (MMF), including OM1, OM2, OM3, and OM4 types . They are not compatible with single-mode fiber, as the 850nm wavelength is optimized for multimode transmission. Modern SX modules often use VCSEL (Vertical-Cavity Surface-Emitting Laser) technology, which offers reliability, low power consumption, and cost-effectiveness .

Transmission Distance

The typical range of SX modules depends on the fiber type....

Article Content

Dec 26, 2025

How to Choose Between 1000BASE-SX vs. 1000BASE-LX

This article will tell you how to choose between 1000BASE-SX and 1000BASE-LX SFP transceiver modules. By comparing the

Oct 11, 2025

What is the difference between lx and sx sfp?

SX SFP: Short wavelength, supports shorter distances in fiber optic networks. The main difference

Oct 29, 2025

What Is 1000BASE-SX SFP Transceiver Module: Complete Guide

A 1000BASE-SX SFP transceiver module is a Gigabit Ethernet optical module designed for short-range data transmission over

Oct 05, 2025

SX SFP Module Guide: SX vs LX vs SR Differences Explained

What Does "SX" Mean in SFP? "SX" stands for Short Wavelength. In the world of fiber optics, "Short Wavelength" specifically refers

Apr 22, 2026

Differences Between 1000BASE-SX, LX, BX, and ZX SFP Modules

SFP (Small Form-factor Pluggable) modules are widely used in Ethernet, Fibre Channel, and other communication

Dec 11, 2025

What is the difference between LX and SX transceivers?

LX and SX transceivers are both types of optical transceivers used in fiber optic communication. The main difference

Feb 12, 2026

Cisco GLC-SX-MM: Unveiling the Optical Transceiver Module for

The Cisco GLC-SX-MM optical transceiver module is one of the critical instruments designed to achieve reliable yet

Dec 23, 2025

What is the difference between LX and SX fiber?

SX stands for short wavelength. The standard specifies a distance capability between 220 meters and 550 meters.

Mar 11, 2026

LX SFP Module Guide: What Is 1000BASE-LX and vs LR LH SX

Learn what LX SFP (1000BASE-LX) modules are, how they differ from LR/LH/SX, and practical tips for compatibility,

Nov 11, 2025

SX SFP Transceivers: Specifications, Applications

Key Specifications and Features of SX SFP Modules SX SFP modules are designed for

Dec 07, 2025

SX vs SR vs LX vs LH Explained: A Simple Guide

Fiber optic networks rely heavily on transceiver modules to transmit data efficiently across different distances and

Apr 23, 2026

SFP-1G-SX Explained: The Essential Guide to 1G Gigabit Multimode ...

Our LS-MM851G-S5C is rigorously tested for seamless integration with major brands, offering exceptional value without

Jun 30, 2026

One minute to know about SFP SX LX EX ZX SR LR

Some HTF new customers are not clear about the abbreviations for SX. So share the

May 30, 2026

1000BASE-SX VS 1000BASE-LX SFP Transceivers

SFP module is a small pluggable optical module for supporting optical fiber communication with a 1G rate, which has

Apr 01, 2026

What is the difference between sx and fx sfp?

SX SFP modules are typically used for short-range communication. The "SX" stands for "Short Wavelength," which refers to the

Nov 28, 2025

Guide to Optical Transceiver Standards

SX- Short Wavelength – these transceivers are optimized for transmission via multimode fiber (MMF) via the 850 nm wavelength

Jul 21, 2026

What Is 1000BASE-SX SFP Transceiver Module: Complete Guide

The “SX” in 1000BASE-SX stands for short wavelength, referring to its use of an 850nm optical signal. This wavelength is optimized

Nov 11, 2025

Guide to Optical Transceiver Standards

Guide to Optical Transceiver Standards – What do SR, LR, FX, LX, etc. stand for? Transceiver part codes are typically made up of a

Mar 20, 2026

How to Choose LX or SX SFP Module

The "SX" stands for "Short Wavelength," and these modules typically use a wavelength of 850nm. SX SFP modules support

Jun 11, 2026

Everything You Need to Know About Optical Modules

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

Oct 23, 2025

1G SX SFP Module Specifications and Compatibility Guide

The “SX” in 1000BASE-SX stands for Short Wavelength, indicating that these modules operate at 850 nm, making

May 04, 2026

Understanding SFP SX, LX, EX, ZX, SR, LR, ER, ZR

☐☐ One Minute to Understand SFP SX, LX, EX, ZX, SR, LR, ER, ZR (Especially for those new to fiber optics) ☐☐ ☐☐ At Sate Optics, we often

Jun 24, 2026

How Can I Interpret the Name of an Optical Module?

How Can I Interpret the Name of an Optical Module? Understanding naming conventions of an optical module help you obtain all

Jun 06, 2026

Understanding SFP SX, LX, EX, ZX, SR, LR, ER, ZR

So here's a simple, 1-minute guide to help you decode them easily: ☐☐ What do these letters mean? ☐☐ For 1.25G SFP modules: 1☐ SX –

Dec 17, 2025

What Is a 1G Multimode SFP? SX Optics and MMF Design

Discover what a 1G multimode SFP is, how 1000BASE-SX works, and when to use short range fiber modules for

Apr 23, 2026

1000BASE-SX, 1000BASE-LX, 1000BASE-ZX& BX SFP: A Simple

It is used for operating on multimode fiber with a short wavelength of 770 to 860 nanometers (typically 850nm). The

Jul 28, 2025

What is a 1000BASE-SX SFP Optical Transceiver

What is a 1000BASE-SX SFP Module? A 1000BASE-SX SFP (Small Form-factor Pluggable) is a hot-swappable,

Aug 16, 2025

SX vs SR vs LX vs LH Explained: A Simple Guide

What Do SX, SR, LX, and LH Mean? These labels define optical transmission standards used in fiber optic

Dec 10, 2025

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical

Jul 14, 2026

Optical Transceivers Guide: SFP, QSFP, CFP Modules

Complete optical transceiver reference: SFP, SFP+, QSFP28, CFP specifications. Distance ranges, wavelengths,

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg,
2196, South Africa

This document is for informational purposes only. Specifications subject to
change without notice.

