

Active Optical Module Models and Specifications



AI Overview

Active Optical Modules (AOMs) are high-speed, hot-pluggable transceivers that convert electrical signals to optical signals, supporting data rates from 1G to 400G over fiber with defined link lengths, form factors, and diagnostic capabilities.

Overview

Active Optical Modules (AOMs) are used to extend high-speed network connectivity over fiber, offering longer reach and lower power consumption compared to copper cables. They are commonly deployed in data centers, enterprise networks, and telecom environments. AOMs include SFP, SFP+, SFP28, QSFP, QSFP-DD, OSFP, and DSFP form factors, each supporting different data rates and link distances .

Key Specifications

1. Data Rate and Form Factor

- SFP: 1–4 Gbps
 - SFP+: up to 10 Gbps
 - SFP28: 25 Gbps
 - QSFP/QSFP-DD/OSFP: 40G to 400G
 - Modules are hot-swappable and adhere to Multi-Source Agreements (MSA) for mechanical dimensions and pinouts .
- #### 2. Optical Parameters
- Fiber Type: Single-mode (SMF) or Multi-mode (MMF, e.g., OM3/OM4/OM5)...

Article Content

Apr 01, 2026

Active Optical Cables (AOC) – MapYourTech

An Active Optical Cable is an advanced cabling assembly that integrates fiber optic technology with active electronic components to enable high-speed data transmission over distances

Jun 21, 2026

Optical Modules in Intelligent Computing Scenarios

In the AI era, Huawei provides a full range of GE to 800GE optical modules, featuring three major capabilities: Spanning (ultra-long transmission), Stable (ultra-high reliability), and Secure (ultra-solid

Nov 18, 2025

Everything You Need to Know About Optical Modules

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

Dec 21, 2025

Active Optical Cables (AOC)

Molex's Active Optical Cables (AOC) offer significant cost advantages over traditional optical modules. Additionally, AOCs can easily be substituted by interfacing to systems via a broad range of standard

Mar 09, 2026

Active Optics Cable Assemblies | TE Connectivity

Our Active Optical Cable assembly portfolio provides greater cable flexibility and longer reach, as compared to passive copper and emerging active copper (ACC/AEC) solutions.

Sep 06, 2025

Cisco 40GBASE QSFP Modules Data Sheet

Cisco QSFP-40G-CSR4 Cisco 40GBASE-CSR4 QSFP Modules extend the reach of the IEEE 40GBASE-SR4 interface to 300 and 400 meters on

Jun 07, 2026

Active Optical Module Market 2025

Active Optical Module Market was valued at 5916 million in 2024 and is projected to reach US\$ 15140 million by 2032, at a CAGR of 14.7%

Mar 26, 2026

FS Community

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Feb 26, 2026

Optical module design resources | TI

View the TI Optical module block diagram, product recommendations, reference designs and start designing.

Sep 15, 2025

Cisco 10GBASE SFP+ Modules Data Sheet

Cisco SFP-10G-ER-I module Cisco SFP-10G-ZR-S module (S-Class) Cisco SFP-10G-ZR module Cisco SFP-10G-ZR-I module Cisco SFP+ Twinax

Jul 14, 2026

Cisco 10GBASE SFP+ Modules Data Sheet

Cisco SFP+ Active Optical Cables (Figure 5) are direct-attach fiber assemblies with SFP+ connectors. They are suitable for very short distances and offer a cost-effective way to connect within racks and

Apr 11, 2026

Optical Modules in General-Purpose Computing Scenarios

Huawei offers a comprehensive portfolio of pluggable StarryLink optical modules for data center networks, with various models providing flexible plug-and-play solutions tailored to diverse interface

Jun 25, 2026

Unveiling the World of Active Optical Cables: A Comprehensive Guide

Explore the world of active optical cables (AOC) in our comprehensive guide. Discover their role in high-speed data transmission for data centers and interconnect applications like HDMI.

Apr 17, 2026

LinkPro Optics — Transceivers & AOC

LinkPro supplies a full portfolio of pluggable optical transceivers and Active Optical Cables (AOC) for data-center Ethernet and DCI. Offerings span 100G to 800G today with a roadmap beyond, covering

Aug 21, 2025

What is Optical Link Module?

Also known as an optical transceiver, it sits at the physical layer of the OSI model and serves as the core bridge in any fiber optic communication system. In this guide, you'll learn what an optical link

Apr 14, 2026

SFP Optical Module Specifications: Standards & Performance

This guide dives into the key SFP Optical Module Specifications that engineers, network architects, and procurement professionals rely on when evaluating optical transceivers.

May 12, 2026

Cisco Compatible Optical Modules Catalog

TECHNICAL SPECIFICATIONS ing table encapsulates the primary classifications and capabilities of the catalog. For detailed, model-specific parameters, please refer to the individual SKU datasheets.

Dec 06, 2025

Active Optical Cable (AOC) Connection Solutions

The appearance of Active Optical Cable (AOC) is quite similar to that of Direct Attach Cable (DAC), but they differ in transmission mode and application environment. Common types of

Oct 28, 2025

100GBASE QSFP-100G Modules Data Sheet

QSFP-100G Optical modules Features and benefits of Cisco QSFP modules Hot-swappable input/output device that plugs into a 100G Gigabit Ethernet Cisco QSFP port.

Jul 23, 2026

Arista Optics Modules and Cables

Arista's Optical Modules and Cable portfolio offer a wide variety of high-density and low-power 800G (dual 400G), 400G, 200G, 100G, 50G, 40G, 25G, 10G, 1G, and 100M Ethernet connectivity options

Dec 21, 2025

Optical Transceiver Datasheet Guide: SFP Specs & PDF Downloads

Learn how to read an optical transceiver datasheet, understand SFP specifications, compare 1G/10G modules, and choose compatible optics for enterprise networks.

Aug 20, 2025

White Paper: Management of Smart Optical Modules

ABSTRACT: Current paradigms for managing pluggable optical modules require tight coupling between the host and module. This White Paper describes a new paradigm that decouples

Jul 16, 2026

Active Optical Module Market Research Report 2034

Active optical modules operate across a broad spectrum of data rate specifications ranging from legacy 10 Gbps systems to cutting-edge 800 Gbps coherent platforms.

Dec 03, 2025

Models, specifications, and compatibility

The following Active Optical Cable (AOC) products are offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only)

Oct 03, 2025

SFP Optical Module Specifications: Standards & Performance

A practical guide to SFP Optical Module Specifications, covering data rates, optical budget, Tx/Rx power, DDM/DOM, standards, and deployment best practices.

Sep 04, 2025

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical modules typically have an electrical interface on the side that

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Active Optical Cables (AOC) & Optical Transceiver

Compared with fiber cables, active optical cables can be highly facilitated and integrated with two optical transceivers (multi-mode optical fiber)

Oct 08, 2025

Classification and Models of H3C Active Optical Cables

Active Optical Cables (AOC) work by utilizing external energy during communication, converting electrical signals into optical signals, or vice versa. The optical modules at both ends of

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AOC (Active Optical Cable) : Optical Transceiver Module | NEC

AOC (Active Optical Cable) Active Optical Cables (AOC) use optical fibers, allowing for longer distance transmission compared to copper cables and being less susceptible to electromagnetic interference.

Contact Us

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

Website: <https://ntmmgroup.co.za>

Email: sales@ntmmgroup.co.za

Phone: +27 82 471 2596

Address: Unit 7, Optic Park, 24 High-Tech Lane, Century City, Cape Town, 7441, South Africa

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