

MSA Optical Module Specifications



Overview

Multi-Source Agreement (MSA) standards are industry-driven technical specifications jointly developed by multiple leading manufacturers to define common form factors, electrical interfaces, optical interfaces, mechanical dimensions, and management protocols for optical transceiver. Multi-Source Agreement (MSA) standards are industry-driven technical specifications jointly developed by multiple leading manufacturers to define common form factors, electrical interfaces, optical interfaces, mechanical dimensions, and management protocols for optical transceiver. An LPO (Linear Pluggable Optics) solution offers considerable power savings for optical interconnect by removing the digital signal processing (DSP) function from the pluggable optical module. This architecture takes advantage of the capabilities in each segment of the link to form a power, cost. MSA (Multi-Source Agreement) standards define the mechanical, electrical, and management interfaces of optical transceivers, enabling multi-vendor interoperability, supply chain flexibility, and large-scale network deployment. The OSFP Management interface is described in a separate document, Common Management Interface Specification for 8/16X. The MSA stands for Multi-Source Agreement and is an agreement between multiple manufacturers to implement standards for optical modules. All other SFF MSA specifications can be seen in the SNIA SFF Specifications database. Newer standards like the QSFP-DD and OSFP are defined by either the QSFP-DD MSA group or the OSFP MSA group. As the transceivers are more.

Article Content

\$LITE \$GLW \$AAOI \$COHR \$AXTI \$TSM \$ASX Tech titans have

Tech titans have formed the Optical Compute Interconnect Multi-Source Agreement (OCI MSA) to develop an open, standardized specification for optical interconnections in AI data centers.

Optical Transceivers | Fiber Optic Transceivers | Form

Leveraging LPO technology, the module provides ultra-low-latency, power-efficient optical links tailored for AI, high-performance computing, and

Arista Announces XPO High Density Liquid Cooled

SANTA CLARA, Calif. – March 12, 2026 — Arista Networks (NYSE: ANET) today announced the formation of a multi-source agreement (MSA) for XPO, a

New coalition launches to advance and scale optical connections for

Multi-source agreement will accelerate open standards for optical connectivity ST. PAUL, Minn., May 12, 2026 / PRNewswire / -- 3M (NYSE: MMM) today announced it has joined a group of

LPO MSA Announces Successful Multi-Vendor Interoperability

ECOC2024 – The LPO MSA (Linear Pluggable Optics Multi-Source Agreement) Group announced today the successful interoperability testing of network equipment le...

LPO MSA Announces Release of Specification for Linear Pluggable Optical ...

The specification defines the necessary optical and electrical requirements for a robust ecosystem of LPO-compatible switch, NIC and module products.

Multi-Source Agreement: A Beginner Guide

Get the complete guide to optical transceiver Multi-Source Agreements (MSAs). Learn how MSAs ensure seamless communication.

What are SFP MSA and SFP+ MSA standards?

The MSA has helped accelerate the development of optical modules such as SFP, SFP+, CFP, and QSFP over the past two decades, enabling them to support

MSA Optical Transceivers: Standards, Compatibility, and Deployment ...

This guide provides practical, solution-driven insights, combining technical depth, deployment strategies, and commercial guidance for choosing the right MSA-compliant optical modules.

MSA Standards for Optical Transceivers: Complete Guide

Learn about MSA standards for optical transceivers, including SFP, QSFP, and XFP specifications. Understand compatibility and vendor requirements.

Welcome to OSFPmsa

OSFP-XD Specification November 23, 2025 Rev 1.11 :: Specification for OSFP-XD Octal Small Form Factor eXtra Dense Pluggable Module September 12, 2024 Rev. 1.1 :: Specification for

Common MSA Protocols in Optical Transceivers

Explore the most common MSA protocols used in optical transceivers. Learn about SFP, SFP+, QSFP, CFP, and more—plus how LINK-PP's

Open Eye MSA

The MSA is developing optical transmitter and receiver specifications to enable optical module implementation using a wide range of optical and electronics

OSFP MSA Rev 5.0

The OSFP module contains a PCB with contact pads (i.e., module PC board; paddle card) that mate with a connector as specified in Section 5.10 of this document. Critical dimensions for the contact

GlobalFoundries Accelerates Adoption of Co-Packaged Optics for

GlobalFoundries (Nasdaq: GFS) (GF) today announced the introduction of its SCALE™ optical module solution for co-packaged optics (CPO). GF's SCALE solution, or Silicon photonics Co

LPO MSA Specification

It builds on IEEE 802.3 and OIF CEI-112G-LINEAR-PAM4 specifications. It enables Ethernet-like links with 1, 2, 4, or 8 lanes for data centers, using low power, high port density, low cost, and low latency

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

XG-SFP-LR-SM1310 10GBASE-LR SFP+ 1310-nm 10-km DOM

The XG-SFP-LR-SM1310 is aligned to IEEE 10GBASE-LR optical specifications and supports a link length of up to 10 kilometers over a single-mode fiber (SMF) with an LC connector. It adopts the

LPO MSA Announces Release of 400G-FR4-LPO Specification for

The specification defines the necessary optical and electrical requirements for a robust ecosystem of LPO-compatible switch, NIC and module products leveraging WDM infrastructure.

Selecting the Perfect 100G Optical Module Packaging:

MSA outlines specifications for the form factor, size, interface, and electrical characteristics of 100G optical modules. Common form factors include

Coherent to Unveil Breakthrough AI-Scale Optical Innovations and ...

Coherent will unveil AI-scale optical innovations at OFC 2026, showcasing technologies that advance bandwidth, scalability, and energy efficiency.

Small Form-factor Pluggable

Small Form-factor Pluggable Small Form-factor Pluggable connected to a pair of fiber-optic cables Small Form-factor Pluggable (SFP) is a compact, hot-pluggable

SFP MSA Standards: Technical Guide for Optical Modules

Multi-Source Agreement (MSA) standards are industry-driven technical specifications jointly developed by multiple leading manufacturers to define common form factors, electrical interfaces, optical

GlobalFoundries Announces New Co-Packaged Optics Solution for AI

GlobalFoundries (GF) announced the introduction of its SCALE™ optical module solution for co-packaged optics (CPO). GF's Silicon photonics Co-packaged Advanced Light Engine (SCALE)

Understanding the OSFP Standard: The Open 400G/800G Optical

Thermal design guidelines up to 20W per module Management interface compatible with SFF-8636 (I²C) Interoperability roadmap for 400GBASE and 800GBASE Ethernet standards By

A Faster Future with Linear Pluggable Optics

Linear Pluggable Optics are a low-power pluggable module interface that eliminates DSP chips, creating a linear signal path.

GlobalFoundries accelerates adoption of co-packaged optics for

SCALE CPO solution is the industry's first OCI MSA capable platform and built with GF's proven silicon photonics technology MALTA, N.Y., May 4, 2026 – GlobalFoundries (Nasdaq: GFS)

Contact Us

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