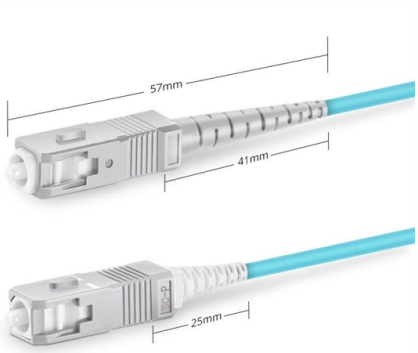
ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Active Optical Cable 100G



Simplex SC UPC

Overview

The QSFP28-100G-AOCxM family is QSFP+ active optical cables (AOC) for 100G Ethernet (100GbE) applications.

Key Takeaways

100G Active Optical Cables (AOCs) typically comply with IEEE 802.3bm, SFF-8636, and QSFP Multi-Source Agreement (MSA) standards, supporting 100Gb/s data rates over multimode or single-mode fiber.Key Standards and Compliance

Form Factor and Interface: Most 100G AOCs use the QSFP28 form factor, which is compatible with QSFP Multi-Source Agreement (MSA) specifications, ensuring interoperability with 100G QSFP ports . IEEE Compliance: 100G AOCs are generally compliant with IEEE 802.3bm, which defines 100 Gigabit Ethernet over multimode fiber (SR4) and single-mode fiber (LR4, ER4) standards . Electrical and Optical Standards: AOCs convert parallel electrical signals into optical signals using VCSEL arrays for multimode fiber or other laser sources for single-mode fiber. Each AOC typically has 4 transmit and 4 receive channels, each capable of 25Gb/s, aggregating to 100Gb/s . Connector Standards: QSFP28 AOCs use MPO or LC connectors depending on the application, supporting both SR4 multimode and LR4 single-mode links . Digital Diagnostic Monitoring (DDM): AOCs include I2C-based DDM, allowing real-time monitoring of temperature, voltage, and optical power, with alerts if parameters exceed specifications .

Typical Applications
• Data Center Interconnects: Rack-to-rack or row-to-row connections within high-density environments .

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• High-Performance Computing: Low-latency, high-bandwidth links for compute clusters .

• Enterprise and Service Provider Networks: Core and distribution layer 100G Ethernet connectivity .
Performance and Reach
• Multimode Fiber (OM3/OM4): Typical reach up to 100 meters for SR4 AOCs .

• Single-Mode Fiber (SMF): Reach can extend from 500 meters to 10 km depending on LR4, ER4, or ZR4 variants .

• Bi-Directional (BiDi) Options: Some QSFP AOCs support dual-rate operation over duplex MMF, enabling reuse of existing 10G duplex infrastructure .
Advantages of 100G AOCs
• High-Density and Low Power: Suitable for dense data center environments .

• Hot-Swappable: Easy installation and replacement without downtime .

• Reduced Interoperability Issues: Pre-optimized for 100G links, eliminating transceiver compatibility concerns .

• Improved Airflow: Thin, flexible cables allow better cable management and cooling .
In summary, 100G AOCs adhere to IEEE 802.3bm, SFF-8636, and QSFP MSA standards, providing reliable, high-speed optical connectivity for data centers and high-performance networks, with support for DDM, multimode and single-mode fiber, and flexible deployment options .

Article Content

100G QSFP28 Active Optical Cable (AOC)

Amphenol''s 100G QSFP28 to QSFP28 Active Optical Cable assemblies are a reliable, cost

100Gb/s QSFP28 1~100m Active Optical Cable (AOC)

The 100G QSFP28 AOC cables provide an ideal alternative

100G QSFP28 AOC Cables | Active Optical Cables

With 4 full-duplex, independent data transmission and receiving channels, OptoSpan 100G AOC Cables

100G Active Optical Cables (AOCs) – Vitex Direct LLC

Standard 100G QSFP28 Active Optical Cables for enterprise switching and storage networks. A staple of modern data centers, these

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100G Quadwire® QSFP28 Active Optical Cable

Multichannel AOCs combine our vertically integrated VCSEL array technology

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100G QSFP28 Parallel Active Optical Cables (AOC) are a high performance, cost-effective interconnect solution supporting

Understanding the 100G QSFP28 Active Optical Cable: Key

The 100G QSFP28 AOC (Active Optical Cable) has enabled such high data rates. This paper seeks to give an all

100G QSFP28 AOC Active Optical Cable

TARLUZ 100G QSFP28 AOC is applied for data storage, high performance computing connection. The

100G QSFP28 DSFP56 Active Optical Cables (AOC) | FiberMall

100G Active Optical Cables (AOC) with hot-pluggable QSFP28 or DSFP built-in digital diagnostic functions for 100 Gigabit Ethernet

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100G-AOC-1M

Explore our 100Gb/s parallel active optical cable (AOC) for 100 meters, featuring 4 channels. Designed for harsh conditions, ensuring

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Experience seamless 100G data transfer with Innoptical''s QSFP28 active optical cables. Enjoy low power,

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100G has become the standard for data center, hyperscale, and enterprise networks. GigaTech Products

JTOPTICS 100G AOC Cables | High-Performance 100G Solutions

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100G AOC Cables 100G AOC Cables from JTOPTICS are Active Optical Cables that offer lightweight, flexible, and low-power

QSFP28 100G Active Optical Cables | Compatibility Assured

QSFP28 100G AOC cables Connect QSFP28 to QSFP28 ports QSFP28 100G Active Optical (AOC) cables are hot-pluggable, highly

100G Active Optical Cables

100% OEM Compatible. Carrier Grade 100G QSFP28 Optics. 100% Tested & Programmed in USA. Fully tested for optical

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100G QSFP28 Active Optical Cables | AscentOptics

100G QSFP28 AOC is a 4x25Gb/s active optical cable, which is designed for 100G Ethernet (100GbE) and InfiniBand FDR/EDR

Active Optical Cables AOC SFP QSFP 10G 25G 100G 400G Fiber

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Pivotal Optics'' Active Optical Cables (AOCs) are fully integrated, plug-and-play fiber assemblies designed for short- to medium-range

QSFP 100Gbps Active Optical Cable (AOC) Cisco QSFP-100G

Black Box QSFP28 Active Optical Cables provide premium, error-free performance for data, storage, and high-performance

Spec Sheet

QSFP28 100G Siemon 100G QSFP28 Active Optical Cable (AOC) assemblies offer a highly reliable and cost-effective alternative to

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100G Quadwire® QSFP28 Active Optical Cable

Multichannel AOCs combine our vertically integrated VCSEL array technology

Arista AOC-Q-Q-100G-10M 100G QSFP28 Active Optical Cable

By offering a cost-efficient alternative to discrete optical transceivers and patch cables, these AOCs are ideal for establishing

2m (7ft) Intel Compatible 100G QSFP28 Active Optical

This cable offers versatile and adaptable deployment options, supporting a capacity of 100G. It can be

100G Active Optical Cables

Carrier Grade 100G QSFP28 Optics. 100% Tested & Programmed in USA. Fully tested for optical compliance and system

100Gb/s QSFP28 Active Optical Cables

Amphenol''s 100G QSFP28 optical modules include SR4, AOC, AOC break out, CWDM4,

Active Optical Cable

Experience reliable, high-speed network connectivity with Cleerline''s 100G QSFP28 Parallel Active Optical Cable (AOC). AOC

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