

Manufacturer s Active Optical Cable NRZ



Article Overview

Active Optical Cables (AOCs) with NRZ modulation are high-speed fiber assemblies designed for data center and networking applications, offered by manufacturers like TE Connectivity, NVIDIA Mellanox, Amphenol, and Extreme Networks.

Overview of NRZ Active Optical Cables

Active Optical Cables (AOCs) use optical fiber and integrated transceivers to transmit data at high speeds over longer distances than copper cables, while maintaining low latency and signal integrity. NRZ (Non-Return-to-Zero) modulation is commonly used for line rates up to 25Gb/s per lane, providing reliable performance for 10G, 25G, 50G, 100G, and 200G applications .

Key Manufacturers and Products

TE Connectivity offers a broad portfolio of AOCs supporting 4G to 112G speeds, including QSFP, QSFP+, and QSFP-DD form factors. Their QSFP-DD cables support 28Gbps NRZ per lane and are suitable for high-performance computing and data center interconnects . NVIDIA Mellanox LinkX AOCs provide 10G, 25G NRZ, and 50G PAM4 line rates, optimized for GPU-based systems and Ethernet switching networks. These cables use 850nm VCSELs and multi-mode fibers, are fully factory-tested, and ensure low bit error rates for reliable end-to-end performance . Amphenol manufactures QSFP-DD and QSFP28 AOCs, including 200G QSFP-DD cables operating at 25Gb/s NRZ per lane, doubling port density compared to 100G QSFP28 AOCs. Their products are designed for high-capacity networks and data center applications, supporting distances up to 100 meters over parallel multimode fiber . Amphenol als...

Article Content

Jan 30, 2026

What is an Active Optical Cable and How Does It Work

An active optical cable uses built-in transceivers to convert electrical signals to light, enabling high-speed, long-distance

Dec 06, 2025

NVIDIA Mellanox LinkX InfiniBand AOC Cables

LinkX InfiniBand AOC cables are designed and manufactured by LinkX Optics, the largest and longest-running AOC manufacturer in

Feb 23, 2026

30m (98ft) Intel Compatible 100G QSFP28 4 x 25G NRZ Active

The Intel Compatible QSFP28 Active Optical Cables are fiber assemblies with QSFP28 connectors designed for direct-attach

Feb 10, 2026

Active Components for 50 Gb/s NRZ-OOK Optical Interconnects in a ...

We present active components developed in imec's silicon photonics platform that enable 50-Gb/s non-return-to-zero

Oct 03, 2025

Optical Communications Products

Browse our optical communication connectivity products designed to help you enable your communication networks. Easily create a

May 29, 2026

Aktive optische Kabel

Größere Kabelflexibilität und größere Reichweite Unser Portfolio an aktiven optischen Kabeln (Active Optical Cables, AOC) bietet im

Jul 09, 2026

1m (3ft) Arista Networks Compatible 200G QSFP56 4 x 50G PAM4 to

The AOC (Active Optical Cable) has several advantages, including high-speed and large-bandwidth transmission, long-distance

Mar 02, 2026

NVIDIA Mellanox LinkX Ethernet AOC Cables

Explore active optical cables (AOCs) and splitters for GPU-accelerated computing.
NVIDIA Mellanox LinkX Optics AOC cables

Sep 13, 2025

Active Optical Cable | Nortech Hybrid Active Optical

This is a family of small form-factor hybrid Active Optical Cable assemblies, performing E-O/O-E within a

May 23, 2026

200G QSFP-DD to 200G QSFP-DD Active Optical Cables 8X 25G NRZ

FIBERSTAMP 200G QSFP-DD parallel Active Optical Cable (AOC) assemblies transmit parallel 8x 25G NRZ signals over multimode

Oct 05, 2025

NVIDIA LinkX Ethernet AOC Cables

NVIDIA ® LinkX ® Optics AOC cables are the lowest-cost way to create high-speed 25G-400G optical links in Ethernet switching

Sep 20, 2025

Active Optical Cables (AOC) - MapYourTech

An Active Optical Cable is an advanced cabling assembly that integrates fiber optic technology with active electronic

Dec 03, 2025

100G QSFP28 Active Optical Cables 4x25G NRZ, 100Meters (328ft)

100G QSFP28 Active Optical Cables 4x25G NRZ, 100Meters (328ft) FIBERSTAMP 100G QSFP28 AOC active optical cable is used

Nov 08, 2025

400G and 200G (50G-PAM4) and 100G (25G-NRZ) Cables and

Part List Using 25G-NRZ Modulation for 100Gb/s InfiniBand and/or Ethernet QSFP28 LinkX 100Gb/s Active Optical Cables (AOC)

Aug 11, 2025

Active Optics Cable Assemblies | TE Connectivity

Our active optical cable assembly portfolio provides greater cable flexibility and longer reach, as compared to both traditional passive

Jul 29, 2025

Aktive optische Kabel

Unser Portfolio an aktiven optischen Kabeln (Active Optical Cables, AOC) bietet im Vergleich zu herkömmlichen passiven

Feb 25, 2026

NVIDIA LinkX Ethernet AOC Cables

Designed and manufactured by LinkX Optics, the largest and longest-running AOC manufacturer in the industry, the cables are

Nov 10, 2025

Active Optical Cables

High-quality, affordable, custom-made active optical cables for multi-line data communications, interconnecting applications, and high

Mar 12, 2026

LinkX Cables and Transceivers | NVIDIA

400Gb/s cables and transceivers are used for linking Spectrum-4 SN5400 and Spectrum-3 SN4000 series Ethernet switches with

May 22, 2026

3m (10ft) 100G QSFP28 Active Optical Cable for Cisco NADDOD

3m (10ft) Cisco QSFP-100G-AOC3M Compatible 100G AOC QSFP28 4x25G NRZ to QSFP28 4x25G NRZ Active Optical Cable

Oct 31, 2025

About OCC

We manufacture and design top-tier fiber optic and copper cabling and connectivity products to support a wide range of application

Feb 26, 2026

Fiber Optic Products Manufacturer Wholesale Supplier China | OPELINK

OPELINK Founded in 2013, in China, is a leading worldwide manufacturer, supplier and wholesale of passive and active fiber optic

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