

# Rising Demand for High-Data Transmission in Modern Applications is Driving Global Active Optical Cable & Extender Market

*Global Active Optical Cable and Extender Market Size is Expected to Reach USD 8 Bn by 2031, Expanding at 17.8% CAGR (2023 - 2031); says TNR*

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/EINPresswire.com/ -- The global active optical cable and extender market is evolving as with the advent of the big-data age, the cloud technology has developed rapidly. In order to satisfy the demands of higher bandwidth and more applications in a variety of cloud computing environments, active optical cable and extenders are highly emerging.

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## Global Active Optical Cable and Extender Market Introduction

Active optical cables (AOCs) and extenders are both technologies used to transmit high-speed data, typically video or networking signals, over longer distances than traditional cables can support. They are commonly used in applications such as data centers, home theaters, conference rooms, and more. Extenders, in the context of audio/video (AV) and networking, are devices designed to extend the range of signals beyond their typical limitations. These devices come in various forms, including HDMI extenders, USB extenders, and Ethernet extenders.

## Trends in the Global Active Optical Cable and Extender Market

- A major trend in active optical cable and extender market is the continuous push for higher data rates. With the increasing demand for 4K, 8K, and even higher resolution video content, active optical cable manufacturers are working on developing solutions that could support these high data rates without signal degradation. Moreover active optical cables are gaining traction in data center environments due to their ability to provide high-speed and long-distance connections.
- On the other hand, in the gaming industry, active optical cable and extender having been used

frequently to connect gaming consoles, PCs, and displays, especially for competitive gaming where low latency and high refresh rates are crucial. In addition, the immersive experiences offered by VR and AR applications require high-speed data transmission with minimal latency. Thus active optical cable are being explored as a solution to deliver the necessary data bandwidth to support these applications.

- Just as with active optical cable, there was a trend toward supporting higher resolutions in extenders as well. 4K content is gaining huge popularity and extender manufacturers are looking forward to developing solutions to transmit high-quality 4K video over longer distances. For instance, HDBaseT is a technology that enables the transmission of audio, video, control signals, Ethernet, and power over a single Cat5e/6 cable. This technology was gaining popularity as an efficient way to extend HDMI signals for applications such as home theaters and professional AV setups.

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Global Active Optical Cable and Extender Market Snapshot

Market Value in 2022: USD 3.43 Billion

Market Value Forecast 2031: USD 8 Billion

Growth Rate: 17.8 %

Historical Data: 2015-2021

Base Year: 2022

Forecast Data: 2023-2031

Driver: The rise of remote work and the Internet of Things (IoT) has led to the huge demand in active optical cables and extenders.

Challenges : AOCs, especially those using optical fiber, can be more expensive to manufacture compared to traditional copper cables.

Opportunities: The increasing demand for cloud services and data storage is driving data center expansion, creating opportunities for AOCs and extenders.

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Key Industry Insights: Global Active Optical Cable and Extender Market

- In 2022, USB in the technology segment had the highest share in the active optical cable and extender market as USB is a widely recognized and adopted interface for connecting various devices, including peripherals, storage devices, cameras, printers, and more. Using USB technology in AOCs and extenders allows for compatibility with a broad range of devices and hence have been used across several industries.

- The active optical cable and extender market has continued to expand and attract new participants, including some of the world's largest cable and telecom component providers. AOCs' application sectors are mostly in data centres and account for a substantial share of their

usage. AOCs are also becoming more popular in consumer electronics, HDMI, and digital signage. Active optical cables (AOC) will be used in future data centres for high-speed transmission, such as 40Gbps, 100Gbps, and even InfiniBand.

- IT and telecom industry dominated the global active optical cable and extender market in 2022. As IT and telecommunications deal with vast amounts of data, including high-resolution videos, real-time communications, cloud services, and large-scale data processing. AOCs and extenders provide the necessary high data rates and bandwidth to handle these demands efficiently. Thus in order to cater to the rising demand market participants are introducing advanced active optical cables (AOCs) and extenders in the market. L-com, an Infinite Electronics brand introduced a new series of active optical cables to address high-speed data centers and enterprise networking applications.
- During the forecast period, active optical cable and extender market in Asia Pacific region has a huge potential. As many Asian cities are rapidly urbanizing, leading to the need for advanced IT and telecommunications infrastructure to support the growing urban populations. AOCs and extenders are in a huge demand for efficient and high-capacity connectivity in densely populated areas. With the rise of streaming services, online gaming, and high-definition content consumption, there is an increasing need for high-speed data transmission which are all driving the active optical cables and extenders market in Asia.

#### Key Developments in the Global Active Optical Cable and Extender Market

In March 2023, Jabil Inc. announced the expansion of its photonics business unit's design, production, and testing capabilities, culminating in the introduction of a new active optical cable (AOC) family. As a consequence, the company is ideally positioned to handle the rapid pace of improvements in optics-enabled network and data center infrastructures while supporting the ongoing rise of AI, cloud, and Internet-Of-Things.

In January 2023, Pure Fi, a leading provider of premium consumer and commercial A/V connection solutions, has introduced the Pure Fi USB Type-C Active Optical Cable (AOC). As one of the first USB-C active optical cables with rates of up to 40 Gbps over a distance of 30 feet, this innovative connection is suited for high-speed communication applications.

#### Global Active Optical Cable and Extender Market Segmentation

##### Global Active Optical Cable and Extender Market –Protocol Outlook

- InfiniBand
- Ethernet
- HDMI
- USB
- Thunderbolt
- Fiberchannel
- Serial Attached SCSI (SAS)
- Display Port
- PCI Express (PCIe)
- Others

## Global Active Optical Cable and Extender Market –Form Factor Outlook

- QSFP
- SFP
- QSFP DD
- SFP DD
- QSFP+
- CFP
- SPF+
- Others

## Global Active Optical Cable and Extender Market –Distribution Channel Outlook

- Online
- Offline

## Global Active Optical Cable and Extender Market – End User Industry Outlook

- IT & Telecommunication
- Aerospace
- Defense
- Automotive
- Consumer Electronics
- Banking, Finance Services and Insurance
- Media & Entertainment
- Retail
- Healthcare
- Industrial
- Others

## Global Active Optical Cable and Extender Market - Regional Outlook

- North America (U.S., Canada, Mexico, Rest of North America)
- Europe (France, The UK, Spain, Germany, Italy, Nordic Countries (Denmark, Finland, Iceland, Sweden, Norway), Benelux Union (Belgium, The Netherlands, Luxembourg), Rest of Europe)
- Asia Pacific (China, Japan, India, New Zealand, Australia, South Korea, Southeast Asia (Indonesia, Thailand, Malaysia, Singapore, Rest of Southeast Asia), Rest of Asia Pacific)
- Middle East & Africa (Saudi Arabia, UAE, Egypt, Kuwait, South Africa, Rest of Middle East & Africa)
- Latin America (Brazil, Argentina, Rest of Latin America)

## Major Players in the Global Active Optical Cable and Extender Market

- Amphenol Communications Solutions
- APAC Opto Electronics Inc.
- ATEN INTERNATIONAL Co., Ltd
- Beetek
- BizLink Group
- Black Box
- Broadcom

- Coherent Corp.
- Corning Incorporated
- LIGHTWARE VISUAL ENGINEERING
- Molex
- Nice North America LLC
- NVIDIA Corporation
- Philex Electronic Ltd.
- TE Connectivity Ltd.
- Vitex
- Other market participants

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