Optical Interconnect - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 120 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

The Optical Interconnect Market size is estimated at USD 19.39 billion in 2025, and is expected to reach USD 35.97 billion by 2030, at a CAGR of 13.15% during the forecast period (2025-2030).

Due to the adverse effects of COVID 19 across industries, players such as 3M are currently manufacturing medical products to assist various stakeholders globally, to combat Covid-19. 3M has doubled production of N95 respirators to 1.1 billion per year at its global manufacturing facilities, including in the U.S., Asia, and Europe. This has led to reduced manufacturing for optical interconnect cables.

However, as the ability to work from home has become an absolute necessity, market players such as Nexcom (Taiwan) plans to help telecom providers and data centers across the world to virtualize and expand capacity. For meeting current network demands for faster speeds, the NC 220FMS3 module provides a PCIe3.0 x16 interface and two QSFP28 ports, each supporting 100Gb/s Ethernet connectivity. The module provides high-speed connectivity without any packet loss. The 100 G optical transceivers (providing 100Gb/s ethernet), their form factor type, and standard are developed according to the cost and power consumption, which are regarded as the main drive in the development for interconnect market, which potentially drives the demand of optical interconnect.

Key Highlights
- Moreover, directly modulated VCSEL arrays, parallel fiber ribbons, along with detector arrays, are highly being applied to optical backplane capacity issues. In the future, additional higher functionality is highly expected as an emerging trend for optical interconnects, which includes features such as cross-connect switches and data packet routing in the optical domain.
- The increasing demand for communication bandwidth is expected to drive the market. Due to the emergence of a large number

of new services in different types of communications and their value-added entities, the demand for bandwidth has gone up more than ever before. Optical interconnect drive it possible in providing more bandwidth and bring great advantage to computing performance, compared to electrical interconnects.
- With optics, over the next decade, it is believed that the energy-requiring for cross-chip communication would approach less than 0.5 pJ b1 and to 0.1 pJ b1 for communication, such as off-chip communication technology. By utilizing the ability to move data affordably, both the power consumption and the total cost for such future multicore processor systems are expected to be reduced with improving bandwidth.
- Since the beginning of 2020, vendors, like Ciena, Infinera, Huawei, and Nokia, have been pushing the limits of modern optics. Huawei CloudFabric EVN Layer 2 DCI solution provides highly permits scalable, efficient layer 2 interconnection that allows expansion of up to 32 data centers across IP WANs. Like Huawei, competing vendors, like Ciena or Infinera, are also working on their 800G-capable coherent solutions, which may power next-generation optical DCI platforms.
- By the second quarter of 2020, millions of people switched to work from home, and video consumption (which amounts to 60% of the global data traffic) was at an all-time high. Critical services were being impacted, and Wi-Fi access points were facing congestion; FWA witnessed limitations, and interconnect points were burdened.
- These scenarios also surge the cloud computing activities, along with significantly increasing investments from the industrial and enterprises segment. All these factors made a massive boom in the data center market along with technologies incorporated to expand the capabilities of data centers. Such trends are expected to further stimulate the growth of the market studied.

Optical Interconnect Market Trends

Data Communication is Expected to Spur the Demand for Optical Interconnects

- One of the major applications of optical interconnectivity is within data communication networks which include datacenter networks, wireless access networks, and wired access networks. Current data center networks, which are based on electronic packet switches, experiences an exponential increase in network traffic due to cloud computing development. Optical interconnects emerged as a promising alternative that offers high throughput, low latency, and reduced power consumption.
- According to IEEE Communications, all-optical networks could provide up to 75% energy savings in the data centers. Especially in large data centers used in enterprises, the use of power ef?cient, high bandwidth, and low latency interconnects is of paramount importance, and there is signi?cant interest in the deployment of optical interconnects in these data centers.
- Currently, optical technology is utilized in data centers is only for point-to-point links, which is in the same way as point-to-point optical links that were used in older telecommunication networks (opaque networks). However, optically switched interconnects are still in the research phase.

North America To Witness High Market Growth

- The rapid penetration of the internet is expected to raise the growth of the market in this region. Moreover, according to Cisco Systems, the cloud traffic in 2021 is estimated to be around 6844 exabytes per year in North America, which is highest in comparison to other regions. According to the November 2020 edition of the Ericsson Mobility Report, North America was expected to end 2020 with about 4% of its mobile subscriptions being 5G. Hence, such trends create scope for the market, as a powerful interconnect is required to enable cell towers and other applications to handle 5G transmissions.
- Also, North America has various players that provide optical interconnect products and solutions, along with players who are also keen to innovate new solutions for the improvement in interconnect bandwidth density at around 10x lower power. For instance, in March 2020, Ayar Labs announced that it had received a strategic investment from Lockheed Martin Ventures, where

the funds will be used to accelerate the commercialization of Ayar Labs' patented monolithic in-package optical I/O (MIPO) solution for applications that require high bandwidth, low latency, and power-efficient short-reach interconnects.
- Moreover, data movement within the data center is becoming a critical feature, and the rise in the ample of new businesses leveraging data center services in the United States, and Canada will leverage more machine-to-machine (M2M) traffic. To overcome this problem, IBM focuses on providing optical switches in the data center as a key to resolve the problem. IBM is undertaking to build reconfigurable optical switches using silicon-photonic technology. If implemented, this optical solution becomes a new trend in the optical interconnect market.
- In June 2020, Equinix Inc., the global interconnection and data center company, announced its agreement to purchase a portfolio of 13 data centers across Canada from BCE Inc for USD 750 million in an all-cash transaction. The 13 data center sites representing 25 Bell data center facilities are likely to generate approximately USD 105 million annualized revenue.

Optical Interconnect Industry Overview

The Optical Interconnect Market is fragmented in nature and is characterized by the presence of several key vendors and other prominent vendors. The key vendors are increasingly focusing on creating awareness about the optical Interconnect development courses and their benefits, along with new innovation and acquisitions. Further, global vendors are trying to stabilize themselves in the market, through strategic collaborations and investements. Key players are 3M, Sumitomo Electric Industries, etc.

- December 2020 - Corning Inc. spent USD 450 million to expand its Cabarrus County fiber optic cable plant in Concord, N.C., generating 475 new jobs and making it the largest such facility in the world.
- November 2020 - Ayar Labs, which makes chip solutions based on optical networking principal's architecture raised USD 35 million in a Series B round of funding. According to the company's CEO, the funding will be used to continue developing its product and working on further commercialization. The main application area for the company's technology is next-generation computing, anywhere that there is a massive movement of data, including aerospace and government applications, artificial intelligence and high-performance computing, telecoms and cloud applications, and lidar for self-driving car and other autonomous systems.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

Optical Interconnect - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 120 pages | Mordor Intelligence

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-03-01
		Signature