

# Optical Interconnect Market Forecasted to Achieve US \$21.15 Billion by 2029

*The Business Research Company's Optical Interconnect Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034*

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Optical Interconnect Global Market Report 2025

How Big Is The Optical Interconnect Market In 2025?

There has been quick expansion in the [optical interconnect market size](#) in the past couple of years. The size is projected to rise from \$12.23 billion in 2024 to \$13.69 billion in 2025, with a compound annual growth rate (CAGR) of 11.9%. This surge over time is considered a result of the growing demand for cloud computing, increased bandwidth needs, the evolution of 5G networks, data center expansions, and a heightened demand for internet services.

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The market size of the optical interconnect is predicted to experience significant expansion in the coming years, with projections estimating a value of \$21.15 billion by 2029,

and a compound annual growth rate (CAGR) of 11.5%. This projected growth within the forecast period can be credited to developments in quantum computing networks, expansion in edge computing infrastructure, an increase in hyperscale cloud investments, a growing demand for solutions that are energy-efficient, and heightened network traffic originating from both private and government sectors. Key trends projected to influence this market within the same period consist of advancements in silicon photonics, the introduction of co-packaged optics, the innovation of 800g/1.6t transceivers, the growth of data centers driven by artificial intelligence, and advancements in applications for quantum communication.

Download a free sample of the optical interconnect market report:

### What Are The Key Driving Factors For The Growth Of The Optical Interconnect Market?

The swift proliferation of 5G networks is predicted to stimulate the growth of the optical interconnect market in the future. As the fifth-generation mobile communication systems, 5G networks offer quicker data speeds, reduced latency, and support a vast array of devices and advanced applications like the Internet of Things (IoT) and smart cities. With the ever-growing number of devices in the IoT ecosystem, 5G networks are expanding at a brisk pace, ensuring seamless communication, instantaneous data exchange and intelligent automation across various sectors. Optical interconnects play a pivotal role in enhancing 5G networks by providing swift, low-latency, and reliable data links among network elements, facilitating efficient connectivity for high-density networks and real-time services. For instance, as per reports from 5G Americas, a trade association in the US, it is anticipated that by the closure of 2024, North America will witness 289 million 5G connections, indicating a 67% growth year-over-year; up from 196 million connections reported at the end of 2023. Consequently, the swift proliferation of 5G networks is catalyzing the growth of the optical interconnect market.

### Who Are The Key Players In The [Optical Interconnect Industry](#)?

Major players in the Optical Interconnect Global Market Report 2025 include:

- Huawei Technologies Co. Ltd.
- Cisco Systems Inc.
- Sumitomo Electric Industries Ltd.
- Mitsubishi Electric Corporation
- Broadcom Inc.
- ZTE Corporation
- TE Connectivity Ltd.
- Corning Incorporated
- Amphenol Corporation
- Furukawa Electric Co. Ltd.

### What Are The Top Trends In The Optical Interconnect Industry?

Leading corporations in the optical interconnect market are concentrating their efforts on devising inventive solutions such as optical interconnect chiplets with the goal of enhancing data transmission speeds, lowering latency, and increasing energy efficiency in high-performance computing and data centre applications. Essentially a compact semiconductor module that utilizes light signals for swift data exchanges between or inside chips, an optical interconnect chiplet has the potential to boost bandwidth, cut latency, and diminish power usage. For example, Ayar Labs, an American firm specializing in high-performance computing, unveiled the first-ever Universal Chiplet Interconnect Express (UCIe) optical chiplet, known as the TeraPHY optical I/O chiplet, in April 2025. An amalgamation of silicon photonics and conventional CMOS manufacturing, this innovative chiplet delivers a stunning 8 Tbps bandwidth driven by a 16-wavelength SuperNova light source. Created specifically to assist AI scale-up structures, it tackles data congestion issues by enabling ultra-fast optical interconnects between chiplets, thereby

reducing latency and power usage. Furthermore, the chiplet's support for the UCIe open standard ensures compatibility and contributes to building a cost-effective environment for optical technologies.

### What Segments Are Covered In The Optical Interconnect Market Report?

The optical interconnect market covered in this report is segmented

- 1) By Product Type: Cable Assemblies, Connectors, Optical Transceivers, Silicon Photonics, Optical Engines, Photonic Integrated Circuits-Based Interconnects, Free Space Optics, Fibers And Waveguides
- 2) By Fiber Type: Single-Mode Fiber (SMF), Multimode Fiber (MMF)
- 3) By Interconnect Level: Metro And Long-Haul, Board Or Rack-level, Chip Or Board-level
- 4) By Technology Type: Optical Waveguide Technology, Optical Fiber Technology, Vertical Cavity Surface Emitting Lasers (VCSELs), Optical Transceivers, Optical Switches
- 5) By Application Area: Data Centers, Telecommunications, High-Performance Computing, Consumer Electronics, Automotive

### Subsegments:

- 1) By Cable Assemblies, Single Mode Cable, Multi Mode Cable, Armored Cable, Breakout Cable, Ribbon Cable
- 2) By Connectors, Lucent Connector, Straight Tip Connector, Subscriber Connector, Mechanical Transfer Registered Jack, Small Form Factor Pluggable Connector
- 3) By Optical Transceivers, Small Form Factor Pluggable Transceiver, Quad Small Form Factor Pluggable Transceiver, Enhanced Small Form Factor Pluggable Transceiver, Compact Small Form Factor Pluggable Transceiver
- 4) By Silicon Photonics, Transmitters, Receivers, Modulators, Photodetectors, Waveguides
- 5) By Optical Engines, Analog Optical Engine, Digital Optical Engine, Hybrid Optical Engine
- 6) By Photonic Integrated Circuits-Based Interconnects, Monolithic Photonic Integrated Circuits, Hybrid Photonic Integrated Circuits, Heterogeneous Photonic Integrated Circuits
- 7) By Free Space Optics, Point To Point Free Space Optics, Point To Multipoint Free Space Optics
- 8) By Fibers And Waveguides, Optical Fibers, Planar Waveguides, Photonic Crystal Fibers, Hollow Core Fibers

View the full optical interconnect market report:

<https://www.thebusinessresearchcompany.com/report/optical-interconnect-global-market-report>

### Which Region Is Expected To Lead The Optical Interconnect Market By 2025?

In 2024, North America led the global optical interconnect market, with Asia-Pacific predicted to witness the most rapid growth in the upcoming period. The report on the optical interconnect market includes regions such as Asia-Pacific, North America, Western Europe, Eastern Europe, South America, Middle East, and Africa.

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