

Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Market to Exceed US \$9 Billion by 2029

Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

LONDON, GREATER LONDON, UNITED KINGDOM, October 29, 2025

/EINPresswire.com/ -- What Is The

Forecast For [The Optical Orthogonal](#)

[Frequency Division Multiplexing \(OFDM\) Communication](#) Market From 2024 To 2029?

The market size for optical orthogonal frequency division multiplexing (OFDM) communication has seen a significant increase in the past few years. The forecast predicts a growth from \$4.21 billion in 2024 to \$4.91 billion in 2025, indicating a compound annual growth rate (CAGR) of

16.7%. This considerable rise in the historical period can be credited to an amplified demand for high-speed data transmission, escalated uptake of fiber optic networks, increase in internet traffic, development of telecommunication infrastructure, and a heightened need for bandwidth optimization.



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In the coming years, the optical orthogonal frequency division multiplexing (OFDM) communication market is poised to experience significant expansion. The market size is anticipated to reach \$9.00 billion by 2029,

progressing at a compound annual growth rate (CAGR) of 16.4%. The surge in the forecast period can be attributed to factors such as the rising adoption of coherent detection systems, growing implementation of data centre interconnects, the burgeoning demand for energy-efficient communication, expansion of cloud-based services, and the escalating deployment of 5G backhaul networks. Key trends anticipated in the forecast period comprise technological enhancements in optical modulators, the emergence of photonic integrated circuits, increased emphasis on research and development, innovations in coherent receivers, and the developed optical amplification methods.

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What Are The Core Growth Drivers Shaping The Future Of The Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Market?

The optical orthogonal frequency division multiplexing (OFDM) communication market is predicted to be spurred by the mounting proliferation of 5G networks. These networks, representing the fifth-generation of wireless cellular tech, boast heightened data speed, minimised latency, and augmented connectivity for a myriad of devices at once. The upswing in 5G networks chiefly stems from the accelerated surge in the consumption of mobile data, powered by the extensive use of cloud gaming, video streaming, and mobile applications that require superior speeds and bandwidth. Optical OFDM, an advanced modulation technique, escalates the capacity and spectral efficiency of fiber-optic network, thereby facilitating speedy data transmission over the prevailing optical infrastructure. For instance, as mentioned by 5G Americas, a US sector trade body, the penetration of 5G had reached an impressive 40% in North America by September 2023 which is a spectacular growth rate of 25.5%. Predictions for the market state that the 5G connections in that region will leap to around 669 million by 2028. This escalating expansion of 5G networks is therefore anticipated to catapult the growth of the optical OFDM communication market. The progression of the optical OFDM communication market is also foreseen to be fueled by the increasing adoption of cloud computing. It is due to the rising requirement for high-capacity, low-latency data transmission. As a service that delivers computing resources like servers, databases, storage, and software over the internet, cloud computing is increasingly being adopted for its scalability, cost-effectiveness, and provision of on-demand IT resources. Optical OFDM, with its heightened spectral efficiency and resilience to dispersion in fiber, is well-suited for quick interconnects in cloud networks. For Example, as of December 2023, 45.2% of enterprises in EU were taking advantage of cloud computing services as per Eurostat, which was a 4.2 percentage point increase from 2021. Therefore, the growth of the optical OFDM communication market is stimulated by the rising adoption of cloud computing.

Which Companies Are Currently Leading In The Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Market?

Major players in the Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Global Market Report 2025 include:

- Huawei Technologies Co. Ltd.
- Cisco Systems Inc.
- Mitsubishi Electric Corporation
- Broadcom Inc.
- Sumitomo Electric Industries Ltd.
- Telefonaktiebolaget LM Ericsson (publ)
- Nokia Corporation

- ZTE Corporation
- Arista Networks Inc.
- Fujikura Ltd.

Comparative Analysis Of Leading Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Market Segments

The optical orthogonal frequency division multiplexing (OFDM) communication market covered in this report is segmented as

- 1) By Component: Transceivers, Modulators, Demodulators, Multiplexers, Other Components
- 2) By Technology: Direct Detection, Coherent Detection
- 3) By Application: Data Center, Long-Haul Communication, Metro Networks, Access Networks, Other Applications
- 4) By End-User: Telecommunications, Information Technology And Data Centers, Enterprises, Government, Other End-Users

Subsegment:

- 1) By Transceivers: Coherent Transceivers, Direct Detection Transceivers, Pluggable Transceivers, Integrated Transceivers
- 2) By Modulators: Mach-Zehnder Modulators, Electro-Absorption Modulators, Phase Modulators, In-phase And Quadrature (IQ) Modulators
- 3) By Demodulators: Coherent Demodulators, Direct Detection Demodulators, Software-Defined Demodulators
- 4) By Multiplexers: Wavelength Division Multiplexers, Dense Wavelength Division Multiplexers, Optical Add-Drop Multiplexers, Coarse Wavelength Division Multiplexers
- 5) By Other Components: Optical Amplifiers, Optical Filters, Dispersion Compensation Modules, Photodetectors, Optical Connectors And Couplers

View the full optical orthogonal frequency division multiplexing (ofdm) communication market report:

<https://www.thebusinessresearchcompany.com/report/optical-orthogonal-frequency-division-multiplexing-ofdm-communication-global-market-report>

Which Regions Are Dominating The Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Market Landscape?

In the Optical Orthogonal Frequency Division Multiplexing (OFDM) Communication Global Market Report 2025, North America led the market in the year 2024. The region anticipated to experience the most significant growth in the forecast period is Asia-Pacific. Other regions mentioned in the report include Western Europe, Eastern Europe, South America, Middle East, and Africa.

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