

South & Central America Pluggable Optics for Data Center Market Report (2021-2031) by Scope, Segmentation, Dynamics, and Competitive Analysis

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Abstracts

The South & Central America pluggable optics for data center market size is expected to reach US\$ 498.46 million by 2031 from US\$ 291.63 million in 2023. The market is estimated to record a CAGR of 6.9% from 2023 to 2031.

Executive Summary and South & Central America Pluggable Optics for Data Center Market Analysis:

Linear pluggable optics (LPO) are optical transceivers that do not include digital signal processor (DSP) chips. They rely Data centers in South America are expanding rapidly, owing to increased digital transformation and internet adoption. Brazil, Argentina, and Chile are developing as significant hubs due to their strategic positioning, strong infrastructure, and favorable government regulations. These countries receive a significant investment in data center infrastructure to enhance data storage, cloud services, and processing capabilities. Growing focus on enhancing data communications and telecommunications applications increases the demand for pluggable optics that maintain optimal network performance in low latency and high bandwidth applications. The growth of the pluggable Optics for Data Center market in South America is driven by increasing investment in the region. In August 2024, Scala Data Centers completed the second phase of its Tambor? data center campus in Barueri, S?o Paulo, with an investment of US\$ 1.1 billion (6.2 billion reais). The development will add six more vertical data centers to the complex, with total investments expected to exceed US\$ 5.85 billion (32 billion reais). Increasing investment in data centers and advanced technologies in the region are expected to generate lucrative opportunities for the pluggable Optics for Data Center market during the forecast period.

South & Central America Pluggable Optics for Data Center Market Segmentation Analysis:

Key segments that contributed to the derivation of the South & Central America pluggable Optics for Data Center market analysis are component and data rate.

Based on component, the South & Central America pluggable Optics for Data Center market is segmented into switches, routers, and servers. The switches held the largest share of the market in 2023.

By data rate, the South & Central America pluggable Optics for Data Center market is segmented into 100-400GB/S, 400-800GB/S, and 800GB/S and Above. The 400-800GB/S segment held the largest share of the market in 2023.

South & Central America Pluggable Optics for Data Center Market Outlook

The usage of AI is quickly increasing, and data center and cloud service providers prioritize developing and deploying high-speed, high-bandwidth optical interconnects. The development of new-generation connectivity solutions results in reduced mW/Gbps and dollar/Gbps and increased power usage. Linear pluggable optics (LPO) links leverage the power of a unique Linear Drive architecture. This drives innovation in power, latency, and cost. LPO links can significantly reduce module power consumption, maintain performance, and lower cooling costs when compared to standard Digital Signal Processing (DSP)-based solutions. Moreover, LPO links greatly decrease the latency and allow faster data transmission times during AI model training and inference, which is crucial for improving AI performance.

Businesses across the globe are swapping from DSP-based solutions to LPO links, which significantly results in cost savings and lower power consumption. This also supports businesses to reduce capital investment and operational costs. Additionally, market players are collaborating and demonstrating their products to create awareness of pluggable optics in high-performance AI infrastructure. Below mentioned are a few examples:

In March 2023, ALPHAWAVE SEMI announced its collaboration with InnoLight Technology, the leader in data center optics, to bring a low-power, low-latency linear pluggable optics (LPO) demonstration to OFC 2024. Alphawave Semi showcases the PCIe 6.0 subsystem (Controller + PHY) with InnoLight's LPO OSFP optics capable of

operating at 64 Gbps per lane. The product is essential for scaling AI workloads in next-generation data center infrastructure. In March 2024, Semtech Corporation announced the demonstration of 100Gbps/lane linear pluggable optical links for AI and ML Data Center Interconnects at OFC 2024. The product features Semtech's PAM4 PMDs from its FiberEdge product line and its new DirectEdge brand, focused specifically on LPO applications. In October 2023, Jabil Inc announced it will take over the manufacture and sale of Intel's current Silicon Photonics-based pluggable optical transceiver ("module") product lines and the development of future generations of such modules. This deal better positions Jabil to cater to the needs of customers in the data center industry, including hyperscale, next-wave clouds, and AI cloud data centers. Therefore, the demand for pluggable optics in high-performance AI infrastructure creates opportunities for the market during the forecast period.

South & Central America Pluggable Optics for Data Center Market Country Insights

Based on country, the South & Central America pluggable Optics for Data Center market comprises Brazil, Argentina, and the Rest of South & Central America. Brazil held the largest share in 2023.

Brazil accounts for over 40% of new investments made in South America's leading data center market. According to Datacenter Map, the market size is predicted to be 740 thousand megawatts in 2024, increasing to 1,210 thousand megawatts by 2029. This market benefits from the country's greatest connection, solid energy supply and power infrastructure, and a highly qualified IT workforce. The growth of data centers in Brazil is associated with the country's highest concentration of rapidly expanding data center dealers and wholesalers. Moreover, increasing investment in developing hyperscale data centers and the rising awareness of the benefits provided by pluggable optics are likely to benefit the pluggable Optics for Data Center market in Brazil in the coming years.

South & Central America Pluggable Optics for Data Center Market Company Profiles

Some of the key players operating in the pluggable optics for data center market include Coherent Corp, Nokia Corp, Cisco Systems I, Infinera Corp, Telefonaktiebolaget LM Ericsson, Ciena Corp, Intel Corp, Lumentum Holdings Inc, Juniper Networks Inc, Marvell Technology Inc, Yangtze Optical Fibre and Cable Joint Stock Ltd, and Broadcom Inc among others. These players are adopting various strategies such as expansion, product innovation, and mergers and acquisitions to provide innovative products to their consumers and increase their market share.

South & Central America Pluggable Optics for Data Center Market Research Methodology :

The following methodology has been followed for the collection and analysis of data presented in this report:

Secondary Research The research process begins with comprehensive secondary research, utilizing both internal and external sources to gather qualitative and quantitative data for each market. Commonly referenced secondary research sources include, but are not limited to:

Company websites , annual reports, financial statements, broker analyses, and investor presentations. Industry trade journals and other relevant publications. Government documents , statistical databases, and market reports. News articles , press releases, and webcasts specific to companies operating in the market. Note: All financial data included in the Company Profiles section has been standardized to USD. For companies reporting in other currencies, figures have been converted to USD using the relevant exchange rates for the corresponding year.

Primary Research The Insight Partners' conducts a significant number of primary interviews each year with industry stakeholders and experts to validate its data analysis, and gain valuable insights. These research interviews are designed to:

Validate and refine findings from secondary research. Enhance the expertise and market understanding of the analysis team. Gain insights into market size, trends, growth patterns, competitive dynamics, and future prospects. Primary research is conducted via email interactions and telephone interviews, encompassing various markets, categories, segments, and sub-segments across different regions. Participants typically include:

Industry stakeholders : Vice Presidents, business development managers, market intelligence managers, and national sales managers
External experts : Valuation specialists, research analysts, and key opinion leaders with industry-specific expertise

Reason to buy

Save and reduce time carrying out entry-level research by identifying the growth, size, leading players, and segments in the South & Central America pluggable

optics for data center market.

Highlights key business priorities in order to assist companies to realign their business strategies.

The key findings and recommendations highlight crucial progressive industry trends in South & Central America pluggable optics for data center market, thereby allowing players across the value chain to develop effective long-term strategies.

Develop/modify business expansion plans by using substantial growth offering developed and emerging markets.

Scrutinize in-depth South & Central America market trends and outlook coupled with the factors driving the pluggable optics for data center market, as well as those hindering it.

Enhance the decision-making process by understanding the strategies that underpin security interest with respect to client products, segmentation, pricing, and distribution.

Companies

Coherent Corp

Nokia Corp

Cisco Systems Inc

Infinera Corp

Telefonaktiebolaget LM Ericsson

Ciena Corp

Intel Corp

Lumentum Holdings Inc

Juniper Networks Inc

Marvell Technology Inc

Yangtze Optical Fibre and Cable Joint Stock Ltd

Broadcom Inc

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