Data Center Server Market Report by Product (Rack Servers, Blade Servers, Micro Servers, Tower Servers), Application (Industrial Servers, Commercial Servers), and Region 2024-2032

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Abstracts

The global data center server market size reached US$ 54.9 Billion in 2023. Looking forward, IMARC Group expects the market to reach US$ 80.9 Billion by 2032, exhibiting a growth rate (CAGR) of 4.3% during 2024-2032. The escalating data growth, digital transformation initiatives, scalability demands, edge computing adoption, AI applications, and cybersecurity concerns are some of the major factors propelling the market.

A data center server is a critical component of a data center infrastructure. It is a high-performance computing machine designed to store, process, and manage vast amounts of data and applications within a controlled environment. Data center servers are equipped with powerful processors, ample memory, and extensive storage capacity to support various functions, such as hosting websites, running applications, and storing data for businesses and organizations. These servers are maintained in a temperature-controlled facility with redundant power sources and stringent security measures to ensure uninterrupted operations. Data center servers play a pivotal role in facilitating data processing and distribution for businesses across industries.

The global data center server market is experiencing robust growth primarily driven by the exponential rise in data generation and consumption, fueled by the proliferation of digital services, cloud computing, and IoT devices. Moreover, businesses are increasingly recognizing the importance of data analytics and real-time insights, prompting investments in high-performance servers to support these functions, creating a positive outlook for market expansion. In addition to this, the ongoing digital

transformation efforts across industries, including finance, healthcare, and e-commerce, have accelerated the adoption of data center servers as organizations seek to enhance their operational efficiency and agility, contributing to the market's growth. Furthermore, the growing need for scalability, reliability, and energy efficiency in data center operations has spurred investments in modern server infrastructure, thereby aiding in market expansion. Apart from this, the shift toward edge computing, driven by latency-sensitive applications, has further bolstered the demand for data center servers to support edge locations.

Data Center Server Market Trends/Drivers:
Explosive data growth

The prime factor driving the growth of the data center server market is the exponential increase in data generation and consumption worldwide. This surge is attributed to several trends, including the widespread adoption of digital services, the growth of cloud computing, and the proliferation of Internet of Things (IoT) devices. As more people use smartphones, interact with social media, engage in e-commerce, and rely on online platforms, massive volumes of data are generated every second. Organizations are compelled to manage and process this data efficiently, creating a substantial demand for data center servers. These servers provide the computational power and storage capacity required to store, analyze, and manage vast datasets, making them indispensable in today's data-driven world.

Digital transformation initiatives

The fast pace of digital transformation across various industrial verticals represents another significant factor driving the data center server market. Organizations are increasingly realizing the importance of leveraging data analytics, artificial intelligence (AI), and machine learning (ML) to gain competitive advantages, enhance customer experiences, and optimize operations. To achieve these objectives, they need robust server infrastructure that can handle complex computational tasks and deliver real-time insights. As a result, businesses across sectors such as finance, healthcare, retail, and manufacturing are investing in high-performance data center servers to support their digital transformation efforts, thereby presenting lucrative opportunities for market expansion.

Scalability and energy efficiency

The growing emphasis on scalability, reliability, and energy efficiency in data center

operations represents one of the main factors impelling the market's growth. As data center workloads continue to expand, businesses need scalable server solutions that can accommodate their evolving needs without substantial infrastructure overhauls. In confluence with this, energy efficiency has become a critical consideration due to both environmental concerns and the escalating operational costs associated with traditional data centers. Modern data center servers are designed with energy-efficient technologies and management systems to reduce power consumption and environmental impact, making them an attractive choice for businesses looking to cut operational expenses and meet sustainability goals.

Data Center Server Industry Segmentation:
IMARC Group provides an analysis of the key trends in each segment of the global data center server market report, along with forecasts at the global and regional levels for 2024-2032. Our report has categorized the market based on product and application.

Breakup by Product:

Rack Servers
Blade Servers
Micro Servers
Tower Servers

Rack servers dominate the market

The report has provided a detailed breakup and analysis of the market based on the product. This includes rack servers, blade servers, micro servers, and tower servers. According to the report, rack servers represented the largest segment.

The surging demand for data center rack servers is primarily driven by the rise of edge computing as rack servers are well-suited for distributed computing environments closer to the data source, reducing latency and improving real-time processing capabilities. In addition to this, the surge in AI and ML applications requires servers with enhanced graphics processing unit (GPU) capabilities, which rack servers can provide, making them crucial for organizations seeking to harness the power of AI-driven insights. Furthermore, rack servers' modular design and compatibility with various storage and networking components offering flexibility, allowing businesses to customize their data center infrastructure to meet specific requirements are strengthening the market growth. Apart from this, its ability to accommodate high-density computing, positions rack

servers as a favored choice in modern data centers aiming for scalability, performance, and cost-effectiveness.

Breakup by Application:

Industrial Servers
Commercial Servers

Commercial servers hold the largest share in the market

A detailed breakup and analysis of the market based on the application has also been provided in the report. This includes industrial and commercial servers. According to the report, commercial servers accounted for the largest market share.

One critical driver impelling the demand for commercial data center servers is the increasing reliance on hybrid and multi-cloud architectures, where organizations leverage both on-premises and cloud-based resources to optimize their IT infrastructure. Besides this, the rising need for robust data center servers that can seamlessly integrate with cloud services and facilitate hybrid environments, ensuring data consistency and efficient workload management is propelling the market forward. Moreover, the growing emphasis on cybersecurity and data privacy is encouraging businesses to maintain greater control over their data, leading to heightened demand for on-premises commercial data center servers with advanced security features. Furthermore, as industries such as finance and healthcare contend with stringent regulatory compliance, the use of dedicated commercial servers in secure, controlled environments becomes imperative, fueling the demand for these servers to cater to the unique needs of compliance-driven sectors.

Breakup by Region:

North America
Europe
Asia Pacific
Middle East and Africa
Latin America

North America exhibits a clear dominance, accounting for the largest data center server market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America, Europe, Asia Pacific, the Middle East and Africa, and Latin America. According to the report, North America accounted for the largest market share.

The rapid expansion of cloud service providers and hyperscale data centers across the North America region, especially in countries such as the United States and Canada has led to a substantial demand for high-density, energy-efficient data center servers. These servers are essential for supporting the massive computational needs of these large-scale data center facilities as they cater to a wide range of industries and businesses seeking to migrate to the cloud. Concurrent with this, the increasing adoption of edge computing solutions in North America, driven by the need for low-latency processing in applications such as IoT, autonomous vehicles, and augmented reality, is boosting the demand for data center servers at edge locations. Furthermore, stringent data privacy regulations, such as General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA), are encouraging organizations to prioritize localized data storage and processing, further stimulating the demand for data center servers within North America to ensure compliance while managing data effectively.

Competitive Landscape:
The global data center server market exhibits a highly competitive landscape, characterized by several prominent players vying for market share. Key industry leaders dominate the market, leveraging their extensive product portfolios and established global presence to cater to a diverse clientele. These market leaders continually innovate by introducing cutting-edge server technologies, addressing evolving customer demands for enhanced performance, scalability, and energy efficiency. Additionally, cloud service providers have a significant impact on the market dynamics, as they develop and utilize proprietary server designs for their vast data centers. Furthermore, a host of niche and emerging players are carving out their niches in specialized server segments, such as edge computing servers, FPGA-based servers, and AI-optimized servers.

The report has provided a comprehensive analysis of the competitive landscape in the market. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

Hewlett Packard Enterprise
Dell, Inc.

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International Business Machines (IBM) Corporation

Fujitsu Ltd.

Cisco Systems, Inc.

Lenovo Group Ltd.

Oracle Corporation

Huawei Technologies Co. Ltd.

Inspur Group

Bull (Atos SE)

Hitachi Systems

NEC Corporation

Super Micro Computer, Inc.

Recent Developments:

In July 2023, Lenovo announced its next wave of data management innovation with new ThinkSystem DG Enterprise Storage Arrays and ThinkSystem DM3010H Enterprise Storage Arrays, designed to make it easier for organizations to enable AI workloads and unlock value from their data.

In April 2023, IBM unveiled new single frame and rack mount configurations of IBM z16 and IBM LinuxONE 4, expanding their capabilities to a broader range of data center environments.

In February 2023, Dell Technologies announced the launch of its next-gen server portfolio consisting of three new PowerEdge XR5610 server, XR7620 server, and XR8000 server, all powered by 4th Gen Intel® Xeon® Scalable processors.

Key Questions Answered in This Report

1. What was the size of the global data center server market in 2023?
2. What is the expected growth rate of the global data center server market during 2024-2032?
3. What has been the impact of COVID-19 on the global data center server market?
4. What are the key factors driving the global data center server market?
5. What is the breakup of the global data center server market based on the product?
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