Data Center Construction Market Report by Construction Type (Electrical Construction, Mechanical Construction), Data Center Type (Mid-Size Data Centers, Enterprise Data Centers, Large Data Centers), Tier Standards (Tier I & II, Tier III, Tier IV), Vertical (Public Sector, Oil and Energy, Media and Entertainment, IT and Telecommunication, Banking, Financial Services and Insurance (BFSI), Healthcare, Retail, and Others), and Region 2024-2032

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Report description:

The global data center construction market size reached US$ 55.8 Billion in 2023. Looking forward, IMARC Group expects the market to reach US$ 103.6 Billion by 2032, exhibiting a growth rate (CAGR) of 7.03% during 2024-2032. The increasing reliance on online shopping and e-commerce platforms, rising use of m-banking apps, and the growing usage of IoT devices generating massive amounts of data are some of the major factors propelling the market.

Data center construction refers to the process of building and setting up a facility designed to house and manage the computer systems of an organization, networking equipment, and other associated components. It involves careful planning and execution to ensure the facility meets specific requirements, such as security, power availability, cooling systems, and redundancy measures. It helps in storing, processing, and managing vast amounts of data. It creates a stable, secure, and efficient environment wherein servers and other hardware can operate optimally throughout the day.

The increasing reliance on e-commerce platforms that necessitate robust data storage and processing capabilities is strengthening the growth of the market. Additionally, the rising adoption of data center facilities in the banking, financial services

and insurance (BFSI) sector to streamline banking operations and enhance the experience of the user is favoring the market growth. Along with this, the rising use of m-banking apps on account of rapid digitization and considerable reliance on smartphones is positively influencing the market. Furthermore, the rising utilization of the Internet of Things (IoT) devices to generate massive amounts of data is creating a positive outlook for the market. Apart from this, the escalating demand for content delivery network (CDN) services for faster internet content delivery is driving the need for geographically distributed data centers worldwide. Furthermore, the rising adoption of data center construction in the healthcare industry to record and maintain patient data is bolstering the market growth.

Data Center Construction Market Trends/Drivers:
Increase in data consumption

The exponential increase in data consumption across the globe represents one of the key factors favoring the market growth. Additionally, with the proliferation of digital technologies like IoT devices, smartphones, and cloud computing, data storage requirements are increasing globally. Businesses, governments, and individual consumers generate and consume vast amounts of data daily, which necessitates secure and efficient storage solutions. Apart from this, as more organizations are adopting digital transformation strategies, need for high-capacity, reliable data centers are rising. Furthermore, various public and private organizations are increasingly investing in expanding existing data centers or constructing new facilities, thus fueling the demand for data center construction.

Rise in regulatory compliance

The increasing cases of cybersecurity thefts are driving the need for data protection and privacy regulations. Governments and international bodies are enforcing stringent laws that mandate secure data storage and handling. The implementation of regulations like GDPR for data storage and security is encouraging organizations to invest in data centers that meet these compliance standards. Non-compliance can result in hefty fines and loss of customer trust, making it crucial for companies to opt for state-of-the-art data center facilities. Moreover, the rising need to adhere to legal and regulatory norms is propelling enterprises to either upgrade their existing infrastructure or initiate new data center construction projects.

Growing hybrid cloud adoption

The increasing adoption of hybrid cloud architectures is another significant factor propelling the market growth. A hybrid cloud combines private and public cloud structures, which offers businesses flexibility and optimized performance and allows organizations to store sensitive data in private data centers while utilizing public clouds for less-critical tasks, thereby providing a balanced approach to data storage and processing. Apart from this, the growing need to construct data centers that are compatible with hybrid cloud architectures is offering a favorable market outlook. Furthermore, the shift towards hybrid cloud strategies is enabling seamless data migration, enhanced security, and efficient resource allocation, making it an attractive option for many enterprises. Moreover, the escalating demand for the construction of data centers that can support and facilitate the complexities of a hybrid cloud environment is driving the market.

Data Center Construction Industry Segmentation:
IMARC Group provides an analysis of the key trends in each segment of the global data center construction market report, along with forecasts at the global, regional and country levels from 2024-2032. Our report has categorized the market based on construction type, data center type, tier standards and vertical.

Breakup by Construction Type:

Electrical Construction

Mechanical Construction

Electrical construction accounts for the largest market share

The report has provided a detailed breakup and analysis of the market based on the construction type. This includes electrical construction and mechanical construction. According to the report, electrical construction dominates the market as it focuses on establishing and maintaining electrical systems, which involves the installation of electrical circuits, power supplies, and backup generators, among other elements. Apart from this, it ensures an uninterrupted power supply to always keep the data center operational. This includes the deployment of uninterruptible power supply (UPS) systems that provide emergency power to keep the servers and networking equipment running in case of power failure. Apart from this, electrical construction firms are well-versed in compliance requirements, ensuring that data centers meet all necessary codes and regulations, reducing the risk of legal and operational issues. Moreover, the integration of smart technologies, such as the Internet of Things (IoT) sensors and predictive maintenance, enhances the efficiency and performance of data center electrical systems. Electrical construction companies are at the forefront of implementing these innovations.

Breakup by Data Center Type:

Mid-Size Data Centers
Enterprise Data Centers
Large Data Centers

Large data centers hold the largest share in the market

A detailed breakup and analysis of the market based on the data center type has also been provided in the report. This includes mid-size data centers, enterprise data centers, and large data centers. According to the report, large data centers hold the largest market share as they are often operated by cloud service providers or colocation companies. Additionally, they are built to accommodate multiple clients and a wide range of computing needs. The construction of these data centers is designed for scale and efficiency. Electrical systems in large data centers are built to be exceptionally robust, with high-capacity UPS systems, multiple generators, and advanced switchgear that can handle massive electrical loads. Apart from this, the mechanical construction for large data centers often employs innovative cooling technologies, like evaporative cooling or hot/cold aisle configurations, to manage the heat generated by a large number of servers efficiently. Furthermore, racks in these data centers are usually standardized to accommodate various hardware types and configurations.

Breakup by Tier Standards:

Tier I & II
Tier III
Tier IV

Tier III dominates the market

The report has provided a detailed breakup and analysis of the market based on the tier standards. This includes tier I and II, tier III, and tier IV. According to the report, tier III accounts for the largest market share as they are characterized by their N+1 redundancy, which means they have multiple backup systems for critical components. This design ensures a remarkable level of availability. Additionally, tier III data centers are constructed with robustness and uptime in mind and are typically utilized by larger businesses and enterprises. Along with this, they strike a balance between reliability and affordability, making them an attractive choice for businesses looking for a cost-effective solution without compromising on uptime. Apart from this, these data

centers offer multiple power and cooling distribution paths, including one active and one passive, to allow for maintenance without causing downtime. They feature a wide range of redundant components, including UPS systems, multiple backup generators, and advanced cooling mechanisms.

Breakup by Vertical:

Public Sector
Oil & Energy
Media & Entertainment
IT & Telecommunication
Banking, Financial Services and Insurance (BFSI)
Healthcare
Retail
Others

IT and telecommunication represent the largest market segment

A detailed breakup and analysis of the market based on the vertical has also been provided in the report. This includes public sector, oil and energy, media and entertainment, IT and telecommunication, banking, financial services and insurance (BFSI), healthcare, retail, and others. According to the report, IT and telecommunication represented the largest segment due to their increasing reliance on data center facilities for disaster recovery and business continuity. These centers offer redundancy and backup solutions to ensure minimal downtime in case of unexpected events. Additionally, in the IT and telecommunication sectors, data center construction focuses on high performance, scalability, and extreme reliability. These data centers need to support a vast array of services, ranging from cloud computing to data storage and networking capabilities. As a result, the electrical systems are designed for high capacity and redundancy. Furthermore, the deployment of fifth-generation (5G) networks requires substantial data center infrastructure to support the increased data speeds and connectivity demands. Telecom companies are heavily investing in data centers to ensure the success of 5G technology.

Breakup by Region:

North America
United States
Canada
Asia Pacific
China
Japan
India
South Korea
Australia
Indonesia
Others
Europe
Germany
France
United Kingdom
Italy
Spain

Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa
Turkey
Saudi Arabia
Others

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

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa (Turkey, Saudi Arabia, and others). According to the report, North America accounted for the largest market share since the region has a highly skilled workforce in areas like data center design, construction, and management. Additionally, the increasing adoption of cloud-based services, especially among startups and SMEs in the region is offering a favorable market outlook. Moreover, the rising frequency and sophistication of cyber-attacks across public and private organizations are favoring the growth of the market in the region. Besides this, the rising adoption of digital financial services is catalyzing the demand for secure and efficient data centers to handle the rising volume of financial transactions and data in the region. Moreover, North America is home to major technology hubs like Silicon Valley, the Research Triangle in North Carolina, and the Boston-Cambridge area. These hubs drive innovation and create a strong demand for data center services.

Competitive Landscape:
The leading companies are integrating advanced cooling technologies, such as liquid immersion cooling and free cooling systems, to make their way into modern data centers. These cooling technologies allow for more effective heat dissipation and reduce the need for mechanical cooling, thereby lowering energy costs. They are also using prefabricated components that can be quickly assembled on-site, which allows for faster deployment and easier scalability. Prefabricated modules often come with integrated electrical and mechanical systems, which reduce the construction time and potential for errors. Moreover, key players are incorporating artificial intelligence (AI) and machine learning (ML) in data center management systems that can predict equipment failure, optimize cooling systems in real time, and manage energy usage more efficiently.

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:

AECOM
DPR construction Inc.
Eaton Corporation Inc.
Fujitsu Limited
Holder Construction Company
Legrand SA
Rittal GmbH & Co. KG
Schneider Electric SE
Tripp Lite
Turner Construction

Vertiv Group Corporation
Recent Developments:
In August 2022, Eaton Corporation Inc., launched a new platform targeting construction digitalization, addressing massive opportunities across project delivery.
In January 2023, Fujitsu Limited and Sapporo Medical University announced the launch of a joint project starting in April 2023 to realize data portability for patients? healthcare data including electronic health records (EHRs) and personal health records (PHRs).
In September 2022, Schneider Electric SE delivered a new data center cooling infrastructure for University College Dublin.

Key Questions Answered in This Report

1. What was the size of the global data center construction market in 2023?
2. What is the expected growth rate of the global data center construction market during 2024-2032?
3. What are the key factors driving the global data center construction market?
4. What has been the impact of COVID-19 on the global data center construction market?
5. What is the breakup of the global data center construction market based on the construction type?
6. What is the breakup of the global data center construction market based on the data center type?
7. What is the breakup of the global data center construction market based on the tier standards?
8. What is the breakup of the global data center construction market based on the vertical?
9. What are the key regions in the global data center construction market?
10. Who are the key players/companies in the global data center construction market?

Table of Contents:

Data Center Construction Market Report by Construction Type (Electrical Construction, Mechanical Construction), Data Center Type (Mid-Size Data Centers, Enterprise Data Centers, Large Data Centers), Tier Standards (Tier I & II, Tier III, Tier IV), Vertical (Public Sector, Oil and Energy, Media and Entertainment, IT and Telecommunication, Banking, Financial Services and Insurance (BFSI), Healthcare, Retail, and Others), and Region 2024-2032

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