Data Center Switch - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Data Center Switch Market size is estimated at USD 17.03 billion in 2024, and is expected to reach USD 22.02 billion by 2029, growing at a CAGR of 5.27% during the forecast period (2024-2029).

Key Highlights
-Global data center investments are rising because of adopting cloud computing, data localization, and emerging technologies like 5G and IoT. Data centers are fast gaining popularity because of the shifting needs of businesses of all sizes, the ongoing creation of millions of linked devices, and the daily volume of data generated via the Internet.
-Additional computer processing and decision-making processes are needed to exploit AI technology's potential fully. Depending on aspects like performance, capacity, and cost, the location of AI processing and data storage may range from the cloud to on-premises data centers to the network's periphery. Edge computing, projected to tremendously benefit from connected devices, innovative industries, and connected cars, would significantly impact the market under examination.
-Core switches are experiencing new growth potential because of expanding traffic management. When the COVID-19 outbreak forced people to stay home, many turned to OTT services like Netflix for entertainment instead of going out to eat or to the movies. In the first three months of COVID-19, Netflix Asia-Pacific added 3.6 million new subscribers. Netflix decided to delete the highest bandwidth streams and cut traffic by tor to handle the high volume of incoming traffic while retaining the streaming service's quality.
-The COVID-19 outbreak messed up the supply chain for building the data center. Lockdown-related delays in project completion and a decline in revenue from particularly hard-hit industries, like hospitality and entertainment, impacted construction activity and data center entry locations.
-Due to the rapid adoption of cloud-based business processes, businesses have made significant investments in data management solutions to handle the massive volume of data produced by these systems. Virtual network-based servers are replacing

conventional on-premises physical servers due to the growth of multi-cloud computing, which drives the global expansion of data centers and increases the demand for data center switching equipment.
-However, one of the most significant expenses for data centers is still electricity. According to the International Energy Agency, data centers consume 1% of all electricity worldwide. They will use it in the next five years. Most of this energy consumption is required to run the servers, which generate heating and cooling. Again, a lot of energy is used in the cooling process.

Data Center Switch Market Trends

Core Switches Holding the Largest Market Share

- Core switches must be given more priority than the other two switches. Companies with larger market shares, such as Amazon and Microsoft, are building additional data centers. The need for core switches will rise dramatically since data centers are expanding.
- The growing traffic must be handled effectively and reliably, with low and predictable latency. However, because vPC (virtual-port-channel) can only supply two active parallel uplinks, bandwidth becomes a constraint in a three-tier data center architecture. Another issue with a three-tier design is that server-to-server latency changes depending on the traffic path used. For Instance, Cisco introduced a new data center design known as the Clos network-based spine-and-leaf architecture to address these restrictions. This design has been demonstrated to provide a high-bandwidth, low-latency, nonblocking server-to-server connection.
- Crore Switches offer a comprehensive selection of devices to satisfy different data center requirements. Switches from their range allow clients to create effective and scalable network infrastructures for top-of-rack (ToR), spine, and leaf architectures. Additionally, offer specialized controls for particular use cases, including SANs or clusters for high-performance computing (HPC).
- In North America, cloud computing technology is becoming more widely used. For instance, Facebook Inc.'s Meta Platforms Inc. announced plans to increase its data center market share by investing USD 800 million in large-scale campuses in Idaho, United States, last year.
- The complexity and interconnectedness of many IT devices are expected to be improved by expanding data center capabilities, and the demand for data center networking components like switches and routers will be a crucial part of hyper-scale infrastructures. The use of high-performance core switches for quick data transfer by hyper-scale IT infrastructure providers will drive the growth of the data center switch market.

North America Expected to Register Significant Growth

- According to real estate expert CBRE, data center leasing in the top seven US markets was 31% greater than in the previous several years and 50% higher than the last year, which had slightly decreased owing to the pandemic. Northern Virginia was the leading market, with over 60% of the country's new data center capacity.
- Cloud service providers and social media firms account for most of the demand for colocation data centers. The market is also driven by adopting new technologies, including blockchain technology, 5G infrastructure, virtual reality communities, and autonomous car technology.
- With new projects from providers aiming at the enterprise sector, Atlanta has recently become another important market for data center development. To develop a 1.1 million square foot data center in Atlanta, QTS Data Centers submitted proposals the year before the current year. According to the designs in "Project Granite," QTS would create 2.3 million square feet of mixed-use space on around 36 acres of land, including data center space and commercial, retail, and residential land uses. These advances increase the need for data center switching devices in these areas.

- By fusing storage, processing, and networking into a single system, hyper-convergence reduces the complexity of data centers and improves scalability, which has begun to gain the attention of businesses in the North American region. An increase in the usage of a hyper-converged infrastructure platform is driving the market for data centers.
- The Patrinely Group and its financing partner, USAA Real Estate, introduced Corscale, a new data center development platform, to the Northern Virginia market last year. The company's first project is Gainesville Crossing, a 300-megawatt complex in Prince William County with five data centers designed for hyper-scale clients.
- In recent years, the region has also widely adopted the 200GbE and 400GbE switch ports. Hewlett Packard Enterprise (HPE), for instance, in the previous and current year, introduced the 32-port 200GbE SN3700M switch, which is designed specifically for the modern data center. The switch has a groundbreaking 8.33Bpps packet processing rate and a bidirectional switching capacity of up to 12.8Tb/s when powered by the 50G PAM-4-based Spectrum-2 ASIC.

Data Center Switch Industry Overview

The Data Centre Switch market is highly competitive and has several major players. However, few significant companies currently dominate the market regarding market share. The companies follow several strategies, including expansions, mergers & acquisitions, joint ventures, collaborations, partnerships, and others; these market players have strengthened their position in the business. The major market players interpreted in the report include Cisco, Jupiter Networks, Dell EMC, Arista Networks, ZTE, Hewlett Packard Enterprise, Mellanox, Huawei, Extreme Networks, etc.

In March 2022, Two brand-new CloudEngine high availability multicast (HAM) data center switches, the CloudEngine 8850-HAM and CloudEngine 6860-HAM, were launched by Huawei. These switches were excellent for the securities, insurance, and high-end manufacturing industries and were expected to help businesses create expansive production and transaction systems.

In April 2023, the Ultra High-Capacity 400G Switch was launched by Edgecore to provide the next-generation data center network architectures. To satisfy the demands of the next-generation data center and cloud computing environments and to bring a new level of basic network architecture, Edgecore announced the launch of the DCS520, an ultra-high capacity 400G switch.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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