

Vietnam Data Center Power - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The Vietnam Data Center Power Market size is estimated at USD 397.10 million in 2024, and is expected to reach USD 556.30 million by 2029, growing at a CAGR of 6.84% during the forecast period (2024-2029).

The increasing demand for cloud computing among SMEs, government regulations for local data security, and growing investment by domestic players are some of the major factors driving the demand for data centers in the country.

Key Highlights

Under Construction IT Load Capacity: The upcoming IT load capacity of the Vietnamese data center market is expected to reach 240 MW by 2029.

Under Construction Raised Floor Space: The country's construction of raised floor area is expected to increase to 870 K sq. ft by 2029.

Planned Racks: The country's total number of racks to be installed is expected to reach 43 K units by 2029. NCR Ho Chi Minh City is expected to house the maximum number of racks by 2029.

Planned Submarine Cables: There are close to 20 submarine cable systems connecting Vietnam, and many are under construction. One such cable, Southeast Asia-Japan Cable 2 (SJC2), is estimated to start service in 2023. It stretches over 10,500 kilometers and has landing points from Quy Nhon, Vietnam.

An increasing need for data storage has resulted in an upsurge in the number of data centers. The rising usage of data centers increased electricity consumption in Vietnam. The country has made clear progress in increasing competition in electricity and natural gas markets. It has reduced the use of fossil fuels and increased the share of renewable energy.

Vietnam could become self-sufficient with domestic energy production. The country's energy production units produce 163 billion KWh of electricity, accounting for 107% of its own consumption. Despite this, Vietnam trades energy to foreign countries. Besides pure consumption, production, imports, and exports also play an important role.

Electricity consumption in the country is rapidly growing (by more than 8% annually on average), creating a power shortage issue. To reduce energy consumption and resolve power shortage issues, key market players are focusing on introducing efficient power management systems such as PDUs, busways, and UPS to control unnecessary expenditures in data centers, which is expected to drive the market's growth. For instance, ABB's technologies guarantee essential power and ensure uninterrupted service in Vietnam's CMC Creative Space data center, a significant cloud computing infrastructure provider.

Vietnam Data Center Power Market Trends

IT & Telecommunication Segment Holds Major Share in the Market

Following the global trend of cloud technology, the interest of Vietnamese companies and their demand for cloud services are also increasing. Service provider opportunities in IT services include IT technical training and IT consulting, management, software/enterprise applications (ERP and CRM systems, financial and accounting software), data centers and data storage, and web services.

The country's data center market is driven by the migration of enterprise data to cloud platforms. For instance, in December 2022, Vietnamese conglomerate Vingroup announced its plans to migrate its SAP systems, including supply chain management, enterprise resource planning (ERP), finance management, human capital management (HCM), and manufacturing operations, in its on-premise data centers to Google Cloud to boost its production capabilities and improve product and service quality. Such developments are expected to increase the adoption of data storage solutions and positively impact the market.

The telecom segment also witnessed significant growth of 5.48%. Many telecom operators aim to increase their offerings and expand their presence nationwide amid the growing economy and the increasing number of internet users. For instance, Viettel IDC plans to invest in 4G and 5G infrastructure and fiber optic connectivity for every household by 2025.

In 2022, the launch of the 5G network and Viettel revolutionized the country's digital market. Vietnam has plans to increase its share of the digital economy's gross domestic product (GDP) to 20% by 2025. Vietnam enjoys 99.8% 4G coverage nationwide, with three major carriers, Viettel, VNPT, and MobiFone, successfully piloting 5G technology in 16 cities and provinces. Such developments are expected to increase the adoption of data storage solutions and positively impact the market's growth.

Monitored PDUs Hold Significant Share in the Market

The increasing focus on digitalization, internet penetration (reached 79.1% by the start of 2023 from 73.2% during the same period in 2022), and e-commerce sales across the country create more need for storage facilities, resulting in huge demand for data centers and a rise in power consumption. Growing demand for data storage has led to the deployment of intelligent power distribution units (PDUs) against simple multi-socket rack installations with server and network equipment, which optimize power consumption in data centers.

Monitored rack PDUs are essential components in data center and server room infrastructure, providing real-time monitoring of power usage, voltage, current, and other electrical parameters. This data helps administrators make informed decisions about power allocation and capacity planning.

By tracking power usage trends, administrators can plan for future growth and ensure that power capacity is not exceeded, preventing overloads that could lead to equipment failures. It also helps identify inefficiencies and optimize energy usage. This can lead to cost savings and a reduced environmental footprint by eliminating unnecessary power consumption. It allows administrators to have remote access and control, reducing the need for physical presence and minimizing operational disruptions.

Furthermore, Vietnam aims at a 10% yearly increase in energy demand, and improving power generation efficiency is one of its main priorities. By 2030, the Vietnam Energy

Efficiency Program (VNEEP 3) expects to save 10% of national energy consumption and reduce power loss by 6.0%. The US firms are playing an important role in providing many energy-saving solutions that Vietnam needs. With the US industry as a partner, Vietnam can guarantee its energy security and create a sustainable industrial sector driven by an efficient, digital-enabled, smart power that underpins development.

Because of the above advancements mentioned with monitored PDUs and the necessity to reduce electricity consumption as per government measures in the country, key players were focusing on introducing energy-efficient products into the market. In May 2023, Eaton, which provides the power management service, launched G3 Universal Input Rack PPDUs with dynamic C39 outlets capable of accommodating different plug configurations and input voltage requirements. To meet the most diverse data center rack power requirements, G3UPDU has added new features.

In May 2023, Legrand, a significant global provider of electrical and digital building infrastructures, introduced the next generation of intelligent rack PDUs PRO4X and Raritan PX4. These new intelligent rack PDU designs revolutionize capacity planning, environmental monitoring, physical and digital access control, workload optimization, and uptime initiatives. Such developments in the segment are predicted to boost regional demand over the forecast period.

Vietnam Data Center Power Industry Overview

The upcoming DC construction projects in Vietnam are anticipated to increase the demand for the data center power market in the coming years. The Vietnamese data center power market is moderately consolidated with the presence of some players, including ABB Ltd, Cummins Inc., Eaton Corporation, Legrand Group, and Vertiv Group Corp. These major players, with a prominent market share, focus on expanding their regional customer base.

January 2024: Caterpillar Inc. partnered with Microsoft and Ballard Power Systems to test the use of large-format hydrogen fuel cells as a reliable and eco-friendly backup power source for multi-megawatt data centers. Hydrogen fuel cells are seen as a possible low-carbon alternative to diesel backup generators, which is expected to drive the growth of DC generators.

March 2024: Schneider Electric announced the expansion of its US manufacturing

facilities at two locations to support critical infrastructure of data centers and other industries. At both locations, the company planned to manufacture electrical switchgear and medium-voltage power distribution products.

Additional Benefits:

The market estimate (ME) sheet in Excel format

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