

# **Vietnam Data Center Server Market, By Form Factor (Blade Server, Rack Server, Tower Server), By End User (IT & Telecommunication, BFSI, Government, Media & Entertainment, Others), By Data Center Size (Small, Medium, Large) By Region, Competition, Forecast & Opportunities, 2019-2029F**

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## **Abstracts**

Vietnam Data Center Server Market was valued at USD 403 Million in 2023 and is expected to reach USD 693 Million by 2029 with a CAGR of 9.30% during the forecast period.

The Data Center Server market refers to the industry segment involved in the production, distribution, and utilization of servers within data centers. These servers are specialized computing devices designed to manage, store, and process vast amounts of data. Data centers, which house these servers, are facilities that provide the infrastructure and environment necessary for their operation, including power, cooling, and physical security.

The market encompasses a broad range of products and services, including server hardware, software, and related support and maintenance. Key players in this market include manufacturers of servers, data center operators, and technology service providers. The market's growth is driven by increasing data storage needs, the expansion of cloud computing, and the rise of big data analytics. Businesses across various sectors rely on data centers for their IT infrastructure, making this market crucial for the digital economy. Emerging trends such as edge computing, AI integration, and sustainability initiatives are also influencing the market's evolution, shaping its future dynamics.

## Key Market Drivers

### Growing Demand for Cloud Computing Services

The increasing adoption of cloud computing services is a primary driver of the Vietnam Data Center Server market. Cloud computing offers scalable and flexible IT solutions, allowing businesses to manage and store data remotely rather than investing in on-premises infrastructure. In Vietnam, both enterprises and smaller businesses are progressively moving towards cloud-based solutions to leverage the benefits of cost-efficiency, scalability, and accessibility.

As the demand for cloud services rises, so does the need for robust data center infrastructure to support these services. Data centers are essential for hosting cloud servers, which handle the vast volumes of data generated and processed by cloud applications. Major global cloud service providers, including Amazon Web Services (AWS), Microsoft Azure, and Google Cloud, are expanding their presence in Vietnam, driving the need for local data centers to ensure low-latency access and comply with data sovereignty regulations. Moreover, the Vietnamese government has been actively promoting digital transformation and the development of IT infrastructure, including data centers. This support includes policy frameworks and incentives designed to encourage investment in data center facilities. As businesses increasingly rely on cloud services for their operations, the demand for data center servers that can support these cloud environments continues to grow.

### Rising Data Consumption and Big Data Analytics

The exponential growth in data consumption and the increasing use of big data analytics are significantly fueling the Vietnam Data Center Server market. As individuals and businesses generate more data through digital interactions, online transactions, and IoT devices, the need for data storage and processing capabilities escalates. Big data analytics, which involves analyzing large datasets to uncover insights and trends, requires substantial computing power and storage resources.

In Vietnam, the expansion of digital services and e-commerce has led to a surge in data generation. Companies across various sectors, including retail, finance, and telecommunications, are leveraging big data analytics to gain competitive advantages, optimize operations, and enhance customer experiences. This surge in data-driven activities necessitates advanced data center servers capable of handling

and processing large volumes of information efficiently. Additionally, the rise of artificial intelligence (AI) and machine learning (ML) applications further amplifies the demand for high-performance servers in data centers. AI and ML require significant computational resources to train models and process data, driving the need for more powerful and efficient data center infrastructure. As these technologies become increasingly integrated into business operations and consumer services in Vietnam, the data center server market is expected to experience continued growth.

### Government Initiatives and Policy Support

Government initiatives and policy support play a crucial role in driving the Vietnam Data Center Server market. The Vietnamese government has recognized the importance of IT infrastructure for economic development and has implemented various policies to support the growth of data centers. These policies include incentives for investments in technology infrastructure, tax benefits, and regulatory support aimed at fostering the development of data center facilities.

One significant initiative is the National Digital Transformation Program, which aims to promote digitalization across various sectors of the economy. This program includes strategies for expanding IT infrastructure, enhancing cybersecurity, and developing data center capabilities. By creating a conducive environment for data center investments, the government is encouraging both domestic and international companies to establish and expand their data center operations in Vietnam. Additionally, the government has been working to improve the regulatory framework surrounding data center operations, including data protection and privacy laws. This regulatory clarity provides businesses with confidence in investing in data center infrastructure, knowing that their operations will comply with national standards and regulations. The alignment of government policies with industry needs helps create a favorable market environment for data center servers, supporting the sector's growth and development.

### Increasing Focus on Data Sovereignty and Local Hosting

The growing emphasis on data sovereignty and local hosting requirements is a significant driver of the Vietnam Data Center Server market. Data sovereignty refers to the principle that data should be subject to the laws and regulations of the country where it is collected and processed. In response to concerns about data security, privacy, and compliance, many countries, including Vietnam, have implemented regulations requiring certain types of data to be stored and processed

locally.

In Vietnam, data sovereignty regulations are becoming more stringent, prompting businesses to invest in local data center infrastructure to ensure compliance. Companies operating in sectors such as finance, healthcare, and government are particularly affected by these regulations, as they often handle sensitive and regulated data. By hosting data locally, these organizations can meet regulatory requirements, reduce latency, and improve data security. Moreover, the Vietnamese government has been advocating for increased local data hosting to support the growth of the domestic IT industry and reduce reliance on foreign data centers. This focus on local hosting is driving the development of new data center facilities and the expansion of existing ones within the country. As businesses seek to align with data sovereignty regulations and leverage local data center capabilities, the demand for data center servers in Vietnam is expected to rise.

## Key Market Challenges

### Infrastructure and Energy Challenges

One of the major challenges facing the Vietnam Data Center Server market is the adequacy and reliability of infrastructure, particularly related to energy supply. Data centers require a consistent and robust energy supply to operate efficiently and ensure the continuous availability of services. However, Vietnam has faced periodic issues with power reliability and infrastructure capacity, which can impact data center operations.

The demand for electricity in Vietnam has been growing rapidly due to economic development and industrialization. While the government has been investing in expanding the energy infrastructure, including developing renewable energy sources and increasing power generation capacity, there are still concerns about the stability and sustainability of the energy supply. Data centers, which are energy-intensive facilities, need a reliable and uninterrupted power supply to avoid downtime and potential data loss. In regions where power supply is less stable, data centers must invest in backup power solutions, such as uninterruptible power supplies (UPS) and diesel generators, which can increase operational costs. Additionally, the high energy consumption of data centers poses environmental challenges. The carbon footprint associated with data center operations can be substantial, especially if the energy is sourced from non-renewable resources. This environmental impact has led to increasing scrutiny from regulators and stakeholders who are pushing for more

sustainable practices. Data center operators in Vietnam are thus faced with the dual challenge of ensuring energy reliability while also adopting energy-efficient technologies and practices to minimize their environmental impact.

To address these challenges, data center operators need to engage in strategic planning and investment in energy-efficient infrastructure and backup systems. Collaboration with energy providers and government bodies to enhance power reliability and explore sustainable energy options is crucial. Moreover, adopting innovative cooling solutions and optimizing data center operations can help mitigate some of the energy-related challenges.

### Talent Shortage and Skill Gaps

Another significant challenge in the Vietnam Data Center Server market is the shortage of skilled talent and the existing skill gaps within the industry. Data centers require a highly specialized workforce to manage and maintain their complex systems, including server hardware, network infrastructure, and data security measures. However, the rapid growth of the industry has outpaced the development of a sufficiently skilled labor pool in Vietnam.

The demand for IT professionals with expertise in data center management, cybersecurity, cloud computing, and network administration is growing, yet the supply of qualified candidates remains limited. This talent shortage can lead to increased recruitment and training costs for data center operators, as well as potential difficulties in maintaining high standards of service and operational efficiency.

Several factors contribute to this challenge. Firstly, the fast-evolving nature of technology means that skills and knowledge quickly become outdated, necessitating continuous learning and adaptation. The pace of technological change in the data center sector—encompassing advancements in server technology, virtualization, and data analytics—requires ongoing education and training, which can be challenging for both individuals and educational institutions.

The educational and training infrastructure in Vietnam may not always align with the specific needs of the data center industry. While there are educational programs focused on IT and engineering, they may not fully address the specialized skills required for data center operations. Bridging this gap requires collaboration between industry players and educational institutions to develop targeted training programs and certification courses that meet the industry's evolving demands.

Addressing the talent shortage involves investing in workforce development through partnerships with educational institutions, offering internships and apprenticeships, and providing continuous professional development opportunities for existing staff. Additionally, creating an attractive work environment and competitive compensation packages can help attract and retain skilled professionals in the data center sector.

## Key Market Trends

### Growth of Edge Computing

One prominent trend in the Vietnam Data Center Server market is the expansion of edge computing. Edge computing refers to the practice of processing data closer to its source, rather than relying solely on centralized data centers. This trend is driven by the need for lower latency, improved performance, and enhanced data privacy.

In Vietnam, the increasing adoption of Internet of Things (IoT) devices, smart city projects, and real-time applications has created a demand for edge computing solutions. These applications require rapid data processing and minimal delay, which centralized data centers alone cannot always provide. By deploying edge servers and infrastructure closer to the data source, organizations can reduce latency and improve the efficiency of their operations.

The rise of edge computing is also influenced by the growth of mobile and remote workforces. As businesses and individuals increasingly rely on mobile applications and remote connectivity, there is a need for distributed computing resources that can handle local data processing without relying on distant data centers. This trend is pushing data center operators in Vietnam to develop edge computing capabilities and integrate them into their service offerings. Furthermore, edge computing aligns with the growing emphasis on data sovereignty and local data processing. As regulatory requirements for data localization become more stringent, edge computing provides a solution by enabling data processing within regional boundaries. This trend is likely to continue driving investment in edge data centers and infrastructure throughout Vietnam, supporting the overall growth of the data center server market.

### Emergence of Green Data Centers

The shift towards green data centers is another significant trend in the Vietnam Data

Center Server market. Green data centers focus on reducing energy consumption, minimizing environmental impact, and promoting sustainability. This trend is driven by increasing environmental awareness, regulatory pressures, and the need for cost savings through energy efficiency.

In Vietnam, the government and businesses are becoming more conscious of their environmental footprint, leading to a push for greener practices in various industries, including data centers. Green data centers utilize energy-efficient technologies such as advanced cooling systems, renewable energy sources, and energy-efficient server hardware to reduce their carbon footprint. By adopting these practices, data centers can lower their operational costs and contribute to national sustainability goals.

The adoption of green technologies is also influenced by global trends and corporate social responsibility (CSR) initiatives. Many international companies operating in Vietnam are implementing green data center practices to align with their global sustainability commitments and meet the expectations of environmentally conscious customers. Additionally, advancements in technologies such as liquid cooling, energy-efficient processors, and renewable energy integration are making it more feasible for data centers to achieve significant reductions in energy consumption. As these technologies become more accessible and cost-effective, the trend towards green data centers is expected to gain momentum in Vietnam.

## Segmental Insights

### Form Factor Insights

The Rack Server held the largest market share in 2023. Rack servers are designed to be mounted in standard server racks, which allows for efficient use of space within data centers. This is crucial in Vietnam, where the demand for data center space is growing rapidly due to increasing digitalization and cloud computing needs. Rack servers enable the deployment of high-density configurations, maximizing the use of available physical space and supporting a larger number of servers in a given area.

Rack servers offer scalability that is essential for data centers accommodating varying workloads and expanding business needs. They can be easily added or reconfigured within the rack, allowing data centers to scale their infrastructure efficiently without significant downtime or disruptions. This flexibility is particularly valuable in the rapidly evolving IT landscape of Vietnam, where businesses require adaptable solutions to keep pace with technological advancements and growing data demands.

Rack servers generally provide a more cost-effective solution compared to blade servers, especially for large-scale deployments. The modular nature of rack servers allows for incremental expansion, reducing the need for substantial upfront investments. Additionally, rack servers often have lower maintenance and operational costs due to their standardized design and widespread compatibility with existing infrastructure.

The design of rack servers facilitates better airflow and cooling within data centers, which is vital for maintaining optimal operating conditions and ensuring reliability. Efficient cooling solutions are essential in Vietnam's climate, where managing heat generation from dense server configurations can be challenging.

## Regional Insights

Southern Vietnam held the largest market share in 2023. Southern Vietnam is the country's economic powerhouse, housing the majority of its major businesses, financial institutions, and multinational corporations. Ho Chi Minh City, as the largest urban center, serves as a critical commercial and financial hub, driving significant demand for data center services. The concentration of businesses necessitates robust IT infrastructure to support their operations, fueling the growth of data centers in the region.

The southern region has seen substantial investment in infrastructure development, including advancements in telecommunications, power, and transportation networks. This infrastructure supports the establishment and operation of data centers, providing the necessary resources for their efficient functioning. The presence of modern business districts and technology parks further enhances the region's appeal as a data center location.

The Vietnamese government has prioritized the development of the southern region through various economic and technological initiatives. Policies aimed at promoting digital transformation and technological innovation have led to increased investment in IT infrastructure, including data centers. Incentives and support for technology enterprises further contribute to the region's dominance in the data center market.

Southern Vietnam benefits from superior connectivity and network access compared to other regions. The proximity to major international submarine cable landing points enhances the region's connectivity to global networks, making it an attractive location for data centers that require high-speed, reliable international connectivity.



The burgeoning demand for cloud computing, e-commerce, and digital services in Southern Vietnam drives the need for advanced data center facilities. As businesses and consumers increasingly rely on digital platforms, the region's data centers must scale to meet these needs, solidifying Southern Vietnam's position as a market leader in the data center server industry.

### Key Market Players

Hewlett Packard Enterprise Company

IBM Corporation

Cisco Systems Inc.

Oracle Corporation

Microsoft Corporation

NEC Corporation

Huawei Technologies Co., Ltd.

Fujitsu Limited

Hitachi Ltd.

### Report Scope:

In this report, the Vietnam Data Center Server Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Vietnam Data Center Server Market, By Form Factor:

Blade Server

Rack Server

Tower Server

Vietnam Data Center Server Market, By End User:

IT & Telecommunication

BFSI

Government

Media & Entertainment

Others

Vietnam Data Center Server Market, By Data Center Size:

Small

Medium

Large

Vietnam Data Center Server Market, By Region:

Southern Vietnam

Northern Vietnam

Central Vietnam

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Vietnam Data Center Server Market.

Available Customizations:

Vietnam Data Center Server Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

#### Company Information

Detailed analysis and profiling of additional market players (up to five).

## Contents

### 1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
  - 1.2.1. Markets Covered
  - 1.2.2. Years Considered for Study
- 1.3. Key Market Segmentations

### 2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Formulation of the Scope
- 2.4. Assumptions and Limitations
- 2.5. Sources of Research
  - 2.5.1. Secondary Research
  - 2.5.2. Primary Research
- 2.6. Approach for the Market Study
  - 2.6.1. The Bottom-Up Approach
  - 2.6.2. The Top-Down Approach
- 2.7. Methodology Followed for Calculation of Market Size & Market Shares
- 2.8. Forecasting Methodology
  - 2.8.1. Data Triangulation & Validation

### 3. EXECUTIVE SUMMARY

### 4. VOICE OF CUSTOMER

### 5. VIETNAM DATA CENTER SERVER MARKET OUTLOOK

- 5.1. Market Size & Forecast
  - 5.1.1. By Value
- 5.2. Market Share & Forecast
  - 5.2.1. By Form Factor (Blade Server, Rack Server, Tower Server)
  - 5.2.2. By End User (IT & Telecommunication, BFSI, Government, Media & Entertainment, Others)
  - 5.2.3. By Data Center Size (Small, Medium, Large)

5.2.4. By Region (Southern Vietnam, Northern Vietnam, Central Vietnam)

5.2.5. By Company (2023)

5.3. Market Map

## **6. SOUTHERN VIETNAM DATA CENTER SERVER MARKET OUTLOOK**

6.1. Market Size & Forecast

6.1.1. By Value

6.2. Market Share & Forecast

6.2.1. By Form Factor

6.2.2. By End User

6.2.3. By Data Center Size

## **7. NORTHERN VIETNAM DATA CENTER SERVER MARKET OUTLOOK**

7.1. Market Size & Forecast

7.1.1. By Value

7.2. Market Share & Forecast

7.2.1. By Form Factor

7.2.2. By End User

7.2.3. By Data Center Size

## **8. CENTRAL VIETNAM DATA CENTER SERVER MARKET OUTLOOK**

8.1. Market Size & Forecast

8.1.1. By Value

8.2. Market Share & Forecast

8.2.1. By Form Factor

8.2.2. By End User

8.2.3. By Data Center Size

## **9. MARKET DYNAMICS**

9.1. Drivers

9.2. Challenges

## **10. MARKET TRENDS & DEVELOPMENTS**

## **11. VIETNAM ECONOMIC PROFILE**

## 12. COMPANY PROFILES

### 12.1. Hewlett Packard Enterprise Company

- 12.1.1. Business Overview
- 12.1.2. Key Revenue and Financials
- 12.1.3. Recent Developments
- 12.1.4. Key Personnel/Key Contact Person
- 12.1.5. Key Product/Services Offered

### 12.2. IBM Corporation

- 12.2.1. Business Overview
- 12.2.2. Key Revenue and Financials
- 12.2.3. Recent Developments
- 12.2.4. Key Personnel/Key Contact Person
- 12.2.5. Key Product/Services Offered

### 12.3. Cisco Systems Inc.

- 12.3.1. Business Overview
- 12.3.2. Key Revenue and Financials
- 12.3.3. Recent Developments
- 12.3.4. Key Personnel/Key Contact Person
- 12.3.5. Key Product/Services Offered

### 12.4. Oracle Corporation

- 12.4.1. Business Overview
- 12.4.2. Key Revenue and Financials
- 12.4.3. Recent Developments
- 12.4.4. Key Personnel/Key Contact Person
- 12.4.5. Key Product/Services Offered

### 12.5. Microsoft Corporation

- 12.5.1. Business Overview
- 12.5.2. Key Revenue and Financials
- 12.5.3. Recent Developments
- 12.5.4. Key Personnel/Key Contact Person
- 12.5.5. Key Product/Services Offered

### 12.6. NEC Corporation

- 12.6.1. Business Overview
- 12.6.2. Key Revenue and Financials
- 12.6.3. Recent Developments
- 12.6.4. Key Personnel/Key Contact Person
- 12.6.5. Key Product/Services Offered

## 12.7. Huawei Technologies Co., Ltd.

12.7.1. Business Overview

12.7.2. Key Revenue and Financials

12.7.3. Recent Developments

12.7.4. Key Personnel/Key Contact Person

12.7.5. Key Product/Services Offered

## 12.8. Fujitsu Limited

12.8.1. Business Overview

12.8.2. Key Revenue and Financials

12.8.3. Recent Developments

12.8.4. Key Personnel/Key Contact Person

12.8.5. Key Product/Services Offered

## 12.9. Hitachi Ltd.

12.9.1. Business Overview

12.9.2. Key Revenue and Financials

12.9.3. Recent Developments

12.9.4. Key Personnel/Key Contact Person

12.9.5. Key Product/Services Offered

## **13. STRATEGIC RECOMMENDATIONS**

## **14. ABOUT US & DISCLAIMER**

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