

Data Center Power Infrastructure Market Forecasts to 2034 – Global Analysis By Infrastructure Component (Uninterruptible Power Supply (UPS), Power Distribution Units (PDUs), Backup Generators, Busway Systems, Transfer Switches and Other Infrastructure Components), Data Center Tier, Power Rating, Power Architecture, End User, and Geography

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Abstracts

According to Statistics MRC, the Global Data Center Power Infrastructure Market is accounted for \$31.5 billion in 2026 and is expected to reach \$82.5 billion by 2034 growing at a CAGR of 12.8% during the forecast period. Data center power infrastructure comprises the electrical systems and equipment that ensure the reliable generation, distribution, management, and backup of power within data centers. It includes uninterruptible power supply (UPS) systems, switchgear, transformers, power distribution units, backup generators, battery energy storage, intelligent power monitoring systems, and energy management software. These solutions maintain continuous operation, improve energy efficiency, and minimize downtime for mission-critical IT infrastructure. Growing demand for cloud computing, artificial intelligence, hyperscale data centers, and digital services is driving investment in advanced data center power infrastructure globally.

Market Dynamics:

Driver:

Growing hyperscale data center investments

Enterprises are scaling up digital infrastructure to support cloud computing, AI, and big data applications. Hyperscale facilities require advanced power systems to ensure reliability and efficiency. Governments are supporting data center expansion through digital economy initiatives. Consumer demand for seamless digital services reinforces the importance of robust power infrastructure. Collectively, hyperscale investments ensure strong momentum for the data center power infrastructure market.

Restraint:

Increasing electricity consumption

Power demand continues to escalate as facilities expand capacity. Enterprises face challenges in managing energy costs and sustainability commitments. Regulatory bodies are imposing stricter efficiency standards to reduce environmental impact. Smaller operators struggle to balance growth with energy efficiency compared to larger competitors. As a result, electricity consumption remains a significant barrier to sustainable expansion.

Opportunity:

Adoption of modular power systems

Modular designs enable flexible deployment and faster installation in hyperscale facilities. Enterprises benefit from reduced downtime and improved operational efficiency. Governments are encouraging modular adoption to strengthen resilience and sustainability. Consumer demand for reliable digital services accelerates investment in modular infrastructure. This opportunity is expected to reshape the competitive landscape of data center power systems.

Threat:

Grid capacity constraints

Rapid expansion strains local electricity networks, creating risks of outages. Enterprises must invest heavily in backup systems and renewable integration. Regulatory frameworks often limit grid expansion, slowing down project timelines. Smaller firms are particularly vulnerable to grid instability compared to larger operators. Unless grid capacity improves, constraints will remain a challenge.

Covid-19 Impact:

The Covid-19 pandemic disrupted supply chains and slowed down data center construction projects. Lockdowns delayed installations and reduced short-term investment in infrastructure. However, recovery plans emphasized digital transformation, boosting long-term demand. Governments introduced funding programs to accelerate cloud and data center adoption post-pandemic. Enterprises renewed focus on resilient and efficient power systems. Overall, Covid-19 created temporary setbacks but reinforced the strategic importance of data center power infrastructure.

The modular segment is expected to be the largest during the forecast period

The modular segment is expected to account for the largest market share during the forecast period as enterprises prioritize flexibility and scalability. Modular systems enable rapid deployment and efficient power management. Enterprises rely heavily on modular infrastructure to support hyperscale data centers. Regulatory support for efficient and resilient systems further boosts adoption. Consumer demand for reliable digital services reinforces the importance of this segment. Consequently, modular systems remain the cornerstone of the data center power infrastructure market.

The busway systems segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the busway systems segment is predicted to witness the highest growth rate due to rising demand for efficient power distribution. Busway systems provide flexible and scalable solutions for large data centers. Enterprises benefit from reduced installation time and improved energy efficiency. Governments are supporting advanced distribution technologies to enhance sustainability. Consumer demand for uninterrupted digital services accelerates adoption in this segment.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to strong demand from hyperscale data centers. The U.S. leads in cloud adoption and digital infrastructure investments. Enterprises in North America are investing heavily in advanced power systems. Consumer demand for reliable digital services is higher compared to other regions. Regulatory frameworks support innovation while ensuring compliance, further boosting adoption. These factors collectively secure North America's leadership in the market.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by rapid industrialization and digital transformation. Countries such as China, India, and Singapore are scaling up data center projects. Rising middle-class populations are fueling demand for cloud and digital services. Governments are introducing supportive policies to encourage infrastructure expansion. Local companies are scaling up innovations to meet both domestic and export demand. This dynamic environment positions Asia Pacific as the fastest-growing regional market.

Key players in the market

Some of the key players in Data Center Power Infrastructure Market include Schneider Electric SE, Eaton Corporation plc, Vertiv Holdings Co., ABB Ltd., Siemens AG, Legrand SA, Cummins Inc., Hitachi Energy Ltd., Huawei Technologies Co., Ltd., Delta Electronics, Inc., Rittal GmbH & Co. KG, Johnson Controls International plc, Panduit Corp., Fujitsu Limited and Mitsubishi Electric Corporation.

Key Developments:

In March 2026, Eaton Corporation plc completed a major technology product launch by collaborating with NVIDIA to unveil the Eaton Beam Rubin DSX platform. This grid-to-chip data center architecture is designed to address the surging infrastructure buildout market, integrating Eaton's newly expanded switchgear capacity, pre-integrated modular enclosures from its Fibrebond acquisition, and advanced liquid-cooling systems from its recently completed buyout of Boyd Thermal.

In November 2025, Schneider Electric SE executed an expansive commercial infrastructure agreement by securing a USD 1.9 billion supply capacity deal with data center operator Switch. This milestone transaction, paired with a broader USD 2.3 billion package of U.S. operator contracts, targets the deployment of specialized large-scale power and liquid cooling infrastructure—including assets from its newly acquired stake in Motivair—to anchor high-density "AI Factories" across North America.

Infrastructure Components Covered:

Uninterruptible Power Supply (UPS)

Power Distribution Units (PDUs)

Backup Generators

Busway Systems

Transfer Switches

Other Infrastructure Components

Data Center Tiers Covered:

Tier I

Tier II

Tier III

Tier IV

Other Data Center Tiers

Power Ratings Covered:

Below 500 kVA

500–1000 kVA

1000–2000 kVA

Above 2000 kVA

Other Power Ratings

Power Architectures Covered:

Centralized

Distributed

Modular

Redundant

Other Power Architectures

End Users Covered:

Colocation Providers

Cloud Service Providers

Telecommunication Companies

Enterprise Data Centers

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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