

Data Center Electrical Asset Monitoring Market Forecasts to 2034 – Global Analysis By Monitoring Components (Hardware Sensors and Meters, Intelligent Monitoring Devices, Gateways and Communication Modules and Other Monitoring Components), Software Type, Service Type, Electrical Asset Type, Deployment Model, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Data Center Electrical Asset Monitoring Market is accounted for \$4.11 billion in 2026 and is expected to reach \$8.31 billion by 2034 growing at a CAGR of 9.2% during the forecast period. Data Center Electrical Asset Monitoring refers to the continuous tracking, measurement, and analysis of electrical infrastructure within a data center to ensure safe, reliable, and efficient power delivery. It involves monitoring assets such as switchgear, transformers, UPS systems, PDUs, circuit breakers, and cabling using sensors, meters, and intelligent software platforms. The system collects real-time data on parameters including voltage, current, load, temperature, power quality, and energy consumption. By enabling predictive maintenance, fault detection, capacity planning, and compliance reporting, electrical asset monitoring helps minimize downtime, reduce energy waste, extend equipment lifespan, and support resilient, mission-critical data center operations.

Market Dynamics:

Driver:

Rising demand for real-time infrastructure visibility

Enterprises increasingly require continuous monitoring to ensure uptime and operational efficiency. Real-time visibility enables predictive maintenance, anomaly detection, and proactive risk mitigation. Hyperscale operators prioritize monitoring to manage complex power systems and distributed architectures. Regulatory mandates for compliance and sustainability further reinforce adoption of monitoring technologies. Consequently, real-time visibility acts as a primary driver for market growth.

Restraint:

High implementation and integration costs

Advanced monitoring systems require substantial investment in hardware, software, and skilled personnel. Smaller enterprises struggle to allocate budgets for comprehensive monitoring solutions. Integration with legacy infrastructure adds complexity and raises costs further. Hidden expenses in training and maintenance increase financial burdens. As a result, high costs act as a key restraint on market expansion.

Opportunity:

Expansion of AI-enabled analytics solutions

AI enhances monitoring by providing predictive insights and automated anomaly detection. Intelligent analytics reduce downtime risks and optimize energy usage. Enterprises leverage AI to align monitoring with sustainability and compliance goals. Rising adoption of machine learning and IoT integration amplifies demand for advanced monitoring platforms. Therefore, AI-enabled analytics act as a catalyst for innovation and growth.

Threat:

Skilled talent shortage hindering adoption

Implementing advanced systems requires expertise in AI, electrical engineering, and data analytics. Limited availability of trained personnel delays projects and increases costs. Smaller enterprises face acute challenges in attracting and retaining talent. Workforce gaps also raise risks of mismanagement during critical monitoring phases. Collectively, talent shortages remain a major threat to market adoption.

Covid-19 Impact:

The Covid-19 pandemic disrupted monitoring activities due to supply chain delays and workforce restrictions. Lockdowns limited site access, slowing down installation and maintenance processes. Equipment shortages further delayed project timelines. However, rising digital adoption boosted long-term demand for resilient monitoring infrastructure. Remote monitoring and automation gained traction as operators sought continuity during restrictions. Overall, Covid-19 acted as both a disruptor and a catalyst for innovation in electrical asset monitoring practices.

The hardware sensors & meters segment is expected to be the largest during the forecast period

The hardware sensors & meters segment is expected to account for the largest market share during the forecast period as they form the foundation of monitoring systems. Sensors and meters provide real-time data on voltage, current, and power quality. Enterprises rely on these devices to ensure operational efficiency and compliance. Rising complexity of hyperscale facilities intensifies demand for robust sensor networks. Technological advancements in IoT-enabled sensors enhance accuracy and scalability. Consequently, hardware sensors & meters dominate the market as the largest segment.

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

Over the forecast period, the switchgear segment is predicted to witness the highest growth rate owing to rising demand for resilient power distribution. Switchgear plays a critical role in protecting electrical assets and ensuring uninterrupted operations. Enterprises prioritize advanced switchgear to manage increasing workloads and complex infrastructures. Integration of smart monitoring features enhances reliability and efficiency. Rising adoption of edge and hyperscale facilities amplifies demand for intelligent switchgear solutions. Therefore, switchgear emerges as the fastest-growing segment in the market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share as it hosts major hyperscale operators. The presence of Amazon Web Services, Microsoft Azure, Google Cloud, and Meta drives concentrated investment in

monitoring solutions. Strong regulatory frameworks and advanced energy infrastructure reinforce adoption of reliable monitoring systems. Enterprises prioritize monitoring to meet stringent compliance and uptime requirements. The region benefits from mature digital ecosystems and high internet penetration. Investments in AI-enabled monitoring and renewable integration further strengthen market leadership.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR due to explosive digital growth and infrastructure investments. Rising internet penetration and mobile-first economies fuel hyperscale and edge data center expansion. Governments in China, India, and Southeast Asia are investing heavily in digital and energy infrastructure. Rapid adoption of 5G and IoT applications intensifies reliance on resilient monitoring solutions. Subsidies and incentives for AI-enabled technologies accelerate adoption across enterprises and startups. Emerging SMEs also contribute significantly to rising demand for cost-effective monitoring systems.

Key players in the market

Some of the key players in Data Center Electrical Asset Monitoring Market include Schneider Electric SE, Siemens AG, ABB Ltd., Eaton Corporation plc, Vertiv Group Corp., General Electric Company (GE), Mitsubishi Electric Corporation, Delta Electronics, Inc., Huawei Technologies Co., Ltd., Legrand SA, Cisco Systems, Inc., Hewlett Packard Enterprise (HPE), IBM Corporation, Hitachi, Ltd. and Toshiba Corporation.

Key Developments:

In January 2025, Siemens entered a strategic partnership with Telefónica to integrate its grid management software with Telefónica's AI platform, aiming to enhance predictive maintenance and efficiency for data center electrical infrastructure across Spain and Germany. This collaboration focuses on leveraging real-time data analytics to optimize power consumption and prevent unplanned outages in critical facilities.

In July 2024, Schneider Electric completed the acquisition of EcoAct, a leader in climate consulting and carbon offset solutions. This acquisition strengthens Schneider's sustainability advisory services, allowing it to offer integrated solutions that combine physical electrical asset monitoring data with carbon footprint tracking and reporting for data center clients.

Monitoring Components Covered:

- Hardware Sensors & Meters
- Intelligent Monitoring Devices
- Gateways & Communication Modules
- Other Monitoring Components

Software Types Covered:

- Asset Performance Management Software
- Power Quality & Energy Monitoring Software
- Predictive Maintenance & Analytics Software
- Visualization & Dashboard Platforms
- Other Software Types

Service Types Covered:

- Installation & Commissioning Services
- Calibration & Testing Services
- Maintenance & Support Services
- Consulting & System Integration Services
- Other Service Types

Electrical Asset Types Covered:

Switchgear

Transformers

Uninterruptible Power Supply Systems

Power Distribution Units

Circuit Breakers & Protection Devices

Generators

Other Electrical Asset Types

Deployment Models Covered:

On-Premises

Cloud-Based

End Users Covered:

IT & Telecommunications

Banking, Financial Services & Insurance

Healthcare

Government & Defense

Manufacturing

Retail & E-Commerce

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, 3032 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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