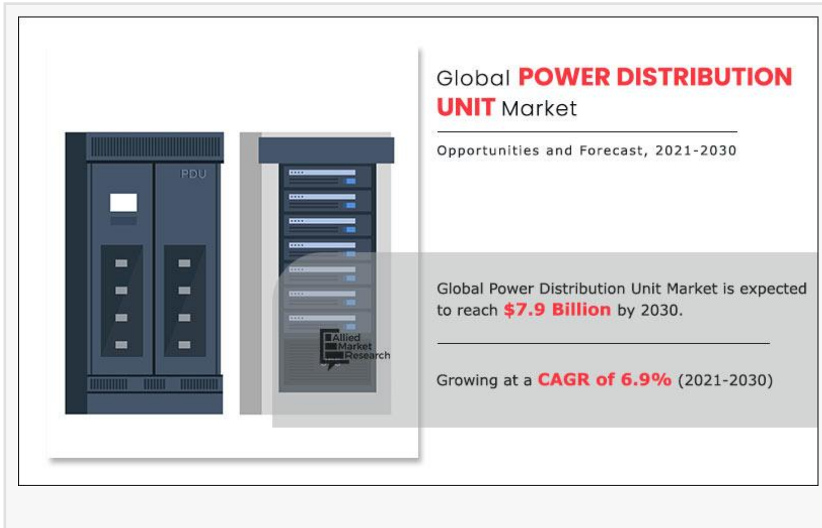
Power Distribution Unit Market to Hit $7.9 Billion by 2030 Amid Rising Data Center Demand

Global Power Distribution Unit Market to Grow at 6.9% CAGR Fueled by Digitalization and Cloud Adoption



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According to a new report published by Allied Market Research, the global [power distribution unit (PDU) market](#) size was valued at $4.1 billion in 2020 and is projected to reach $7.9 billion by 2030, growing at a CAGR of 6.9% from 2021 to 2030.

A power distribution unit is an essential electrical device that provides multiple integrated power outputs to computing and networking systems. Available in rack-mounted and floor-mounted types, PDUs are designed to deliver reliable and efficient power management across data centers, IT infrastructure, and industrial facilities.

> “The global power distribution unit market to reach $7.9 billion by 2030, growing at 6.9% CAGR, driven by data center digitalization.”
>
> *Allied Market Research*

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Key Findings

The metered PDU segment accounted for 27% market share in 2020 and continues to grow steadily.

The three-phase segment is expected to expand at a 7.0% CAGR, dominating large-scale installations.

The IT & Telecom sector held 20% market share and remains the largest end-use industry.

North America led the global market with 37.3% share in 2020.

 Understanding the Role of PDUs in Modern Infrastructure

Rack-mounted PDUs are directly attached to racks and monitor power distribution to servers, switches, and other network devices. These intelligent systems often include Smart PDUs with remote management capabilities, allowing operators to monitor and balance power loads using Simple Network Management Protocol (SNMP).

On the other hand, floor-mounted PDUs—also known as main distribution units (MDUs)—act as a vital link between the primary power source of a building and the various racks within a data center. These units can handle significantly higher power loads (up to 300 kilovolt-amps, depending on the model) and are designed to ensure stable power supply across multiple equipment racks.

With the growth of cloud computing, virtualization, and edge data centers, PDUs have become indispensable to efficient digital infrastructure management, reducing energy waste and downtime.

 Data Center Expansion Driving Market Growth

The surge in global data center digitalization is a key factor propelling the growth of the power distribution unit market. The exponential rise in data generation, cloud services, and virtualization technologies has created the need for more energy-efficient and intelligent power management systems.

For example, Siemens AG implemented advanced virtualized power distribution solutions in its data centers, enhancing energy efficiency and real-time monitoring. Similarly, governments and enterprises are actively investing in green energy practices and energy-efficient infrastructure, further accelerating demand for PDUs.

Moreover, global emphasis on sustainable energy consumption and compliance with environmental standards is promoting the adoption of smart and intelligent PDUs that optimize power utilization across large-scale operations.

 Market Segmentation Insights

The power distribution unit market is segmented by type, phase, end-use industry, and region—each contributing significantly to the overall market expansion.

By Type: The market is categorized into metered, monitored, switched, and basic PDUs. Among these, the metered segment accounted for the largest revenue share of 27% in 2020 and is projected to grow at a CAGR of 6.7%. The demand for metered PDUs is driven by their ability to provide real-time energy usage data, helping enterprises improve energy management and reduce operational costs.

By Phase: The three-phase segment dominates the market with a 7.0% CAGR, as it supports higher power capacities, making it suitable for large-scale data centers and industrial facilities requiring consistent power delivery.

By End-Use Industry: The IT & Telecom sector emerged as the largest end-user segment, capturing 20% of the total market share in 2020. With increasing adoption of 5G networks, cloud services, and IoT technologies, demand for reliable power distribution across IT environments continues to rise. Other key end-use sectors include healthcare, government & defense, and BFSI, all of which are expanding their data management capabilities.

By Region: Regionally, North America accounted for the highest share at 37.3% in 2020, owing to the region’s advanced IT infrastructure, rapid adoption of cloud computing, and growing number of hyperscale data centers.

 Key Market Players and Strategic Developments

The competitive landscape of the power distribution unit industry is characterized by innovation, digital integration, and strategic partnerships. Leading companies such as Eaton, Siemon, Leviton, Siemens, Powertek, Schneider Electric, Cyber Power Systems, Raritan, Vertiv Group, and nVent are actively investing in R&D to deliver smarter, connected PDU solutions.

Other players such as Tripp Lite, Panduit, Delta Electronics, and Socomec are focusing on energy-efficient designs and scalable solutions tailored for modern data center environments.

These companies are enhancing their product portfolios by integrating AI-based monitoring, IoT connectivity, and real-time analytics, ensuring better uptime and operational efficiency for global clients.

 COVID-19 Impact on the PDU Market

The COVID-19 pandemic initially disrupted supply chains and slowed production due to lockdowns and raw material shortages. However, the rise in remote working, online services, and digital transformation initiatives fueled demand for data centers, which, in turn, boosted the PDU market.

As more organizations adopted cloud-based operations, the need for reliable power distribution infrastructure became evident. This shift reinforced the critical role of PDUs in maintaining the stability of global digital ecosystems, even amid uncertainty.

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Conclusion

The global power distribution unit market is on a strong growth trajectory, driven by rising data center investments, digital transformation, and smart infrastructure development. As the world transitions to an era of cloud computing, IoT, and artificial intelligence, the need for intelligent power management systems will continue to expand.

With increasing focus on energy efficiency, remote monitoring, and sustainable infrastructure, PDUs are expected to play a pivotal role in powering the next generation of digital and industrial growth across the globe.

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