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Global AI Data Center Server PSUs Market Research Report 2026(Status and Outlook)

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Abstracts

The 2025 U.S. tariff policies introduce profound uncertainty into the global economic landscape. This report critically examines the implications of recent tariff adjustments and international strategic countermeasures on AI Data Center Server PSUs competitive dynamics, regional economic interdependencies, and supply chain reconfigurations.In 2024, global AI Data Center Server PSUs capacity 2,800 k Units, sales reached approximately 2,607.37 k Units, with an average market price of around 527 USD/Unit, industrial gross margin 31%.The AI Data Center Server PSUs market is in a hyper-growth cycle, expanding from a niche component into a rack-scale bottleneck technology. Market revenue climbed from ~US$0.30B in 2022 to ~US$1.37B in 2024, and is projected to reach ~US$6.57B by 2031F, implying a ~21% CAGR for 2025E?2031F; shipments follow a similar ~21% CAGR, rising from ~4.13M units in 2025E to ~12.85M units in 2031F. This trajectory aligns with the sharp step-up in AI rack power density and accelerator intensity, which is structurally lifting PSU content per server and per rack. Competition is concentrated at the high end but still dynamic as China-based suppliers scale quickly. In 2024, the top five vendors?Delta Electronics, LITEON Technology, Acbel Polytech, Chicony Power Technology, and Advanced Energy?capture ~74% of revenue; Delta Electronics alone contributes ~41%, reflecting clear leadership in high-power redundant modules. By 2025E, top-five share eases to ~69% as fast-growing followers broaden the supply base, suggesting that scale, qualification speed, and co-design capability with AI OEMs are becoming decisive differentiators.Regionally, demand is anchored in Asia-Pacific and North America, with Asia-Pacific gaining further share through 2031. In 2024 unit demand splits roughly as Asia-Pacific ~45%, North America ~36%, and Europe ~15%; by 2031F, Asia-Pacific is expected to exceed ~51% of global shipments while North America moderates to ~30%. The shift mirrors where AI server manufacturing clusters and hyperscale deployments are densifying fastest, reinforcing a dual-hub demand pattern.Power-rating mix shows a

clear migration toward mid- and high-power modules, while average selling prices remain broadly stable. The 3?5.5 kW class dominates volumes through the forecast window, supported by mainstream 8-GPU and multi-accelerator nodes, whereas >5.5 kW modules are the fastest-growing segment as next-gen servers push higher nameplate and transient loads. Despite the mix upgrade, blended ASP trends only slightly down (roughly US$540 per module in 2022 to ~US$510 by 2031F) as rapid scale-up, yield learning, and platform standardization offset higher specs.By application, GPU servers are the absolute demand core and will remain so even as ASIC server volumes rise. GPU servers account for ~86% of units and ~90% of revenue in 2024, and still about ~85% of units / ~89% of revenue by 2031F, underlining that training-centric clusters drive the PSU market?s center of gravity. ASIC servers grow steadily off a smaller base, reflecting expanding inference fleets and domain-specific accelerators, while FPGA demand stays specialized.Looking ahead, the market is being reshaped by higher-voltage distribution, higher-density shelves, and a rapid move to ultra-high efficiency. Industry roadmaps are converging on 48 V rack distribution and 5.5 kW-class (and above) hot-swap modules/power shelves to reduce copper loss and simplify serviceability at 30?100 kW racks. Efficiency requirements are escalating from 80 PLUS Titanium toward the new Ruby tier, pushing designs toward GaN/SiC power stages, tighter transient response, and digital telemetry for power capping and predictive maintenance. For suppliers, winning strategies will center on Ruby-class efficiency, thermal-mechanical co-design for liquid-cooled racks, and early platform lock-ins with leading AI server OEMs.

The global AI Data Center Server PSUs market size was estimated at USD 1374.0 million in 2025 and is projected to grow at a compound annual growth rate (CAGR) of 20.60% during the forecast period.

This report offers a comprehensive and in-depth analysis of the global AI Data Center Server PSUs market, covering all critical facets from a broad macroeconomic overview to detailed micro-level insights. It examines market size, competitive landscape, emerging development trends, niche segments, key drivers and challenges, as well as conducts SWOT and value chain analyses.

The insights provided enable readers to understand the competitive dynamics within the industry and formulate effective strategies to enhance profitability and market positioning. Additionally, the report presents a clear framework for evaluating the current status and future outlook of business organizations operating in this sector.

A significant focus of this report lies in the competitive landscape of the global AI Data

Center Server PSUs market. It offers detailed profiles of major players, including their market shares, performance metrics, product portfolios, and operational status. This enables stakeholders to identify leading competitors and gain a nuanced understanding of market rivalry and structure.

In summary, this report serves as an essential resource for industry participants, investors, researchers, consultants, and business strategists, as well as anyone planning to enter or expand their presence in the AI Data Center Server PSUs market.

Global AI Data Center Server PSUs Market: Market Segmentation Analysis

This research report provides a detailed segmentation of the market by region (country), key manufacturers, product type, and application. Market segmentation divides the overall market into distinct subsets based on factors such as product categories, end-user industries, geographic locations, and other relevant criteria.

A clear understanding of these market segments enables decision-makers to tailor their product development, sales, and marketing strategies more effectively to meet the unique needs of each segment. Leveraging market segmentation insights can significantly enhance targeted approaches, optimize resource allocation, and accelerate product innovation cycles by aligning offerings with the specific demands of diverse customer groups.

Key Company

Delta Electronics
LITEON Technology
Acbel Polytech
Chicony Power Technology
Advanced Energy
Shenzhen Megmeet Electrical
Shenzhen Honor Electronic
Aohai Technology
China Greatwall Technology
FSP Group
Phihong
Murata
Shenzhen Gospower
Zippy Technology

SilverStone
Beijing Dynamic Power

Market Segmentation (by Type)

Below 3 kW
3-5.5 kW
Above 5.5 kW

Market Segmentation (by Application)

GPU Server
ASIC Server
FPGA Server
Others

Geographic Segmentation

North America (USA, Canada, Mexico)
Europe (Germany, UK, France, Russia, Italy, Rest of Europe)
Asia-Pacific (China, Japan, South Korea, India, Southeast Asia, Rest of Asia-Pacific)
South America (Brazil, Argentina, Columbia, Rest of South America)
The Middle East and Africa (Saudi Arabia, UAE, Egypt, Nigeria, South Africa, Rest of MEA)

Key Benefits of This Market Research:

Industry drivers, restraints, and opportunities covered in the study
Neutral perspective on the market performance
Recent industry trends and developments
Competitive landscape & strategies of key players
Potential & niche segments and regions exhibiting promising growth covered
Historical, current, and projected market size, in terms of value
In-depth analysis of the AI Data Center Server PSUs Market
Overview of the regional outlook of the AI Data Center Server PSUs Market:

Customization of the Report

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Chapter Outline

Chapter 1 mainly introduces the statistical scope of the report, market division standards, and market research methods.

Chapter 2 is an executive summary of different market segments (by region, product type, application, etc), including the market size of each market segment, future development potential, and so on. It offers a high-level view of the current state of the AI Data Center Server PSUs Market and its likely evolution in the short to mid-term, and long term.

Chapter 3 makes a detailed analysis of the market's competitive landscape of the market and provides the market share, capacity, output, price, latest development plan, merger, and acquisition information of the main manufacturers in the market.

Chapter 4 is the analysis of the whole market industrial chain, including the upstream and downstream of the industry, as well as Porter's five forces analysis.

Chapter 5 introduces the latest developments of the market, the driving factors and restrictive factors of the market, the challenges and risks faced by manufacturers in the industry, and the analysis of relevant policies in the industry.

Chapter 6 provides the analysis of various market segments according to product types, covering the market size and development potential of each market segment, to help readers find the blue ocean market in different market segments.

Chapter 7 provides the analysis of various market segments according to application, covering the market size and development potential of each market segment, to help readers find the blue ocean market in different downstream markets.

Chapter 8 provides a quantitative analysis of the market size and development potential of each region and its main countries and introduces the market development, future development prospects, market space, and capacity of each country in the world.

Chapter 9 shares the main producing countries of AI Data Center Server PSUs, their output value, profit level, regional supply, production capacity layout, etc. from the supply side.

Chapter 10 introduces the basic situation of the main companies in the market in detail, including product sales revenue, sales volume, price, gross profit margin, market share, product introduction, recent development, etc.

Chapter 11 provides a quantitative analysis of the market size and development potential of each region in the next five years.

Chapter 12 provides a quantitative analysis of the market size and development potential of each market segment in the next five years.

Chapter 13 is the main points and conclusions of the report.

Key Reasons to Buy this Report:

Access to date statistics compiled by our researchers. These provide you with historical and forecast data, which is analyzed to tell you why your market is set to change
This enables you to anticipate market changes to remain ahead of your competitors
You will be able to copy data from the Excel spreadsheet straight into your marketing plans, business presentations, or other strategic documents
The concise analysis, clear graph, and table format will enable you to pinpoint the information you require quickly
Provision of market value data for each segment and sub-segment
Indicates the region and segment that is expected to witness the fastest growth as well as to dominate the market
Analysis by geography highlighting the consumption of the product/service in the region as well as indicating the factors that are affecting the market within each region
Competitive landscape which incorporates the market ranking of the major players, along with new service/product launches, partnerships, business expansions, and acquisitions in the past five years of companies profiled
Extensive company profiles comprising of company overview, company insights, product benchmarking, and SWOT analysis for the major market players
The current as well as the future market outlook of the industry concerning recent developments which involve growth opportunities and drivers as well as challenges and restraints of both emerging as well as developed regions
Includes in-depth analysis of the market from various perspectives through Porter?s five forces analysis
Provides insight into the market through Value Chain
Market dynamics scenario, along with growth opportunities of the market in the years to

come
6-month post-sales analyst support

Customization of the Report

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