

# Global AIDC SiC Server Power Supply Market Growth 2026-2032

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## Abstracts

The global AIDC SiC Server Power Supply market size is predicted to grow from US\$ 2249 million in 2025 to US\$ 9420 million in 2032; it is expected to grow at a CAGR of 22.8% from 2026 to 2032.

AIDC SiC Server Power Supply is a high-efficiency power supply unit designed for AI data center power infrastructure, using silicon carbide power devices and high-frequency magnetic components to support high-density computing loads, fast dynamic response, improved conversion efficiency, and stable long-term operation. Compared with conventional data center power supplies, its advantages lie in lower switching loss, higher operating frequency, smaller passive component size, better heat dissipation, stronger load response, and higher suitability for GPU-intensive and mission-critical computing environments. In 2025, production was approximately 8.21 million units and the average price was USD 280 per unit. The industry's capacity utilization rate in 2025 was about 73% and the average gross margin was around 28%. Upstream, the key inputs include SiC MOSFETs, SiC diodes, PFC inductors, and LLC transformers, with representative suppliers including Infineon Technologies and Wolfspeed providing core wide-bandgap power devices. The midstream segment focuses on high-efficiency power topology design, power factor correction, resonant conversion, thermal structure optimization, electromagnetic compatibility control, digital monitoring, reliability testing, and automated assembly, which together determine conversion efficiency, power density, heat control, load response, and long-term operating reliability. Downstream, AIDC SiC Power Supply is mainly used in general servers and GPU servers, where general servers emphasize stable power supply, energy efficiency, and system reliability, while GPU servers require higher power density, faster dynamic response, stronger thermal control, and more reliable operation under high-computing-load conditions.

AIDC SiC Server Power Supply will be shaped by AI data centers moving toward higher rack power, faster load fluctuation, and stricter energy-efficiency requirements. In general servers, its value is reflected in stable conversion efficiency, lower heat pressure, and long-term operating reliability. In GPU servers, the demand is more concentrated on high power density, rapid dynamic response, and continuous operation under intensive computing loads. As AI infrastructure shifts from scale expansion to power efficiency and thermal control, competition will focus on SiC device performance, high-frequency topology design, magnetic component optimization, system integration, and reliability verification. Suppliers with stronger power architecture capability will gain deeper customer recognition.

LP Information, Inc. (LPI) ' newest research report, the "AIDC SiC Server Power Supply Industry Forecast" looks at past sales and reviews total world AIDC SiC Server Power Supply sales in 2025, providing a comprehensive analysis by region and market sector of projected AIDC SiC Server Power Supply sales for 2026 through 2032. With AIDC SiC Server Power Supply sales broken down by region, market sector and sub-sector, this report provides a detailed analysis in US\$ millions of the world AIDC SiC Server Power Supply industry.

This Insight Report provides a comprehensive analysis of the global AIDC SiC Server Power Supply landscape and highlights key trends related to product segmentation, company formation, revenue, and market share, latest development, and M&A activity. This report also analyzes the strategies of leading global companies with a focus on AIDC SiC Server Power Supply portfolios and capabilities, market entry strategies, market positions, and geographic footprints, to better understand these firms' unique position in an accelerating global AIDC SiC Server Power Supply market.

This Insight Report evaluates the key market trends, drivers, and affecting factors shaping the global outlook for AIDC SiC Server Power Supply and breaks down the forecast by Type, by Application, geography, and market size to highlight emerging pockets of opportunity. With a transparent methodology based on hundreds of bottom-up qualitative and quantitative market inputs, this study forecast offers a highly nuanced view of the current state and future trajectory in the global AIDC SiC Server Power Supply.

This report presents a comprehensive overview, market shares, and growth opportunities of AIDC SiC Server Power Supply market by product type, application, key manufacturers and key regions and countries.

Segmentation by Type:

Power

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