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Global SiC Power Supply for AI Data Centers Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

https://marketpublishers.com/r/G62C55FC4CC1EN.html
Date: July 2026
Pages: 111
Price: US$ 3,480.00 (Single User License)
ID: G62C55FC4CC1EN

Abstracts

According to our (Global Info Research) latest study, the global SiC Power Supply for AI Data Centers market size was valued at US$ 2365 million in 2025 and is forecast to a readjusted size of US$ 9277 million by 2032 with a CAGR of 21.5% during review period.

SiC Power Supply for AI Data Centers is a high-efficiency power supply unit designed for AI data center infrastructure, using silicon carbide power devices and high-frequency magnetic components to improve conversion efficiency, power density, thermal performance, and operating stability under intensive computing loads. 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 dynamic load response, and higher suitability for GPU-intensive, high-density, 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, Wolfspeed, providing core wide-bandgap power devices and magnetic components. 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, SiC Power Supply for AI Data Centers 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

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higher power density, faster dynamic response, stronger thermal control, and more reliable operation under high-computing-load conditions.

SiC Power Supply for AI Data Centers is increasingly tied to the power architecture upgrade of high-density computing infrastructure. In general servers, its value is reflected in stable output, lower conversion loss, and improved system energy efficiency. In GPU servers, the stronger application driver comes from rapid load transients, concentrated heat, and continuous high-power operation. As AI data centers pursue higher rack power density and stricter energy-efficiency targets, competition will shift toward silicon carbide device integration, high-frequency magnetic design, thermal control, digital monitoring, and long-term reliability. Suppliers with strong power electronics engineering capability can create differentiated value in high-performance data center power systems.

This report is a detailed and comprehensive analysis for global SiC Power Supply for AI Data Centers market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global SiC Power Supply for AI Data Centers market size and forecasts, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global SiC Power Supply for AI Data Centers market size and forecasts by region and country, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global SiC Power Supply for AI Data Centers market size and forecasts, by Type and by Application, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global SiC Power Supply for AI Data Centers market shares of main players, shipments in revenue ($ Million), sales quantity (K Units), and ASP (US$/Unit), 2021-2026

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The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for SiC Power Supply for AI Data Centers

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global SiC Power Supply for AI Data Centers market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Delta Electronics (China), LITEON Technology (China), AcBel Polytech (China), Shenzhen Honor Electronic (China), Aohai Technology (China), GreatWall (China), Gospower Electric (China), Dell (USA), Murata (Japan), Huntkey (China), etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market Segmentation

SiC Power Supply for AI Data Centers market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Type

Power

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Contents

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List Of Tables

LIST OF TABLES

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List Of Figures

LIST OF FIGURES

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