

# AC/DC Chip Market is expected to reach USD 64.2 billion by 2031 | DataM Intelligence

*The Global AC/DC Chip Market is expected to reach at a CAGR of 9.4% during the forecast period 2024-2031.*

AUSTIN, TX, UNITED STATES, December 4, 2025 /EINPresswire.com/ -- Overview of the Market:

The [AC/DC Chip Market](#) has emerged as a crucial segment within the global power management semiconductor landscape, driven by rising demand for compact, efficient, and reliable power conversion solutions. These chips play a vital role in converting alternating

current into stable direct current powering a wide range of consumer electronics, industrial systems, smart home appliances, EV infrastructure, and IoT devices. According to DataM Intelligence, The Global AC/DC Chip Market was valued at US\$ 31.3 billion in 2022 and is projected to reach US\$ 64.2 billion by 2031, expanding at a CAGR of 9.4% during the forecast

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The AC/DC Chip Market sees rising demand driven by power-efficient electronics, smart devices, and industrial automation, with manufacturers focusing on compact, high-performance designs.”

*DataM Intelligence*



## AC/DC Chip Market



AC/DC Chip Market

**CAGR of 9.4%**  
**Key players:**

- Texas Instruments Inc.
- ON Semiconductor Corporation
- STMicroelectronics N.V.
- Infineon Technologies AG
- Maxim Integrated Products, Inc.
- ROHM Co., Ltd.
- Dialog Semiconductor PLC
- NXP Semiconductors N.V.
- Renesas Electronics Corporation

period. The market's growth is strongly supported by increasing adoption of intelligent power systems, energy-efficient electronics, and global initiatives toward carbon-neutral product designs.

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The Market's expansion is also linked to rapid technological advancements, including integrated power management ICs, miniaturized chip architectures, and wide-bandgap

semiconductor materials such as GaN and SiC. The consumer electronics segment remains the dominant application area due to the rising global penetration of smartphones, smart televisions, laptops, wearables, and IoT-enabled appliances. Meanwhile, the Asia-Pacific region

leads geographically, driven by large-scale semiconductor manufacturing ecosystems, increasing industrial automation, and substantial consumer electronics production in countries like China, Japan, South Korea, and Taiwan.

#### Key Highlights from the Report:

Market shows steady growth driven by increasing demand for energy-efficient AC/DC conversion in electronics.

Consumer electronics segment dominates the market due to high-volume device manufacturing.

Asia-Pacific remains the leading regional market, supported by strong chip fabrication capacity.

Integration of GaN and SiC materials significantly enhances chip performance and efficiency.

Rising adoption of IoT and smart home devices accelerates AC/DC chip adoption globally.

Increasing investments in EV charging infrastructure strengthen market expansion over the next decade.

#### Market Segmentation:

The AC/DC Chip Market can be segmented based on product type, power rating, end-user industry, and application. In terms of product type, the market includes isolated and non-isolated AC/DC converters, with non-isolated designs gaining significant traction due to their compact size and cost-efficiency. Isolated AC/DC chips remain crucial in industrial and medical applications where safety, electromagnetic compatibility, and robust insulation are mandatory. Power rating segmentation ranges from low-power chips used in portable consumer gadgets to high-power modules used in EV chargers, industrial machinery, and smart energy systems.

From an end-user perspective, consumer electronics continue to dominate the market, accounting for the largest share due to the high global consumption of digital devices. Industrial automation represents another fast-growing segment as factories modernize and adopt smart, connected, and robotics-powered systems that rely heavily on stable power conversion. Automotive applications are rising sharply as electric vehicles, onboard infotainment systems, power steering systems, and battery management systems require reliable AC/DC chip integration. Telecommunications, renewable energy systems, and smart home devices also showcase strong adoption trends.

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#### Regional Insights:

Asia-Pacific stands as the largest and fastest-growing regional market for AC/DC chips. The region benefits from a highly concentrated semiconductor manufacturing base, widespread adoption of advanced electronics, and supportive government initiatives aimed at boosting local

chip production. China leads due to its massive consumer electronics industry, rapid industrialization, and expanding EV charging infrastructure. South Korea and Japan contribute significantly through advanced R&D in power semiconductors and technological leadership from major electronics brands.

North America shows strong growth, driven by rapid advancements in EV technology, rising demand for high-performance computing devices, and the presence of leading semiconductor innovators. Europe, characterized by strict energy-efficiency regulations and rising adoption of renewable energy systems, is increasingly integrating AC/DC chips into smart grids, industrial automation platforms, and electric mobility systems. Emerging markets in Latin America, the Middle East, and Africa are witnessing steady growth as digitization and smart infrastructure expand.

## Market Dynamics:

### Market Drivers

The Market is primarily driven by the global shift toward energy-efficient electronics. Rising consumer expectations for compact, lightweight, and faster devices have increased demand for high-efficiency AC/DC chips. Growth in IoT ecosystems and smart homes is another major catalyst, as millions of connected devices require continuous and stable DC power.

Advancements in GaN and SiC semiconductor technologies have further enhanced efficiency, thermal performance, and power density, enabling new design possibilities across industrial, automotive, and consumer applications.

### Market Restraints

Despite strong growth, the market faces constraints such as supply chain fluctuations, silicon shortages, and the complexity of designing chips that meet global safety and energy-efficiency standards. High initial manufacturing costs of wide-bandgap semiconductors and the need for sophisticated fabrication equipment pose challenges for small and mid-size manufacturers. Additionally, global geopolitical tensions can impact raw material availability and cross-border trade, affecting chip production and pricing.

### Market Opportunities

Significant opportunities lie in the rising adoption of electric vehicles, renewable energy systems, and AI-driven electronics. The expansion of 5G networks is expected to further increase demand for high-performance power management chips in telecom infrastructure. Smart grids, energy storage systems, and connected healthcare devices offer additional avenues for market penetration. Manufacturers focusing on ultra-compact designs, improved heat dissipation, and integrated protection features are likely to gain a competitive edge.

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## Frequently Asked Questions (FAQs):

How big is the AC/DC Chip Market globally?

Who are the key players in the global AC/DC chip market?

What is the projected growth rate of the AC/DC chip market during the forecast period?

What is the market forecast for 2032?

Which region is expected to dominate the AC/DC chip industry throughout the forecast period?

## Company Insights:

Texas Instruments Inc.

ON Semiconductor Corporation

STMicroelectronics N.V.

Infineon Technologies AG

Maxim Integrated Products, Inc.

ROHM Co., Ltd.

Dialog Semiconductor PLC

NXP Semiconductors N.V.

Renesas Electronics Corporation

Microchip Technology Inc.

## Recent Developments:

### United States:

September 2025: Delta Electronics reported consolidated sales revenues for the month, highlighting strong performance in power electronics including AC/DC solutions amid rising demand for efficient converters.

October 2025: Delta showcased groundbreaking 800 VDC power solutions at the OCP Global Summit, advancing AC/DC chip applications for sustainable AI data centers and high-efficiency power conversion.

November 2025: Demand for digital power conversion, led by AC/DC units at 26.6% market share, surged due to data centers, electric mobility, and industrial automation growth.

### Europe:

September 2025: The electronic components market, including semiconductors for AC/DC chips, showed initial recovery signs with increasing distributor shipments and lead times amid AI-driven demand.

October 2025: AC-DC controller market strengthened with Europe holding 25.6% global share, fueled by automotive industry expansion requiring advanced power conversion.

November 2025: Semiconductor sales grew 7.2% in Q3, boosted by memory and analog chips critical for AC/DC applications in automotive and industrial systems.

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Conclusion:

The AC/DC Chip Market continues to evolve rapidly as global industries emphasize energy efficiency, miniaturization, and enhanced device performance. With strong demand across consumer electronics, industrial automation, EV infrastructure, and smart grids, the market is poised for substantial expansion. Advancements in wide-bandgap materials and intelligent power management designs will continue to shape the future of AC/DC chip technology, positioning the market for long-term growth.

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