

# Global Power Electronics Software Market Size study & Forecast, by Technology and Type (Control Software, Design Software, Analysis Software, Simulation Software) by Application and Regional Forecasts 2022-2032

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## Abstracts

The Global Power Electronics Software Market is valued at approximately USD 3.56 billion in 2024 and is anticipated to grow at a robust CAGR of 9.8% over the forecast period 2025–2035. Power electronics software encompasses specialized platforms and tools that optimize the design, control, simulation, and analysis of power electronic systems used across industrial, automotive, and renewable energy applications. These software solutions facilitate the development of highly efficient converters, inverters, and controllers while ensuring system reliability, energy optimization, and compliance with evolving regulatory standards. Market growth is driven by the surge in electrification, the adoption of renewable energy technologies, and increasing demand for advanced automotive powertrains requiring precise power management.

The rising adoption of electric vehicles, coupled with the growing emphasis on smart grids and renewable energy integration, has intensified the demand for sophisticated power electronics software solutions. Manufacturers increasingly rely on simulation and analysis tools to reduce design cycles, enhance efficiency, and minimize system failures. Moreover, the proliferation of IoT-enabled and AI-driven power electronics systems has created a need for intelligent software capable of handling complex control and optimization tasks. Despite the high initial cost of specialized software solutions, the long-term operational benefits and efficiency gains continue to encourage widespread adoption across sectors.

**The detailed segments and sub-segments included in the report are:**

By Technology:

Hardware

Embedded Software

Cloud-Based Platforms

By Type:

Control Software

Design Software

Analysis Software

Simulation Software

By Application:

Automotive

Industrial

Renewable Energy

Consumer Electronics

By Region:

North America

U.S.

Canada

## Europe

UK

Germany

France

Spain

Italy

Rest of Europe

## Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

## Latin America

Brazil

Mexico

## Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

## Control Software is Expected to Dominate the Market

Control software is the cornerstone of power electronics systems, facilitating precise management of converters, inverters, and motor drives. This segment holds the largest market share, driven by increasing electrification in automotive applications and industrial automation. Control software enables optimized performance, stability, and energy efficiency across complex electronic systems. While other software types like design and simulation solutions are gaining traction for development purposes, control software remains critical for operational functionality and end-to-end system integration.

## Simulation Software Leads in Revenue Contribution

While control software dominates adoption, simulation software generates the highest revenue contribution due to its indispensable role in system design validation, performance optimization, and risk mitigation. Companies increasingly leverage simulation platforms to forecast operational behavior, minimize physical prototyping costs, and accelerate product development cycles. As power electronics systems grow in complexity—particularly in automotive EVs and renewable energy applications—simulation software continues to command a significant share of market revenues, underscoring its strategic importance.

North America represents a major market for power electronics software, driven by a strong automotive and industrial electronics base, early adoption of EVs, and advanced R&D infrastructure. Asia Pacific is projected to witness the fastest growth over the forecast period, propelled by expanding automotive electrification, renewable energy deployment, and semiconductor integration in countries such as China, India, and Japan. Europe maintains steady growth due to its mature automotive sector, commitment to energy efficiency, and widespread adoption of advanced industrial

automation technologies.

Major market players included in this report are:

MathWorks, Inc.

Siemens AG

ABB Ltd.

Schneider Electric SE

Mitsubishi Electric Corporation

Rockwell Automation, Inc.

Texas Instruments Incorporated

Infineon Technologies AG

STMicroelectronics N.V.

Cadence Design Systems, Inc.

ANSYS, Inc.

National Instruments Corporation

Renesas Electronics Corporation

Altium Limited

Power Electronics Software Solutions, Inc.

Global Power Electronics Software Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025–2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent to up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments and countries in recent years and to forecast their values for the coming decade. The report incorporates both qualitative and quantitative analyses within the regions studied. It also provides detailed insights into market drivers, challenges, and emerging opportunities. Additionally, it delivers a comprehensive assessment of the competitive landscape, highlighting the product offerings and strategic initiatives of key players.

#### Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional-level analysis for each market segment.

Detailed analysis of the geographical landscape with country-level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of the competitive structure of the market.

Demand side and supply side analysis of the market.



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