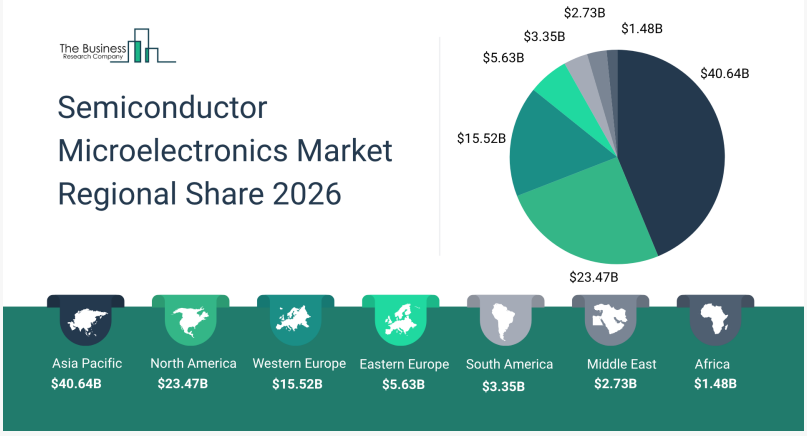
Transition Toward Efficient Power Electronics Impacting the Semiconductor Microelectronics Market

The Business Research Company's Transition Toward Efficient Power Electronics Impacting the Semiconductor Microelectronics Market



Semiconductor Microelectronics Market Overview

LONDON, GREATER LONDON, UNITED KINGDOM, April 3, 2026 /EINPresswire.com/ -- "Semiconductor Microelectronics market to surpass $122 billion in 2030. Within the broader Electrical And Electronics industry, which is expected to be $5,611 billion by 2030, the Semiconductor Microelectronics market is estimated to account for nearly 2% of the total market value.

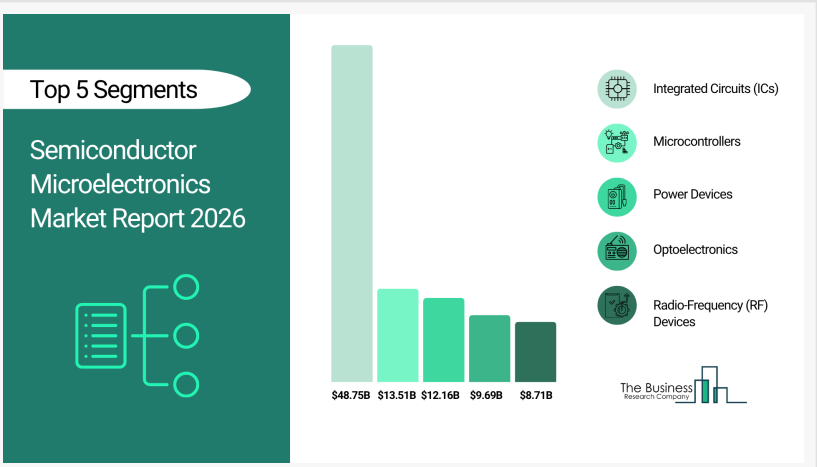
> Expected to grow to $106.23 billion in 2030 at a compound annual growth rate (CAGR) of 6.1%”
>
> *The Business Research Company*

Which Will Be The Biggest Region In The Semiconductor Microelectronics Market In 2030

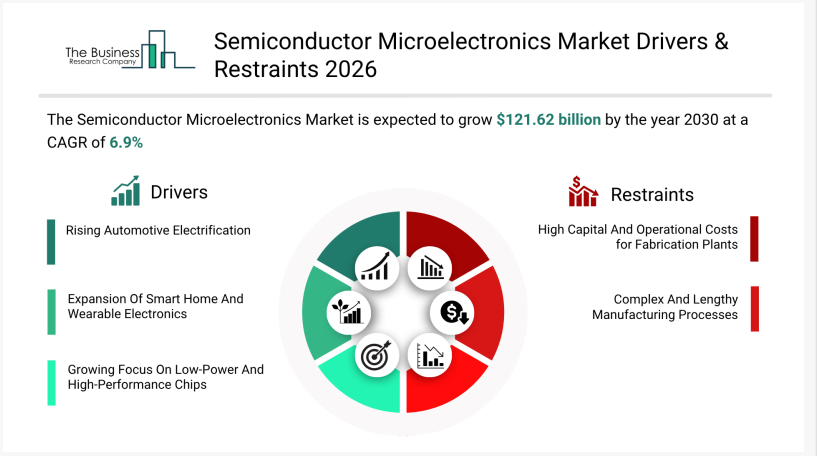
Asia-Pacific will be the largest region in the semiconductor microelectronics market in 2030, valued at $54 billion. The market is expected to grow from $38 billion in 2025 at a compound annual growth rate (CAGR) of 8%. The strong growth can be attributed to the strong presence of semiconductor manufacturing hubs, increasing investments in advanced chip fabrication and packaging technologies, rising demand for consumer electronics and automotive semiconductors, expanding adoption of artificial intelligence and high-performance computing, and continued government support for semiconductor ecosystem development across major Asia-Pacific economies.

Which Will Be The Largest Country In The Global Semiconductor Microelectronics Market In 2030?

The China will be the largest country in the Semiconductor Microelectronics market in 2030, valued at $30 billion. The market is expected to grow from $21 billion in 2025 at a compound annual growth rate (CAGR) of 7%. The strong growth can be attributed to increasing focus on semiconductor self-reliance and localization initiatives, rapid expansion of domestic supply chains for microelectronic components, rising investments in semiconductor research, design, and talent development, growing export competitiveness in electronics and semiconductor products, and strengthening integration of vertically aligned manufacturing capabilities across the country.



Semiconductor Microelectronics Market



Semiconductor Microelectronics Market Growth Rate

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What Will Be Largest Segment In The Semiconductor Microelectronics Market In 2030?
The semiconductor microelectronics market is segmented by device type into integrated circuits (ICs), microcontrollers, power devices, optoelectronics, and radio-frequency (RF) devices. The integrated circuits (ICs) market will be the largest segment of the semiconductor microelectronics market segmented by device type, accounting for 52% or $63 billion of the total in 2030. The integrated circuits (ICs) market will be supported by increasing demand for high-density and multifunctional chips across computing and communication systems, growing adoption of advanced node technologies and system-on-chip (SoC) architectures, rising integration of ICs in data centers, cloud infrastructure, and edge computing environments, expanding use of ICs in smart consumer devices and connected ecosystems, continuous innovation in chip design and fabrication processes, and strong demand for performance optimization and energy-efficient semiconductor solutions.

The semiconductor microelectronics market is segmented by material type into silicon, germanium, gallium arsenide, silicon carbide, and other material types.

The semiconductor microelectronics market is segmented by application into consumer electronics, automotive electronics, telecommunications, industrial and power electronics, and medical devices.

What Is The Expected CAGR For The Semiconductor Microelectronics Market Leading Up To 2030?
The expected CAGR for the semiconductor microelectronics market leading up to 2030 is 7%.

What Will Be The Growth Driving Factors In The Global Semiconductor Microelectronics Market In The Forecast Period?
The rapid growth of the global semiconductor microelectronics market leading up to 2030 will be driven by the following key factors that are expected to reshape automotive electronics adoption, connected consumer device ecosystems, semiconductor design innovation, and energy-efficient computing technologies across the global electronics, automotive, and digital infrastructure industries.

Rising Automotive Electrification - The rising automotive electrification is expected to be a key growth driver for the semiconductor microelectronics market by 2030. The increasing shift toward electric and hybrid vehicles is driving demand for advanced semiconductor components used in battery management systems, power electronics, sensors, and control units. These components enable efficient energy management, enhanced vehicle performance, and advanced safety features. The growing adoption of autonomous and connected vehicle technologies is further accelerating the need for high-performance microelectronics. As automotive manufacturers continue to invest in next-generation mobility solutions, demand for semiconductor components is expected to increase steadily. As a result, this trend is anticipated to contribute approximately 2.3% annual growth to the market.

Expansion Of Smart Home And Wearable Electronics - The expansion of smart home and wearable electronics is expected to significantly contribute to the growth of the semiconductor microelectronics market by 2030. Increasing adoption of connected devices such as smartwatches, fitness trackers, and intelligent home appliances is driving demand for compact and efficient semiconductor components. These devices rely on advanced chips and sensors to enable seamless connectivity, automation, and real-time data processing. Continuous advancements in Internet of Things (IoT) technologies are further enhancing device functionality and integration. As consumers increasingly prefer convenient and intelligent solutions, the demand for microelectronic components is expected to grow rapidly, contributing around 2.0% annual growth to the market.

Growing Focus On Low-Power And High-Performance Chips - The growing focus on low-power and high-performance chips is expected to act as a major growth catalyst for the semiconductor microelectronics market by 2030. Increasing demand for energy-efficient yet powerful semiconductor solutions is driving innovation in chip design and materials. Technologies such as FinFET and 3D architectures are being adopted to enhance processing capabilities while reducing

energy consumption. This is particularly important for applications in portable electronics, IoT devices, electric vehicles, and data centers. These advancements improve system efficiency, extend battery life, and optimize overall performance. As a result, the adoption of next-generation semiconductor technologies is projected to contribute approximately 1.5% annual growth to the market.

Access The Detailed Semiconductor Microelectronics Market Report Here
https://www.thebusinessresearchcompany.com/report/global-semiconductor-microelectronics-market-report?utm_source=EINPresswire&utm_medium=Paid&utm_campaign=Mar_PR

What Are The Key Growth Opportunities In The Semiconductor Microelectronics Market In 2030?
The most significant growth opportunities are anticipated in the integrated circuits (ICs) market, microcontrollers market, power devices market, optoelectronics market, and radio-frequency (RF) devices market. Collectively, these segments are projected to contribute over $34 billion in market value by 2030, driven by increasing demand for high-performance computing and advanced processing capabilities, rising adoption of connected devices and embedded systems across industries, growing electrification in automotive and industrial applications, expanding deployment of advanced communication technologies including 5G and next-generation networks, and continuous innovation in semiconductor design and energy-efficient technologies. This growth reflects the increasing focus on enhancing device performance, enabling smart and connected ecosystems, and supporting next-generation electronic applications, driving significant expansion within the broader semiconductor microelectronics market.

The integrated circuits (ICs) market is projected to grow by $17 billion, the microcontrollers market by $5 billion, the power devices market by $5 billion, the optoelectronics market by $4 billion, and the radio-frequency (RF) devices market by $3 billion over the next five years from 2025 to 2030.

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