Semiconductor and Electronic Parts Manufacturing Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The semiconductor and electronic parts manufacturing market is expected to register a CAGR of 7.1% over the forecast period. With the advent of miniaturization, the adoption of emerging technologies in the Industrial Internet of Things (IIoT), and enhanced communication posed by 5G, the electronic component design and assembly have been revolutionized, boosting the market's growth studied. Further, increasing demand from the industrial sector for IoT and automation devices, owing to the policies of Industry 4.0, increased capital expenditure from the foundries, and demand for MEMS sensors are some of the major factors governing the increasing demand for the semiconductor and electronic parts.

Key Highlights
The manufacturing of semiconductor and electronic parts entails design and engineering, assembly, manufacturing, and testing services for electronic and semiconductor components and printed circuit board (PCB) assemblies. Aimed at original equipment manufacturers, it simplifies investment in automated assembly equipment. In the current market scenario, as almost all electronic devices, including laptops, smartphones, and computers, use ICs, PCBs, and other packages, the demand for manufacturing is rising.
The increasing number of Internet of Things (IoT) devices is expected to force the semiconductor industry to increase its investment in semiconductor and electronic parts manufacturing to fulfill the growing demand for these products. This is evident from the fact that semiconductor companies (including foundries and OEMs) are spending considerable amounts on semiconductor equipment. For instance, according to SEMI, the global sales of total semiconductor manufacturing equipment are forecast to reach USD 117.5 billion in 2022, rising 14.7% from the previous industry high of USD 102.5 billion in 2021.
Asia is expected to continue dominating the semiconductor manufacturing market as the favorable ecosystem and government regulations support the market's growth. Additionally, governments across various countries of the Asia Pacific region are taking initiatives to boost the local semiconductor manufacturing markets. For instance, in 2021, the government of India unveiled an

INR 76,000 crore package to facilitate the country's semiconductor manufacturing industry.
However, the factors such as the miniaturization of semiconductors and electronic components are further increasing the complexity of the manufacturing processes, which is among the significant challenges looming over the vendors involved in the manufacturing of semiconductors and electronic parts.
The COVID-19 outbreak impacted the semiconductor and electronic part manufacturing industry, as the widespread lockdown and restriction on the utilization of the workforce in factories significantly impacted the manufacturing capabilities of the vendors. However, with most countries restoring their normal operations at all their semiconductor manufacturing sites, the studied market is also expected to witness an upward growth trend driven by increasing market demand.

Semiconductor & Electronic Parts Manufacturing Market Trends

Consumer Electronics to Hold a Significant Share

Consumer electronics is among the leading industries wherein the demand for semiconductors and electronic parts is increasing. The increasing penetration of the internet and other digital technologies, along with technological advancements making these devices affordable, are among the key factors driving the demand for consumer electronic products.
This segment's trend has been to increase the adoption of various devices with an extended battery life of the device. Manufacturers are extending the battery capacity of their devices, and the demand for shorter charging is driving the market growth in this industry. The smartphone is this segment's major consumer of semiconductors and electronic parts in this segment. The smartphone has been a very competitive market in recent years; the manufacturers are increasingly focusing on including additional features and functionalities in the devices, driving the demand for semiconductor and electronic components.
Furthermore, with the adoption of smartphones expected to witness significant growth, owing to the growing availability of 5G connectivity and increasing penetration of digital technologies among consumers, new opportunities are on the horizon for the players operating in the studied market. For instance, according to GSMA, smartphone penetration, as a percentage of total mobile connections, is expected to grow from 75% in 2021 to 84% in 2025.
The trend has been the same for PC and wearable devices. The manufacturers want their customers to spend less time plugged in. The manufacturers like Samsung, Oppo, and Motorola, provide these fast charge adapters out of the box, and fast charging is the key to their marketing strategy. As the power adapters operate at a much higher voltage and current increased number of semiconductor and electronic components are used.
Moreover, devices with upgraded functionalities and increased performance are entering the market at regular intervals. The requirement for such enhanced functionalities has led to the inclusion of thousands of electronic components in a limited amount of space inside these devices, which is further increasing the demand for semiconductor and electronic parts manufacturing services.

Asia-Pacific to Witness Highest Growth

The Asia-Pacific region is one of the world's significant markets for semiconductors and electronic parts manufacturing, owing to its strong position in consumer electronics, semiconductors, and other telecommunications and equipment manufacturing industries. Furthermore, a large consumer base of major end-user industries of semiconductor and electronic parts, such as consumer electronics and automotive, etc., is another major factor supporting the growth of the studied market.
China is one of the significant global markets for semiconductor and electronic parts manufacturing, owing to its strong position in the consumer electronics, semiconductor, and other telecommunications devices and equipment manufacturing industries. According to the Semiconductor Industry Association (SIA), in 2021, China remained the largest individual market for

semiconductors, with sales totaling USD 192.5 billion, an increase of 27.1% compared to the previous year.
Domestic semiconductor companies have been spending significant amounts to maintain their current market position in terms of increasing their capacity and transitioning between technology nodes and wafer sizes. Moreover, the electronic manufacturing companies in the country made achievements in developing technologies, such as Flex PCB and Flex rigid PCB. With the continuous upgrades of PCB manufacturing technology, China experiences a stable and optimized product structure. Furthermore, a series of newly established strategic industries in the field of AI, Big Data, and cloud computing belong to advanced manufacturing, thus, leading to the dependence on product design developments.
A similar trend has been observed across other major countries of the Asia Pacific region. For instance, to make India self-reliant in electronic manufacturing, the government of India has announced several performance-linked incentives and has made several regulatory changes. These schemes are expected to contribute considerably towards the growth of the studied market in the country.

Semiconductor & Electronic Parts Manufacturing Market Competitor Analysis

The Semiconductor and Electronic Parts Manufacturing Market is moderately fragmented due to a mixed presence of established and new players. The vendors operating in the market are launching innovative solutions, forming partnerships, and mergers to increase their market share and expand their geographical presence. Some major market players include Jabil Inc., Intel Corporation, Samsung Electronics Co. Ltd, and TSMC.

September 2022 - Vedanta, an Indian mining investment company, signed two memoranda of understanding with the Indian state of Gujarat to set up a semiconductor fabrication plant. The decision to set up the project in Gujarat came after Vedanta and Foxconn, a Chinese technology company, agreed to form a joint venture (JV) company in India.
September 2022 - Micron Technology Inc., a leading semiconductor company and the only U.S.-based memory manufacturer, announced plans to invest approximately USD 15 billion through the decade's end to construct a new fab for leading-edge memory manufacturing in Boise, Idaho. The manufacturing unit will focus on fulfilling the domestic demand for leading-edge memory required for market segments like data-center, automotive, etc.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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