

Semiconductor In Healthcare Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The semiconductor in the healthcare market was valued at USD 6.16 million in 2021 and is expected to reach a value of USD 11.40 million by the next five years, registering a CAGR of 10.72% over the forecast period. Many devices used in the healthcare industry rely on semiconductor manufacturing technology. Semiconductor components, such as sensors, integrated circuits (ICs), discrete devices, memory power management devices, etc., are driving a host of applications in fields such as clinical diagnostics and therapy, medical imaging, and portable and home healthcare.

Key Highlights

The market sizing encompasses the revenue generated through the sales of semiconductor components, like integrated circuits, optoelectronics, sensors, and discrete components for use in different healthcare applications across regions like North America, Europe, Asia-Pacific, Latin America, and the Middle East. The study also tracks the key market parameters, underlying growth influencers, and major vendors operating in the industry, which supports the market estimations and growth rates over the forecast period.

The market is witnessing various developments in medical devices that are expected to increase the need for advanced semiconductors. Portable dialysis machines are gaining market traction, and vendors like Baxter have received FDA clearance post-pandemic that is designed to directly connect electronic medical records for patients' prescriptions and treatment data. Such developments are driving the need for advanced semiconductors.

Factors like increasing use of remote patient monitoring devices, development in diagnostic and treatment modalities, and high incidence of non-communicable diseases are also expected to drive the growth of the semiconductor in healthcare market. A significant number of healthcare professionals and hospitals still use various legacy hardware which are not in line with current technological standards and are incapable of upgrading to new tech. In addition to this, there's a huge market for pre-owned medical technology across the world owing to the lack of availability and funding for such devices, which is hampering the growth

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and adoption of new technology.

At the onset of the COVID-19 pandemic, telehealth usage surged as consumers and providers sought ways to safely access and deliver healthcare. One area of telehealth that has witnessed increased popularity is remote patient monitoring. Remote patient monitoring benefitted healthcare during the pandemic by enabling patients to be monitored and treated at home. Further, remote patient monitoring significantly reduced the amount of time patients need to spend in situations where the COVID-19 virus can be transmitted. Consequently, the demand for remote patient monitoring systems shot up, creating significant demand for the semiconductor components used in such systems.

Semiconductor in Healthcare Market Trends

Medical Imaging to be the Fastest Growing Application

The medical imaging segment consists of X-ray, computed tomography, magnetic resonance imaging, and positron emission tomography that find applications in diagnosing various diseases, such as cancer and chronic diseases, via medical imaging. With technological advancements and the increasing adoption of technology in the healthcare industry, many advances were seen in medical radiation in terms of equipment and techniques. One of the significant advancements in interventional X-ray over the past few years has been an increased focus on core and supporting technologies to provide high-quality, high-resolution images without a corresponding increase in radiation dose. This has been a key driver behind technological advancements, such as Siemens' Artis Q, Philips' ClarityIQ and Q.zen technology, GE Healthcare's image-guided systems (IGS), and Toshiba's Infinix Elite product line. These have been driving the demand for advanced semiconductors.

The medical devices industry is witnessing growth in the number of imaging and diagnostic tests performed every year due to the increasing focus on radiological diagnostic tests and the rising burden of chronic diseases.

According to the World Population Prospects from the UN, the number of people aged 65 years and above is steadily increasing. By 2050, the global older adult population (60 years and above) is predicted to reach 2 billion, of which 80% may live in low- and middle-income countries. Hence, the rising geriatric population and the increasing number of orthopedic and cardiovascular procedures may further drive the adoption of medical imaging in healthcare applications.

In the medical sector, dental applications require smaller and shorter scans. According to the Listerine Professional, oral conditions are the most faced health issues affecting 3.9 billion people on average globally. Therefore, in the dental sector, the primary demand for X-ray imaging is expected to increase and drive the demand for various semiconductors in the market studied.

Asia-Pacific is Expected to be the Fastest Growing Market

The Asia-Pacific region is expected to expand at a healthy rate during the forecast period. Major factors supporting growth are increasing investments in research and innovation centers, government programs, and policies favoring the IT and healthcare equipment and devices markets. Moreover, the region is the biggest market for semiconductors across the globe. This is due to countries like China, Japan, India, Taiwan, South Korea, and Singapore. These countries contribute to the growth of the healthcare segment.

In Japan, companies are investing in the healthcare sector to build advanced businesses and achieve sustainable growth. For instance, in April 2021, FUJIFILM Holdings Corporation launched a new medium-term management plan, VISION2023, covering three years from the fiscal year ending March 2022 (FY2021) to FY2023. VISION2023 foresees investments totaling JPY 1.2 trillion (USD 8.491 trillion) over three years to accelerate business growth, focusing on healthcare and highly-functional materials businesses. The healthcare business will be expanded to the largest segment in terms of revenue and operating income to build a

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robust business foundation that enables sustainable growth.

Furthermore, in August 2022, Wipro GE Healthcare announced that it had partnered with medical device maker Boston Scientific to offer comprehensive, cutting-edge cardiac interventional care solutions in India. In March 2021, the PLI Scheme for pharmaceuticals worth INR 15,000 crores (USD 1.96 billion) was launched. This scheme aims to enhance India's manufacturing capabilities by increasing investment and production in the pharmaceutical and medical devices sectors. It will also contribute to the availability of a broader range of affordable medicines for consumers.

Moreover, China State Council's '2014 National Integrated Circuit Industry Development Guidelines' set the goal of becoming a global leader in all semiconductor industry segments by 2030. In addition, the Made in China 2025 initiative maintains achieving knowledge of advanced semiconductor manufacturing as a vital component of China's future economy and society. In addition, the country recently spent USD 574 billion on the healthcare sector.

Moreover, South Korea is one of the major investors, consumers, and innovators in the market studied. South Korea's strong presence in the semiconductor industry and medical device manufacturing is helping the country strengthen its presence in the global semiconductor in healthcare market. The government is also playing a significant role in developing the domestic market, mainly to drive its economy. Moreover, the country is utilizing AI in its pharmaceutical industry, further expanding the market. According to government data, the Korean market for AI-driven drug development is expected to grow by 40% annually to reach USD 3.9 billion in 2024.

Semiconductor in Healthcare Market Competitor Analysis

The semiconductor in healthcare market is expected to grow moderately over the forecast period. The major players in the market, like Texas Instruments Incorporated, On Semiconductor Corporation, Analog Devices Inc., Maxim Integrated Products Inc., STMicroelectronics, and others, are adopting strategies such as partnerships and acquisitions to enhance their product offerings and gain sustainable competitive advantage.

September 2022 - Analog Devices Inc. announced a new integrated circuit, the MAX77659, a single inductor multiple outputs (SIMO) power management chip for wearables, hearables, and IoT devices.

July 2022 - Vishay Intertechnology Inc. introduced two new IHDM edge-wounds, IHDM-1107BBEV-20 and IHDM-1107BBEV-30. These IHDMs have through-hole inductors featuring a powdered iron alloy core technology. The Vishay Custom Magnetics IHDM-1107BBEV-20 and IHDM-1107BBEV-30 provide stable inductance and saturation over a demanding operating temperature range from -55 °C to +180 °C with low power losses and excellent heat dissipation.

Additional Benefits:

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

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