

RESEARCH BULLETIN

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Small Powerful Systems Give Rise to Medical Semiconductor Sales

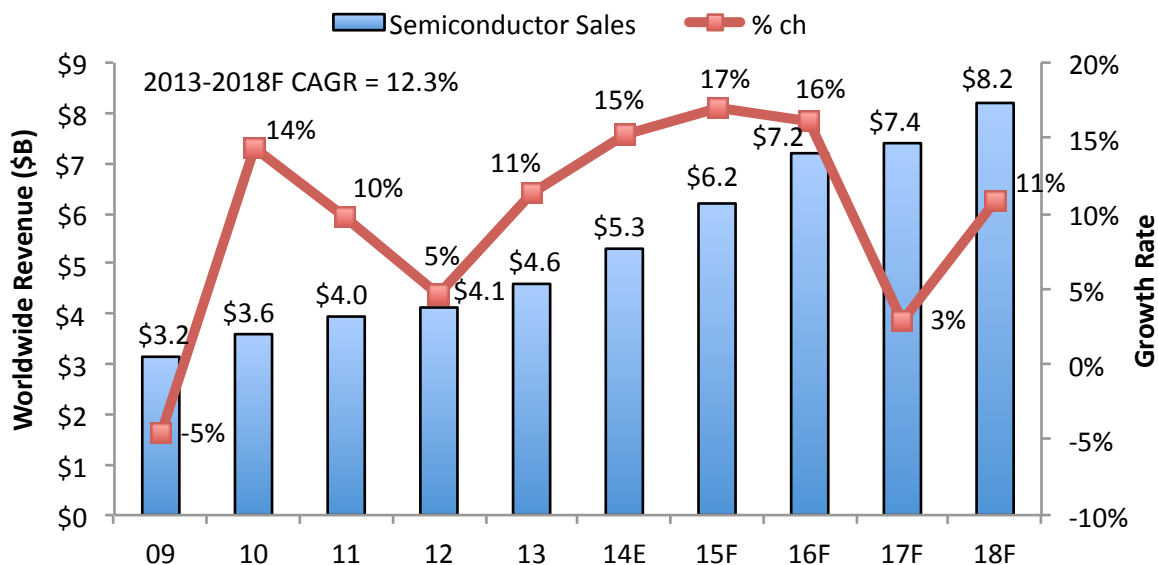
Market for medical semiconductors seen rising to \$8.2 billion in 2018.

Smaller and more powerful medical systems are driving up sales of ICs, sensors, and other devices for the medical semiconductor market. IC Insights believes medical semiconductor sales growth will strengthen this year and next before sliding back in the next expected economic slowdown in 2017 (Figure 1). Between 2013 and 2018, worldwide medical semiconductor sales are projected to rise by a compound annual growth rate (CAGR) of 12.3%, reaching \$8.2 billion in the final year of the forecast. In the 2008-2013 period (which included the 2009 downturn), medical semiconductor sales grew by a CAGR of 6.9%.

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Medical Semiconductor Market Forecast



Source: IC Insights

Figure 1

The IC portion of the medical semiconductor business is expected to rise by a CAGR of 10.7% to \$6.6 billion in 2018 while the marketshare for optoelectronics, sensors/actuators, and discretes (O-S-D) is

forecast to grow by an annual rate of 20.3% to \$1.6 billion that year (primarily due to strong demand for solid-state sensors and optical imaging devices).

ICs and other semiconductor technologies continue to play key roles in reshaping and redefining medical systems. With more medical imaging systems being digitized and healthcare equipment running under computer control, IC-driven advancements are happening almost as quickly as they are in mobile phones, and many consumer electronics. Government certification can slow some system introductions. The scaling of IC feature sizes, system-on-chip (SoC) designs, improvements in sensors, and powerful analog frontend (AFE) data converters are reducing the size of medical diagnostic equipment and the cost of using them.

Developments of new medical systems for imaging and diagnostics, treatment, and surgery are heading in two different directions as equipment makers respond to growing pressures for lower costs and increased availability of healthcare worldwide. In one direction, new medical equipment is becoming smaller and less expensive so that systems can be used in the rooms of hospital patients, clinics, and doctor offices. These systems cost one-quarter to one-tenth the price of large diagnostic equipment—such as traditional MRI and CT scanners, which can cost \$1 million and are normally installed in medical-imaging centers or in dedicated hospital examination rooms.

Also, lower-cost wearable medical systems and fitness monitors, which can wirelessly transmit vital signs and other readings to doctors or be used as “activity trackers” for health-conscious individuals, are seeing tremendous growth. In some cases, medical and fitness-monitoring applications can be performed directly by smartphones using their embedded sensors and downloaded software apps. However, medically certified mobile healthcare devices are usually required in most countries for monitoring patients and the elderly in their homes. The information is sent to doctors via wireless connections to cellphones or the Internet.

The second major trend in medical equipment is the development of more powerful and integrated systems, which are expensive but promise to lower healthcare costs by detecting cancer and diseases sooner and supporting less invasive surgery for quick recovery times and shorter stays in hospitals. Computer-assisted surgery systems, surgical robots, and operating-room automation are among new technologies being pursued by some hospitals in developed markets.

High growth in lower-cost systems along with the rising price tag of more sophisticated hospital equipment in developed country markets is expected to increase total medical electronics systems sales by a CAGR of 8.2% between 2013 and 2018, to \$70.1 billion in the final year of the forecast.

Report Details: *The 2015 IC Market Drivers Report*

Additional details on the IC market for medical and wearable electronic is included in the 2015 edition of IC Insights' *IC Market Drivers—A Study of Emerging and Major End-Use Applications Fueling Demand for Integrated Circuits*. This report examines the largest, existing system opportunities for ICs and evaluates the potential for new applications that are expected to help fuel the market for ICs.

IC Market Drivers is divided into two parts. Part 1 provides a detailed forecast of the IC industry by system type, by region, and by IC product type through 2018. In Part 2, *IC Market Drivers* examines and evaluates key existing and emerging end-use applications that will support and propel the IC industry through 2018. Some of these applications include the Internet of Things, automotive electronics, smartphones, personal/mobile computing (including tablets), wireless networks, digital imaging, and a review of many applications to watch—those that may potentially provide significant opportunity for IC suppliers later this decade. *IC Market Drivers 2015* is priced at \$3,390 for an individual-user license and \$6,490 for a multi-user corporate license.

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About IC Insights

IC Insights, Inc., based in Scottsdale, Arizona USA, is dedicated to providing high-quality, cost-effective market research for the semiconductor industry. Founded in 1997, IC Insights offers coverage of global economic trends, the semiconductor market forecast, capital spending and fab capacity trends, product market details, and technology trends, as well as complete IC company profiles and evaluations of end-use applications driving demand for ICs.

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