

# **MEMS: Biosensors and Nanosensors Market**

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## **Abstracts**

### Summary

MEMS technology integrates four components: microsensors, microactuators, microelectronics, and microstructures in a silicon chip. Biochips are microtechnology based microsensors which are used for the delivery, analysis, processing and detection of proteins, DNA, microorganisms or nucleic acids. Nanosensors are used to detect nanoparticles or any other nanoscaled parameters.

According to BCC Research estimates, the global MEMS: biosensors and nanosensors market was valued at nearly REDACTED in 2016 and is estimated to grow at a CAGR of REDACTED to reach nearly REDACTED by 2022.

The growth of the total microsensors market is driven by stringent standards in the automotive vertical, support from government agencies, the need for better diagnostics and advancement in the production process of nanosensors.

Potential opportunities for this market include: emergence of autonomous vehicles, Internet of Things (IoT) and increased demand for nanoelectromechanical systems (NEMS). However, factors such as problems in biochip development and price erosion of microsensors are some of the major hurdles expected for this sector on its road to market penetration and development.

The global microsensors market has been segmented based on type, end user industry and geography. Based on type, the market has been classified into MEMS sensors, biochips and nanosensors. End user industries include: life sciences, automotive, consumer products, process industries, information technology, military & aerospace and energy and environmental.

Microsensors have been further classified by types. The MEMS sensor market has been segmented into accelerometers, gyroscopes, pressure sensors, chemical and gas sensors, thermal sensors, magnetic sensors, microphone sensors and other MEMS sensors. Biochips have been segmented into DNA microarrays, protein microarrays, emerging microarrays, labs-on-a-chip and next-generation sequencing. Based on geography, the market has been segmented into North America, Europe, Asia-Pacific and ROW.

The global microsensors market was nearly REDACTED in 2016 and is expected to reach nearly REDACTED by 2022 growing at a CAGR of REDACTED from 2017 to 2022. North America accounts for the largest market share of the global MEMS sensors market, followed by Asia-Pacific and Europe. Key market participants include Robert Bosch GmbH, STMicroelectronics N.V., Denso Corporation, Knowles Corporation and TDK Corporation.

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