

Report Information

More information from: <https://www.marketresearchfuture.com/reports/mems-sensors-market-1059>

MEMS and Sensors Market Research Report- Global Forecast to 2030

Report / Search Code: MRFR/SEM/0553-HCR

Publish Date: February, 2023

Request Sample

Price	1-user PDF : \$ 4950.0	Enterprise PDF : \$ 7250.0
-------	------------------------	----------------------------

Description:

MEMS and Sensors Market Overview

Micro-electro-mechanical systems or MEMS are generally a technology, a combination of mechanical and electronic components like microelectronics, sensors, actuators, and miniaturized structures. It is also known as micromachines and microsystems technology or MST in most countries like Japan and Europe.

The increasing adoption of connected devices and increasing demand for IoT technology among various industries and customers increase the demand of the MEMS and Sensors Market. Moreover, the sensors are more in demand to use wearable devices and consumer electronics like navigation devices, digital cameras, smartphones, tablets, laptops, and portable media players. In the present scenario, the MEMS is widely applicable in many healthcare sectors for imaging applications, diagnostic and treatment equipment positioning applications. Many automotive industries need inertial sensors, pressure sensors, and flow sensors to improve their safety and automobile comfort, which is automatically increasing the MEMS market growth. Further, MEMS pressure sensors are required to measure fuel tank, engine oil, and manifold air pressure (MAP).

Global MEMS and Sensors Market is registered to meet the market Share of USD 18.2 Billion by the end of 2030, at a CAGR of 8.1% for the forecast 2020-2030.

The report has focused on the detailed analysis of the global MEMS market network and the various segments and sub-segments concerning regional areas. It has highlighted a country's market analysis concerning the current MEMS market size and future prospective global market. Moreover, it has also explained the factors affecting market growth by analyzing its supply chain and production cost. Further, the report has briefly analyzed the key player's core competencies and illustrating a competitive analysis for the MEMS and Sensors market.

COVID-19 Impact on the Market Growth

The ongoing pandemic has affected the MEMS market and disrupted its supply chains. The global market's revenue generation has also experienced a halt. Many investors were not ready to invest in MEMS and sensors research and development for several reasons. The COVID-19 outbreak brought many challenges for the MEMS market, such as manufacturing material shortage, health safety challenges, labor shortage, and many more. As a result, the global market has experienced declining demands over the consumer's electronics (smartphones, wearable devices, and smartwatches).

The MEMS and Sensors Market Report explains that the global market producers have applied various strategies to increase customers' demands for the smart service using the latest technology to enhance the global revenue generation. The COVID-19 has slowed down the global market's economic growth, but the key players have adopted suitable measures to revive the situation for better profitable outcomes.

Market Dynamics

• Major Key Driver

The increasing adoption of smart connected devices like smart wearable devices, connected cars, smart homes, and the emerging growth of the automotive industry are the two major driving factors that impact the development of the MEMS market. The global MEMS market has smart features like compact size and energy efficiency, and eco-friendly and bulk manufacturing, which can be the key driver for the MEMS and Sensors Market Growth. Moreover, the advanced MEMS market is growing with the help of market drivers. The growth in the MEMS market is expected to drive more market revenue.

As a result, the global market has more demand globally because of the growing smart home penetration and increasingly connected car demands. Thus, the market drivers play an essential role in developing the MEMS and Sensors market.

• Growth Opportunities

Most healthcare sectors prefer the MEMS and Sensors market as it has improved advanced technologies and is expected to enhance the MEMS and Sensors Market Demand. The high adaptation of the Industrial Internet of Thing (IIoT) has revolutionized market growth. It is likely to boom on a larger scale in smart grids, assets tracking systems, and building automation. The global market's growth rate is booming with technological advancements such as sensor fusion, which might drive growth over the next seven years. Moreover, the low cost, miniaturization, low power consumption, integration, and high performance are advantages of MEMS technology.

Therefore, the report explains that the global market demand worldwide is immensely growing to grab more marketing opportunities.

- **Restraints of the Global Market**

The increasing adoption of smart devices like computing devices, smartphones, smart wearables, and PDAs can be constraints to the MEMS market that might hamper the Market Size and growth.

Another restraint for the MEMS market started in 2020 in the form of the COVID-19 outbreak. But now, the global market has overcome the situation and growing its sales and productions. The key players are trying their best to improve the functionality to increase the service's sales potential.

- **Challenges for the market**

The MEMS and sensors market's growing popularity can experience challenges in calibration and accuracy issues during sensor fusion. Another challenge can be intense competition among the market players as these competitions making them a force to keep the cost low to exist in the global market.

Like any other industry, the MEMS market has also faced a massive loss due to the lockdown in 2020. The ability of the service providers or leaders to maximize their output was delayed due to the pandemic. As the situations have resumed slowly and are getting regular, consumers' demands have increased, and the market players are putting in maximum production potential to reach those growing demands.

- **Cumulative Growth Analysis of the Market**

The MEMS and Sensors Market Analysis has recorded the MEMS market share at CAGR 10.2% by 2023, which is purely commendable. The report states that the current forecast years' market revenue prediction is immensely higher than the 2018 year report.

The growing investment in research and development and advanced innovation technology is leading to enhance the quality and techniques. The key drivers of various regions are putting their collective effort and efficiency to ensure that the market thrives across different regions regarding growing demands and sales.

- **Value Chain Analysis**

During the MEMS and Sensors Market Forecast period, the global market increases its market value and market growth. The global market has maintained its stability over 2018, and in the future, it has aimed to achieve its targeted audience. Therefore, the key drivers have contributed to all the regions with the best smart services and developing their market value and size.

The report explains that the COVID-19 outbreak has gradually impacted the market's value chain. The related industries witnessed a low demand over its sales, which are expected to grow in the forecast period.

Segment Overview

The market is segmented into types, materials, and applications.

- **By Type**

Based on the type segmentation, the Global Market is classified into environmental, inertial, pressure, microphone, and optical. Various companies and consumers adopt these types of Automotive MEMS Sensors according to their requirements.

The report explains that these types have their significance and perks in terms of end outcomes. Thus, the end-users pick their requirement type to raise their sales in the global market.

- **By Material**

According to the material segmentation, the Global Market are classified into polymer, metal, silicon, and ceramic. Hence, the report explains that Automotive MEMS Sensors service efficiency is preferred to help the diverse sectors meet their business requirements and offer the ideal solution to their consumers.

In the global market, diverse companies are trying to fulfill their requirements with their best implementations.

- **By Application**

Based on the application segmentation, the Automotive market is applied to industrial, aerospace and defense, consumer electronics, healthcare, and automotive. In laptops, smartphones, and other electronic devices, the MEMS accelerometer sensors are used globally. It has wide features to detect the sudden free fall and right away turn off the hard drive to hinder its damage to the laptop. The accelerometers are installed to provide text scroll, gaming control, silent mode activation, image stability, shock detection, menu navigation, motion dialing, and many more smartphones.

The Market Outlook report explains that the industries are promoting this technology and passing it on to the consumers. As a result, the global sensors market is booming with high revenue generation.

Regional Analysis

Global Market is widely spread across various geographical locations of the world. Some of the popular areas include North America, Asia Pacific, Europe, and other parts of the world.

North America has expectations to generate a high market share worldwide as it has leading market players like Allego microsystems, Bosch, Texas instruments, InvenSense, Qualcomm, and Honeywell. The region has adopted advanced technology in the early stage. The more demand for MEMS and Sensors in this region has brought the key players opportunities to increase the supply.

Competitive Landscape Analysis

The key players for the global MEMS and Sensors Industry are:

- Panasonic (Japan)
- Murata Manufacturing Co (Japan)
- Denso Corporation (Japan)
- Hitachi Ltd (Japan)
- Invensense (US)
- Hewlett Packard (US)
- Honeywell (US)
- Qualcomm (US)
- Infineon (Germany)
- STMicroelectronics (Europe)
- Robert Bosch GmbH (Germany)
- NXP Semiconductors (Netherlands)
- Texas Instruments (US)
- Allego microsystems (US)
- Mega Chips Corporation (Japan)

These companies have not just utilized the same technology in their work operations. Still, they have also extended the hand to make it adaptable for all other commercial industries worldwide.

Recent Developments

BCM4389 is the world's first Wi-Fi 6E chip for mobile devices with low latency Wi-Fi, multi-gigabyte, and superior Bluetooth audio experience, introduced by Broadcom.

Recently, Denso Corporation announced that executive responsibilities are going to change in the future.

Report Overview

The Micro Electro Mechanical Systems Sensors Market report overview is as follows:

Market overview

- COVID 19 Analysis
- Market Dynamics
- Value Chain Analysis
- Market Segmentation
- Regional analysis

Recent developments.

The report focuses on highlighting the growing demand of the market in the coming few years. It is also giving a broad explanation of the growth aspects of the market.

Segmental TableBy Type

- Environmental
- Inertial
- Pressure
- Microphone
- Optical

By Material

- Polymer
- Metal
- Silicon
- Ceramic

By Application

- Industrial
- Aerospace And Defense
- Consumer Electronics
- Healthcare
- Automotive

Table of Content:

Contents	
TABLE OF CONTENTS	
1 Executive Summary	
2 Scope of the Report	
2.1 Market Definition	
2.2 Scope of the Study	
2.2.1 Research Objectives	
2.2.2 Assumptions & Limitations	
2.3 Markets Structure	
3 Market Research Methodology	
3.1 Research Process	
3.2 Secondary Research	
3.3 Primary Research	
3.4 Forecast Model	
4 Market Landscape	
4.1 Porter's Five Forces Analysis	
4.1.1 Threat of New Entrants	
4.1.2 Bargaining power of buyers	
4.1.3 Threat of substitutes	
4.1.4 Segment rivalry	
4.1.5 Bargaining power of suppliers	
4.2 Value Chain/Supply Chain of Global MEMS & Sensors Market	
5 Industry Overview of Global MEMS & Sensors Market	
5.1 Introduction	
5.2 Growth Drivers	
5.3 Impact analysis	
5.4 Market Challenges	
6 Market Trends	
6.1 Introduction	
6.2 Growth Trends	
6.3 Impact analysis	
7. Global MEMS & Sensors Market by Materials	
7.1 Introduction	
7.2 Silicon	
7.2.1 Market Estimates & Forecast, 2020-2027	
7.2.2 Market Estimates & Forecast by Region, 2020-2027	
7.3 Polymers	
7.3.1 Market Estimates & Forecast, 2020-2027	
7.3.2 Market Estimates & Forecast by Region, 2020-2027	
7.4 Metals	
7.4.1 Market Estimates & Forecast, 2020-2027	
7.4.2 Market Estimates & Forecast by Region, 2020-2027	
7.5 Ceramics	
7.5.1 Market Estimates & Forecast, 2020-2027	
7.5.2 Market Estimates & Forecast by Region, 2020-2027	
8. Global MEMS & Sensors Market by Type	
8.1 Introduction	
8.2 Inertial	
8.2.1 Market Estimates & Forecast, 2020-2027	
8.2.2 Market Estimates & Forecast by Region, 2020-2027	
8.3 Pressure	
8.3.1 Market Estimates & Forecast, 2020-2027	
8.3.2 Market Estimates & Forecast by Region, 2020-2027	
8.4 Microphone	
8.4.1 Market Estimates & Forecast, 2020-2027	
8.4.2 Market Estimates & Forecast by Region, 2020-2027	
8.5 Environment	
8.5.1 Market Estimates & Forecast, 2020-2027	
8.5.2 Market Estimates & Forecast by Region, 2020-2027	
8.6 Optical	
8.6.1 Market Estimates & Forecast, 2020-2027	
8.6.2 Market Estimates & Forecast by Region, 2020-2027	
9. Global MEMS & Sensors Market by Application	
9.1 Introduction	
9.2 Consumer Electronics	
9.2.1 Market Estimates & Forecast, 2020-2027	

- 9.2.2 Market Estimates & Forecast by Region, 2020-2027
- 9.3 Healthcare
 - 9.3.1 Market Estimates & Forecast, 2020-2027
 - 9.3.2 Market Estimates & Forecast by Region, 2020-2027
- 9.4 Industrial
 - 9.4.1 Market Estimates & Forecast, 2020-2027
 - 9.4.2 Market Estimates & Forecast by Region, 2020-2027
- 9.5 Aerospace & Defense
 - 9.5.1 Market Estimates & Forecast, 2020-2027
 - 9.5.2 Market Estimates & Forecast, 2020-2027
- 9.6 Automotive
 - 9.6.1 Market Estimates & Forecast, 2020-2027
 - 9.6.2 Market Estimates & Forecast, 2020-2027
- 10. Global MEMS & Sensors Market by Region
 - 10.1 Introduction
 - 10.2 North America
 - 10.2.1 Market Estimates & Forecast, 2020-2027
 - 10.2.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.2.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.2.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.2.5 U.S.
 - 10.2.5.1 Market Estimates & Forecast, 2020-2027
 - 10.2.5.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.2.5.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.2.5.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.2.6 Canada
 - 10.2.6.1 Market Estimates & Forecast, 2020-2027
 - 10.2.6.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.2.6.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.2.6.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.3 Europe
 - 10.3.1 Market Estimates & Forecast, 2020-2027
 - 10.3.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.3.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.3.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.3.5 Germany
 - 10.3.5.1 Market Estimates & Forecast, 2020-2027
 - 10.3.5.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.3.5.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.3.5.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.3.6 France
 - 10.3.6.1 Market Estimates & Forecast, 2020-2027
 - 10.3.6.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.3.6.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.3.6.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.3.7 Italy
 - 10.3.7.1 Market Estimates & Forecast, 2020-2027
 - 10.3.7.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.3.7.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.3.7.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.3.8 Spain
 - 10.3.8.1 Market Estimates & Forecast, 2020-2027
 - 10.3.8.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.3.8.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.3.8.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.3.9 U. K.
 - 10.3.9.1 Market Estimates & Forecast, 2020-2027
 - 10.3.9.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.3.9.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.3.9.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.4 Asia-Pacific
 - 10.4.1 Market Estimates & Forecast, 2020-2027
 - 10.4.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.4.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.4.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.4.5 China
 - 10.4.5.1 Market Estimates & Forecast, 2020-2027
 - 10.4.5.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.4.5.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.4.5.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.4.6 India
 - 10.4.6.1 Market Estimates & Forecast, 2020-2027
 - 10.4.6.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.4.6.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.4.6.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.4.7 Japan
 - 10.4.7.1 Market Estimates & Forecast, 2020-2027
 - 10.4.7.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.4.7.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.4.7.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.4.8 Rest of Asia-Pacific
 - 10.4.8.1 Market Estimates & Forecast, 2020-2027
 - 10.4.8.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.4.8.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.4.8.4 Market Estimates & Forecast by Application, 2020-2027
 - 10.5 Rest of the World
 - 10.5.1 Market Estimates & Forecast, 2020-2027
 - 10.5.2 Market Estimates & Forecast by Materials, 2020-2027
 - 10.5.3 Market Estimates & Forecast by Type, 2020-2027
 - 10.5.4 Market Estimates & Forecast by Application, 2020-2027

10.5.5 The Middle East & Africa	
10.5.5.1 Market Estimates & Forecast, 2020-2027	
10.5.5.2Market Estimates & Forecast by Materials, 2020-2027	
10.5.5.3 Market Estimates & Forecast by Type, 2020-2027	
10.5.5.4 Market Estimates & Forecast by Application, 2020-2027	
10.5.6 Latin America	
10.5.6.1 Market Estimates & Forecast, 2020-2027	
10.5.6.2Market Estimates & Forecast by Materials, 2020-2027	
10.5.6.3 Market Estimates & Forecast by Type, 2020-2027	
10.5.6.4 Market Estimates & Forecast by Application, 2020-2027	
11. Company Landscape	
12. Company Profiles	
12.1 STMicroelectronics	
12.1.1 Company Overview	
12.1.2 Product/Business Segment Overview	
12.1.3 Financial Updates	
12.1.4 Key Developments	
12.2 Robert Bosch GmbH	
12.2.1 Company Overview	
12.2.2 Product/Business Segment Overview	
12.2.3 Financial Updates	
12.2.4 Key Developments	
12.3 NXP Semiconductors	
12.3.1 Company Overview	
12.3.2 Product/Business Segment Overview	
12.3.3 Financial Updates	
12.3.4 Key Developments	
12.4 Texas Instruments	
12.4.1 Company Overview	
12.4.2 Product/Business Segment Overview	
12.4.3 Financial Updates	
12.4.4 Key Developments	
12.5 Panasonic	
12.5.1 Company Overview	
12.5.2 Product/Business Segment Overview	
12.5.3 Financial Updates	
12.5.4 Key Developments	
12.6 Murata Manufacturing Co	
12.6.1 Company Overview	
12.6.2 Product/Business Segment Overview	
12.6.3 Financial Updates	
12.6.4 Key Developments	
12.7 Invensense	
12.7.1 Company Overview	
12.7.2 Product/Business Segment Overview	
12.7.3 Financial Updates	
12.7.4 Key Developments	
12.8 Hewlett Packard	
12.8.1 Company Overview	
12.8.2 Product/Business Segment Overview	
12.8.3 Financial Updates	
12.8.4 Key Developments	
12.9 Honeywell	
12.9.1 Company Overview	
12.9.2 Product/Business Segment Overview	
12.9.3 Financial Updates	
12.9.4 Key Developments	
12.10 Qualcomm	
12.10.1 Company Overview	
12.10.2 Product/Business Segment Overview	
12.10.3 Financial Updates	
12.10.4 Key Developments	
12.11 Infineon	
12.11.1 Company Overview	
12.11.2 Product/Business Segment Overview	
12.11.3 Financial Updates	
12.11.4 Key Developments	
12.12 Allego microsystems	
12.12.1 Company Overview	
12.12.2 Product/Business Segment Overview	
12.12.3 Financial Updates	
12.12.4 Key Developments	
12.13 Mega Chips Corporation	
12.13.1 Company Overview	
12.13.2 Product/Business Segment Overview	
12.13.3 Financial Updates	
12.13.4 Key Developments	
12.14 Denso Corporation	
12.14.1 Company Overview	
12.14.2 Product/Business Segment Overview	
12.14.3 Financial Updates	
12.14.4 Key Developments	
12.15 Hitachi Ltd	
12.15.1 Company Overview	
12.15.2 Product/Business Segment Overview	
12.15.3 Financial Updates	
12.15.4 Key Developments	
13 Conclusion	
List of Tables	
Table 1 Global MEMS & Sensors Market, by Region, 2020—2027	
Table 2 North America: MEMS & Sensors Market, by Country, 2020—2027	
Table 3 Europe: MEMS & Sensors market, by Country, 2020—2027	

Table 4 Asia-Pacific: MEMS & Sensors market, by Country, 2020—2027
 Table 5 The Middle East & Africa: MEMS & Sensors market, by Country, 2020—2027
 Table 6 Latin America: MEMS & Sensors market, by Country, 2020—2027
 Table 7 Global MEMS & Sensors material Market, by Region, 2020—2027
 Table 8 North America: MEMS & Sensors material Market, by Country, 2020—2027
 Table 9 Europe: MEMS & Sensors material Market, by Country, 2020—2027
 Table 10 Asia-Pacific: MEMS & Sensors material Market, by Country, 2020—2027
 Table 11 The Middle East & Africa: MEMS & Sensors material Market, by Country, 2020—2027
 Table 12 Latin America: MEMS & Sensors material Market, by Country, 2020—2027
 Table 13 Global MEMS & Sensors type Market, by Region, 2020—2027
 Table 14 North America: MEMS & Sensors type Market, by Country, 2020—2027
 Table 15 Europe: MEMS & Sensors type Market, by Country, 2020—2027
 Table 16 Asia-Pacific: MEMS & Sensors type Market, by Country, 2020—2027
 Table 17
 The Middle East & Africa: MEMS & Sensors type Market, by Country, 2020—2027
 Table 18 Latin America: MEMS & Sensors Memory type Market, by Country, 2020—2027
 Table 19 Latin America: MEMS & Sensors Market, by materials, 2020—2027
 Table 20 Latin America: MEMS & Sensors Market, by type, 2020—2027
 Table 21 North America: MEMS & Sensors Market, by Country
 Table 22 North America: MEMS & Sensors Market, by materials
 Table 23 North America: MEMS & Sensors Market, by type
 Table 24 Europe: MEMS & Sensors Market, by Country
 Table 25 Europe: MEMS & Sensors Market, by materials
 Table 26 Europe: MEMS & Sensors Market, by type

LIST OF FIGURES

FIGURE 1 Global MEMS & Sensors Market Segmentation
 FIGURE 2 Forecast Methodology
 FIGURE 3 Porter's Five Forces Analysis of Global MEMS & Sensors Market
 FIGURE 4 Value Chain of Global MEMS & Sensors Market
 FIGURE 5 Share of Global MEMS & Sensors Market in 2020, by country (in %)
 FIGURE 6 Global MEMS & Sensors Market, 2020-2027,
 FIGURE 7 Global MEMS & Sensors Market size by materials, 2020
 FIGURE 8 Share of MEMS & Sensors Market by materials, 2020 TO 2027
 FIGURE 9 Global MEMS & Sensors Market size by type, 2020
 FIGURE 10 Share of Global MEMS & Sensors Market by type, 2020 TO 2027
 FIGURE 11 Global MEMS & Sensors Market size by application, 2020
 FIGURE 12 Share of MEMS & Sensors Market by application, 2020 TO 2027