

## Inertial Sensors Market Set to Soar: Projected to Hit \$17,819 Million by 2034 with a 9.4% CAGR

Increased Adoption of Automation and Innovations in MEMS Technology Are Set to Drive Significant Growth in The Inertial Sensor Market

ROCKVILLE, MD, UNITED STATES, January 10, 2025 /EINPresswire.com/ -- The global <u>inertial sensors market</u> is set to reach a valuation of US\$ 239.0 Mn in 2024 and further expand at a CAGR of 9.4% to end up at US\$ by the year 2034.



The increasing demand for automation throughout different industry verticals contributes majorly to the global inertial sensor market. This challenge has resulted in the growing acceptance of inertial sensors across various industries, wherein companies are improving on efficiency and safety, which is catalyzing a higher installation of inertial sensors especially in sectors like automotive, aerospace & defense, and industrial (Manufacturing). According to the U.S. Bureau of Labor Statistics, productivity in automation industries is expected to increase by 1.5% to 2%.

The need for accurate navigation and positioning solutions is driving the inertial sensors market. Advanced inertial sensors are being adopted in industries including automotive and consumer electronics, offering improved performance. In contrast, the International Federation of Robotics reports a substantial rise in commercial drone operations where higher performance inertial sensors are required to navigate and control these systems successfully within a wide range of applications.

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Key Takeaways from the Market Study

The global Inertial Sensor market is projected to grow at 9.4% CAGR and reach US\$ 17,819.0 million by 2034. The market created an opportunity of US\$ 1,759.3 million growing at a CAGR of 7.3% between 2019 to 2023.

East Asia is a prominent region that is estimated to hold a market share of 31.7% in 2034. Accelerometers Sensor under the Sensor type is estimated to grow at a CAGR of 8.8% creating an absolute \$ opportunity of US\$ 2,867 million between 2024 and 2034

North America and East Asia are expected to collectively create an absolute \$ opportunity of US\$ 6,555.2 million.

"Innovations Like MEMS-Based Inertial Sensors and Advanced Properties Like High Sensitivity and Low Power Consumption Will Drive the Inertial Sensors Market, Enhancing Performance Across Automotive, Aerospace, And Consumer Electronics Applications," says a Fact.MR analyst.

## Market Growth Stratagems

The market is witnessing such collaborative partnerships between competent companies, involving innovative product integration, to improve in performance and quality of products that could further lead to increasing demand and sales. Players are strengthening their grip around such populations as China and India, As there is accelerated growth due to the rising demand for quality products in the automobile, Aerospace & Defence industries.

On January 8 of 2024, Bosch Sensortec launched BMA530 and BMA580, among the smallest MEMs accelerometers in the world measuring only  $1.2 \times 0.8 \times 0.55$  mm<sup>3</sup>. Best suited for wearables and wearables, these sensors come with voice activity detection and a built-in step counter, thus extending functionality without compromising battery life.

In April 2024, STMicroelectronics announced LSM6DSV32X, a 6-axis inertial module for intensive move analysis. The improved wearables and trackers prolong their battery life, combining a 32G accelerometer and a 4000 dps gyroscope. This module utilizes machine learning for context sensing and supports advanced user interface schemes.

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Increasing Need for Accurate Positioning and Navigation Systems

The market for inertial sensors is significantly driven by the growing need for precise positioning and navigational solutions. Advanced inertial sensors are being used more and more in a variety of industries, such as consumer electronics, automotive, and aerospace, to improve the performance and resilience of navigational systems. These sensors are crucial for applications like drones, driverless cars, and sophisticated mobile devices; accuracy in location is crucial for both safety and performance enhancement.

Furthermore, according to the International Federation of Robotics, there were over 517,000 new units added in 2022, and the number of units in stock increased by 15% to 3.5 million. About 11% more commercial drones were in operation between 2016 and 2021, which highlights the necessity for effective inertial sensors that provide dependable navigation and control. The increasing dependence on navigation technology highlights the critical function of inertial sensors, which are positioned as crucial facilitators for the enhancement of operational capacities across many industries globally.

## Country-specific Perspectives

One of the main drivers of the inertial sensor market in the US is the aerospace and defense industry. The U.S. Department of Defense (DoD) has estimated a defense budget of little over \$886 billion for fiscal year 2024. This clarifies the government's dedication to enhancing military prowess and technology linkages.

Numerous applications, including navigational systems, missile guidance, and unmanned aerial vehicles (UAVs), heavily rely on inertial sensors. Thus, the requirement for improved inertial sensor performance and its application are anticipated as technology advances and standard standards for defense systems' efficacy and precision are made.

Furthermore, the FAA predicts that the U.S. aerospace sector will generate US\$1.2 trillion by 2030, along with the development of newer technology and growing awareness of safety in commercial flying. In order to improve flight control systems and guarantee improved aircraft performance and safety, inertial sensors are highly relevant. The demand for inertial sensors is also anticipated to rise as a result of these increases in the aerospace sector and an increase in defense spending.

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<u>loT Sensor Market</u> According to the newly revised Fact.MR research study, the worldwide IoT sensor market is anticipated to grow to a value of US\$33 billion by 2024. By the end of 2034, the market is expected to have grown at a compound annual growth rate (CAGR) of 18.6% to reach a value of US\$ 181.7 billion.

<u>Self-Powered Sensor Market</u> The global market for self-powered sensors is expected to reach US\$ 2.87 billion by 2034, having grown from an anticipated US\$ 736 million in 2024 at a compound annual growth rate (CAGR) of 14.6%.

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