Inertial Sensor Market valued over US$11.227 billion in 2021, to experience significant growth

The global inertial sensor market was valued at US$11.227 billion in 2021.

NOIDA, UTTAR PARDESH, INDIA, November 21, 2023 /EINPresswire.com/ -- According to a new report published by Knowledge Sourcing Intelligence, forecasted between 2021 and 2028, the inertial sensor market was valued at US$11.227 billion in 2021 and is anticipated to propel significantly over the coming years.

The key driving factors behind the rapid growth of the inertial sensor market is the automotive industry along with the rapid technological advancement. For instance, according to the International Organization of Motor Vehicle Manufacturers, India experienced a significant surge in total vehicle production in 2022, reaching a remarkable figure of 54,56,857 units, representing a notable growth rate of 24% compared to the previous year, where vehicle production stood at 43,99,112 units in 2021.

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> *Knowledge Sourcing Intelligence*

Inertial sensor refers to the devices that measure and detect changes in motion, orientation, and acceleration, and angular velocity. Inertial sensors work by measuring the forces acting on an object. They are vital components used in various systems, including aerospace, automotive, consumer electronics, and industrial robotics, to determine an object's movement or position in space without relying on external references.

The market is observing numerous product launches and advancements. For instance, in October 2022, Bosch launched the cost-effective motion sensor BMI323. The BMI323 represents a versatile and power-efficient inertial sensor (IMU), blending accurate measurements of acceleration and angular rate with built-in intelligent functionalities activated by motion. The inclusion of these integrated features is designed to accelerate the development journey for original equipment manufacturers (OEMs). This approach provides a smoother and more efficient route for OEMs to integrate cutting-edge sensor capabilities into their products. Also, in

August 2022, MEMSIC launched the first MEMS 6-axis inertial sensor the MIC6100AL, integrating a 3-axis gyroscope and a 3-axis accelerometer. This product is tailored for motion-sensing interactive systems such as game controllers and smart remote controls. It enhances the sensitivity of sensing capabilities, empowering these systems to detect and respond to motion with heightened precision. The integration of these sensors significantly elevates the user experience by enabling precise motion detection and interaction.

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The inertial sensor market, based on type, is segmented into two main categories namely accelerometers and gyroscopes. Accelerometers are devices that measure the acceleration, which is the rate of change of velocity, used in a wide variety of applications, including navigation, robotics, and consumer electronics.

The inertial sensor market, based on its measurement type, is divided into three segments, which include acceleration, vibration and inclination. inertial sensors such as accelerometers, measure acceleration along a single axis or multiple axes.

The inertial sensor market, based on its end user, is segmented into four main categories namely aerospace & defence, automotive, electrical & electronics, and others. inertial sensors in automotive applications provide critical data for safety systems, vehicle stability, navigation, and the development of advanced driver-assistance systems (ADAS) and autonomous driving technologies.

Asia Pacific is poised to experience substantial growth. The rapid industrialization along with the rise of the automotive sector in the region, especially in countries like India and China is bolstering the growth of inertial sensor market in the region. For instance, according to the World Robotics Industrial Report 2022 by the International Federation of Robotics, the year 2021 witnessed a notable surge in industrial robot installations in Asia. The report reveals a substantial increase of 38%, with 380,911 units being installed, compared to 276,651 units in the preceding year of 2020, underscoring the growing demand for industrial automation.

The research includes coverage of TE Connectivity, Panasonic Corporation, Honeywell International Inc., ABB Ltd., General Electric, TDK Corporation, Bosch Sensortec GmbH, INERTIAL SENSE, Silicon Sensing Systems Ltd (Sumitomo Precision Products & Atlantic Inertial System Inc.) as the significant market players in the inertial sensor market.

The market analytics report segments the inertial sensor market using the following criteria:

- By Type

o Accelerometers

- Piezoresistive Accelerometers
- Capacitive Accelerometers
- Piezoelectric Accelerometers
- Others

o Gyroscopes

- By Measurement Type

o Acceleration
o Vibration
o Inclination

- By End Users

o Aerospace & Defence
o Automotive
o Electrical & Electronics
o Others

- By Geography

o North America

- United States
- Canada
- Mexico

o South America

- Brazil
- Argentina
- Others

o Europe

- Germany
- France
- United Kingdom
- Spain
- Others

o Middle East and Africa (MEA)

- Saudi Arabia
- UAE
- Others

o Asia Pacific

- China
- India
- South Korea
- Australia
- Japan
- Others

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