

Tactical Inertial Systems Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The tactical inertial systems market is estimated to register a CAGR of 7.62% during the forecast period, 2022-2027. The emergence of microelectromechanical system (MEMS) technology resulted in the miniaturization of mechanical and electro-mechanical elements in the field of sensors and semiconductors with micro-fabrication and micro-machining techniques. Hence, MEMS has become a fundamental part of future navigation systems.

Key Highlights

The growth in the tactical inertial systems market is majorly driven by the increasing pressure on contract manufacturers to reduce the size of the inertial systems to make them suitable for a broad range of tactical applications. MEMS greatly supports the rapid increase in portable devices, as they offer enhanced capabilities within small unit sizes. The tactical inertial MEMS market forecast predicts a dramatic rise in the volume of inertial MEMS devices over the next five years. However, over the years, GPS has become a prime target for cybersecurity attacks, thus, making the high-end inertial system an attractive choice for its deployment by augmenting the GPS in remote areas and using it for mission-critical applications.

Tactical Inertial Systems market Trends

The Accelerometer Segment is Expected to Hold the Highest Market Share

Traditional accelerometers were built on the principle of mechanical vibration. The principal components of an accelerometer are mass supported by springs. With the use of silicon-based products and miniaturization techniques, the accelerometer structure

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has shrunk rapidly.

MEMS accelerometers sold in the current market scenario contain microscopic crystal structures with a mass attached to the top that gets stressed by accelerative forces, which causes a voltage to be generated.

Over the years, low-g accelerators have gained traction for their applications. With the 3D MEMS technology, the companies are offering accelerators assembled in a dual-in-line or dual-in-flat-line plastic package with pins for surface mount and re-flow soldering. They are environmentally protected with silicone gel, resulting in excellent performance and reliability in a humid environment and at temperature cycling.

Asia-Pacific Accounts for the Largest Market Share

Asia-Pacific is the largest market for tactical inertial systems in the current market scenario. The large volume of production in countries such as China, Japan, and India keeps a constant demand for tactical inertial systems in the region.

In addition, this growth is due to increased investment in the defense sector from growing economies, such as India and China. The defense sectors in China and India are increasing the defense spending and procurement of advanced remotely operated vehicles for military applications.

In September 2021, India sought investment from Australia's defense industry, as the two countries discussed ways to strengthen defense relations and cooperate in maritime security in China's growing military and influential region of the Indo-Pacific region. Following the tremendous growth in the region, the major players in the market are expanding their operations in Asia-Pacific. For instance, in May 2020, Inertial Labs set up new partnerships with Malaysian and Indian distributors to better serve the local market of its inertial sensing technology and products.

With a new partnership with Malaysia's Dynamic Positioning Technology Sdn Bhd, the Southeast Asian marine and offshore industry will become a state-of-the-art automatic positioning, navigation, and directional technology for platforms, such as unmanned surface ships (USVs) and underwater vehicles.

Inertial Labs partnered with Datasol Innovative Labs (DILabs) to provide India with local benefits from local suppliers and partners, all from Inertial Labs' superior products, business development strategies, technical support, and marketing activities.

Tactical Inertial Systems market Competitor Analysis

The market's growth is primarily fueled by increasing applications, technological advancements, and rising aerospace and defense budgets. Furthermore, the growth can be attributed to the increasing demand for accuracy and calibration in guidance, control and targeting, precision-guided armaments, and other weaponry.

November 2020 - Northrop Grumman produced its 75,000th G-2000 gyroscope, the smallest tactical-grade gyroscope for commercial and military customers.

May 2020 - Northrop Grumman's SeaFIND Inertial Navigation System was approved by the US Coast Guard (USCG), formally certifying its use as a shipboard gyrocompass system for navigation.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

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