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

Market Report | 2023-01-23 | 110 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

The inertial system market in marine applications is expected to grow at a CAGR of 10.31% over the forecast period (2022-2027). The rapid advancement of the global lifestyle has resulted in equipment that can be used with greater ease of use. Motion-sensing technology can help achieve this, which extensively uses inertial sensors.

Key Highlights
In the last few years, the navigation industry has seen MEMS-based solutions gaining traction due to improved error characteristics, environmental stability, increased bandwidth, better g-sensitivity, and the increasing availability of embedded computational power to run advanced fusion and sensor error modeling algorithms. Vendors are transitioning from FOG to MEMS technology and an apparent transition in antenna array stabilization applications.
One of the primary reasons why MEMS-based systems see growth is the cost difference, as the traditional FOG or RLG navigation systems cost over USD 30,000 compared to USD 1,000 MEMS-based navigation systems. However, FOG- and RLG-based solutions offer higher accuracy than other solutions offered in the market.
Furthermore, increasing applications based on motion sensing are driving the market. With the current miniaturization of sensors and related components, rising growth toward the advanced function sensors is highly focused. For instance, Xsens has released improved versions of its MTi 1-series of motion-sensing Inertial Measurement Unit (IMU) modules, offering improved roll, pitch, and yaw measurement accuracy and higher tolerance of mechanical stress the first generation of the product in various energy and infrastructure projects.
The COVID-19 outbreak has created confusion and terror throughout the world, halting various industrial and non-industrial activities. The shipping and marine sector is one of the industries that the disease's spread has severely damaged. This outbreak has put the shipping and marine industries in the worst possible position since their workforces have been shut down for the sake of safety and preventing the spread of COVID-19.

Marine Applications Inertial Systems Market Trends

Evolving need for high-accuracy Inertial systems are driving the growth of this market

Unmanned Marine and maritime systems such as AUVs (autonomous underwater vehicles), UUVs (unmanned underwater vehicles), USVs (unmanned surface boats), and ROVs rely on marine inertial systems for orientation, position, and velocity data (remotely operated vehicles). Marine INS is critical for autonomous surface and underwater navigation since it demands precise heading, velocity, pitch, roll, and position information. They're also great for station-keeping and stability for UUVs and USVs in turbulent waters, and they let ROV operators know if their vehicle is in the right place.
Silicon Sensing Systems, for example, designs and manufactures leading MEMS-based inertial sensors for a variety of high-tech applications and has a long history of deploying these technologies to address the demands of fast-growing offshore industries. MEMS inertial sensors are part of the systems needed to monitor and regulate accurate motion and location aboard ships, submarines, and other marine vessels.
The rise of inertial systems can be ascribed to the growing need for navigational precision and the introduction of MEMS technologies. Navigational Systems are expected to have a significant market share. For short-term navigation, inertial measurement units (IMUs) used for naval applications have bias stability of 0.05-0.5 □/h, and for high-grade navigation, 0.0001-0.01 □/h.

Asia Pacific is expected to be a fastest growing region for the market

China and India, two of the world's fastest-growing economies, are part of the Asia Pacific area. The expansion of the marine transportation industry is fueled by commercial exchanges between these countries, where sea routes account for the majority of international trade.
Trends in worldwide container port-handling operations underscore Asia's major position in global commerce and transportation. Asian nations are seeing significant growth in intra-regional trade, which is mostly driven by manufacturing trade and reflects fragmented production processes in which components are created in many sites throughout Asia and assembled in another. The majority of demand growth came from Asia, which was aided by ongoing energy policy adjustments and increased export capacity in Australia and the United States. As enterprises in the region invest in developing sophisticated and novel accelerometers, the region is seeing an increase in the creation of new high-performance accelerometers. This is projected to boost trade, which will be aided by sea transportation.

Marine Applications Inertial Systems Market Competitor Analysis

The market is partially fragmented due to the presence of various inertial systems solution providers. However, vendors are consistently focusing on product development to enhance their visibility and global presence. The companies are also undergoing strategic partnerships and acquisitions to gain market traction and increase market share. The key players are Honeywell International Inc., Bosch Sensortec GmbH, Northrop Grumman Corporation, ST Microelectronics, etc. Recent developments in the market are -

November 2021: Honeywell has developed two new robust navigation systems: the Honeywell Radar Velocity System and the

Honeywell Compact Inertial Navigation System, both of which are available now. These devices, as well as Honeywell's partner InfiniDome's GPSdome Anti-Jamming system, are aimed at commercial clients that want dependable navigation solutions that are small, light, and powerful.
August 2021: Under the EGIM initiative, Spirent Federal Systems, a provider of PNT/GNSS test equipment, has announced intentions to thoroughly evaluate the inertial interface between Spirent GNSS simulators and both historical and upgraded Northrop Grumman inertial systems.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

Table of Contents:

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

Market Report | 2023-01-23 | 110 pages | Mordor Intelligence

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-02-28
		Signature