+357 96 030922
info@marketpublishers.com

Global Robotic Inertial Measurement Unit (IMU) Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

https://marketpublishers.com/r/GC3CDB94A854EN.html
Date: February 2026
Pages: 104
Price: US$ 3,480.00 (Single User License)
ID: GC3CDB94A854EN

Abstracts

According to our (Global Info Research) latest study, the global Robotic Inertial Measurement Unit (IMU) market size was valued at US$ 138 million in 2025 and is forecast to a readjusted size of US$ 436 million by 2032 with a CAGR of 18.3% during review period.

Robotic Inertial Measurement Unit (IMU) is an industrial-grade high-precision core sensing chip customized for various robotic systems, integrating MEMS/fiber optic/laser gyroscopes, high-dynamic accelerometers (and magnetometers/altimeters in mid-to-high-end models) on a single chip or chip set, with built-in industrial-grade anti-interference, wide-temperature calibration and multi-sensor fusion preprocessing circuits. It can real-time collect and process the robot's three-axis angular velocity, three-axis linear acceleration and spatial posture data in complex working conditions, and output standardized, high-reliability sensing signals to the robot's motion control system, serving as the hardware core for robots to perceive motion state, achieve precise posture control and autonomous navigation.Robotic IMU is priced in a huge tiered range by precision and manufacturing process, matching the operational requirements of different robots: Consumer-grade MEMS models for educational and lightweight service robots cost $3-8 each; Industrial-grade MEMS models used in collaborative robots and general AGVs are priced at $20-80; High-precision MEMS models for industrial robotic arms and high-end AGVs range from $120-500; Fiber optic IMU chips for special robots and unmanned vehicles cost $1,000-5,000; Laser IMU chips for military and aerospace-grade robots are priced at $5,000-50,000+.

The industrial chain is divided into three tiers, with core barriers in high-precision sensing technology. Upstream covers MEMS sensitive structures, ASIC circuits, wafer

+357 96 030922
info@marketpublishers.com

materials and other core components, with TSMC, GlobalFoundries and Bosch as key suppliers, accounting for over 40% of the total cost. Midstream focuses on chip design (ADI, Honeywell, CoreMEMS), manufacturing (SMIC, Sino Microelectronics) and packaging & testing (JCET Group, ASE), where the core barriers lie in wide-temperature calibration, anti-interference algorithms and fiber optic/laser sensing processes. Downstream includes manufacturers of industrial robots, service robots and AGV complete machines. The precision requirements of terminal robots drive the technological iteration direction of robotic IMU chips.

This report is a detailed and comprehensive analysis for global Robotic Inertial Measurement Unit (IMU) market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global Robotic Inertial Measurement Unit (IMU) market size and forecasts, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global Robotic Inertial Measurement Unit (IMU) market size and forecasts by region and country, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global Robotic Inertial Measurement Unit (IMU) market size and forecasts, by Type and by Application, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global Robotic Inertial Measurement Unit (IMU) market shares of main players, shipments in revenue ($ Million), sales quantity (K Units), and ASP (US$/Unit), 2021-2026

The Primary Objectives in This Report Are:
To determine the size of the total market opportunity of global and key countries
To assess the growth potential for Robotic Inertial Measurement Unit (IMU)
To forecast future growth in each product and end-use market

+357 96 030922
info@marketpublishers.com

To assess competitive factors affecting the marketplace

This report profiles key players in the global Robotic Inertial Measurement Unit (IMU) market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Bosch, TDK, STMicroelectronics, Murata, Panasonic, Senodia, QST Corporation, Silan Microelectronics, Memsic, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market Segmentation

Robotic Inertial Measurement Unit (IMU) market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Type

4-axis

6-axis

Others

Market segment by Inertial Sensor Composition

MEMS-IMU

Non-MEMS-IMU

Market segment by Manufacturing Process

CMOS IMU

+357 96 030922
info@marketpublishers.com

SOC IMU

Others

Market segment by Application

Industrial Robots

Service Robots

Special Robots

Military and Aerospace Robots

Other

Major players covered

Bosch

TDK

STMicroelectronics

Murata

Panasonic

Senodia

QST Corporation

Silan Microelectronics

Memsic

+357 96 030922
info@marketpublishers.com

Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe Robotic Inertial Measurement Unit (IMU) product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Robotic Inertial Measurement Unit (IMU), with price, sales quantity, revenue, and global market share of Robotic Inertial Measurement Unit (IMU) from 2021 to 2026.

Chapter 3, the Robotic Inertial Measurement Unit (IMU) competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Robotic Inertial Measurement Unit (IMU) breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Type and by Application, with sales market share and growth rate by Type, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021 to 2026.and Robotic Inertial Measurement Unit (IMU) market forecast, by regions, by Type, and by Application, with sales and revenue, from 2027 to 2032.

+357 96 030922
info@marketpublishers.com

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of Robotic Inertial Measurement Unit (IMU).

Chapter 14 and 15, to describe Robotic Inertial Measurement Unit (IMU) sales channel, distributors, customers, research findings and conclusion.

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

3 COMPETITIVE ENVIRONMENT: ROBOTIC INERTIAL MEASUREMENT UNIT (IMU) BY MANUFACTURER

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global Robotic Inertial Measurement Unit (IMU) Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

Product link: https://marketpublishers.com/r/GC3CDB94A854EN.html

Price: US$ 3,480.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/GC3CDB94A854EN.html