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Global Automotive 6-Axis IMU Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global Automotive 6-Axis IMU market size was valued at US$ 3200 million in 2025 and is forecast to a readjusted size of US$ 6269 million by 2032 with a CAGR of 10.0% during review period.

An automotive 6-axis inertial measurement unit is the core inertial component that integrates a 3-axis accelerometer and a 3-axis gyroscope into the same automotive-grade device. Its main role is to deliver stable angular-rate and linear-acceleration data when satellite signals are blocked, vehicle attitude changes rapidly, or the system needs continuous motion awareness, thereby supporting dead reckoning, attitude estimation, body control, vehicle safety, and autonomous-driving sensor fusion. Based on the verified official product pages, this segment has already formed a multi-layer delivery structure ranging from low-power automotive-grade chips, to factory-calibrated modules, to ruggedized packaged IMUs. Its main technical directions center on low noise, bias stability, wide-temperature reliability, time synchronization, redundancy design, functional safety, and factory calibration, while interfaces span SPI, I2C, I3C, CAN, CAN FD, and automotive Ethernet. Typical applications have expanded from traditional navigation and telematics terminals to ADAS, automated driving, vehicle stability control, camera and headlamp leveling, vehicle attitude detection, and motion monitoring for heavy-duty and off-highway vehicles. The main customers are not end vehicle owners, but OEMs, Tier 1 suppliers, domain controller vendors, navigation and positioning suppliers, ADAS providers, body and chassis suppliers, and engineering vehicle system integrators. The business model is still centered on chip or module sales, but calibration, firmware configuration, algorithm adaptation, software tools, and customized parameter services are increasingly used to improve integration efficiency, development speed, and unit value. Official disclosures also show that competition is no

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longer limited to single-point accuracy, but is becoming stratified around public range specifications, temperature capability, interface adaptation, package protection, functional safety level, and system integration readiness, which indicates that the product is evolving from a standalone sensor device into a foundational platform component within in-vehicle positioning and motion-sensing systems.

Official product pages show that automotive 6-axis IMUs have evolved from auxiliary sensing components into the foundational inertial layer of intelligent vehicles and higher-level motion-control systems. Bosch, ST, and TDK still position their products around navigation, telematics, dead reckoning, and standard automotive applications, which indicates that low-power, cost-efficient, high-volume chip products remain the base of the market. At the same time, Murata, Quectel, Aceinna, and Honeywell are clearly pushing their products into higher-value scenarios such as GNSS fusion, ADAS, automated driving, central vehicle IMUs, construction machinery, and off-highway vehicle automation. This shows that demand is shifting from simply obtaining motion data toward providing continuous, trustworthy, and fusion-ready dynamic state inputs for the vehicle. As application levels move upward, the importance of a 6-axis IMU is no longer defined only by sensing performance itself, but by whether it can continuously provide stable base measurements for higher-level control and positioning systems under complex temperature conditions, vibration, signal blockage, and long operating cycles. For OEMs and Tier 1 suppliers, these devices are increasingly functioning as a foundational motion reference source connected to positioning, body, chassis, camera, lighting, and domain-control subsystems. As a result, the market can no longer be judged only by single-chip cost, but by reuse value within the vehicle E/E architecture, data credibility, and scenario extensibility.

A second clear trend is that competition is shifting from device-parameter competition to competition in system integration efficiency and safety-trusted capability. Murata emphasizes the central vehicle IMU role, time synchronization, functional safety, and factory calibration. ST emphasizes a dedicated automotive MEMS production flow, full-temperature testing, and dead-reckoning performance. Quectel emphasizes factory-calibrated modules based on automotive-grade chips. Aceinna and Honeywell further extend the value proposition into automotive Ethernet, CAN FD, J1939, configurable firmware, and customer-specific adaptation. This means customers are no longer buying a standalone chip, but rather a motion-sensing subsystem that can be integrated faster, validated more easily, and adapted to different electrical and electronic architectures. Going forward, companies that can simultaneously control noise, bias, wide-temperature consistency, redundancy, interfaces, and calibration workflows will be more likely to move from simple component suppliers to vehicle inertial platform

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suppliers. As vehicle algorithms rely more heavily on multi-sensor fusion, vendors that can provide time synchronization, factory trimming, standardized interfaces, configurable parameters, and development tools will have a better chance of entering production programs, because they reduce customer debugging effort, shorten vehicle-introduction cycles, lower system-validation cost, and improve real-world performance under weak satellite coverage, harsh roads, and complex thermal drift conditions.

From the external industry environment, the growth logic of this segment is also strengthening. Since July 2024, the European Union has applied broader mandatory driver-assistance requirements to all newly sold motor vehicles and has established the approval framework for automated and driverless vehicles. In 2025, China further tightened administration over the admission, recall, and OTA upgrade management of intelligent connected vehicle products. NHTSA in the United States continues to treat active safety and automated driving systems as major pathways for improving road safety. These policies do not directly require the use of any specific 6-axis IMU, but they continuously raise system requirements for sensing, fusion, monitoring, event recording, and safety redundancy, which objectively increases the necessity of highly reliable automotive-grade inertial devices. Based on the current official supplier sample, production capability is mainly concentrated in Europe, Japan, the United States, and China, while sales and deployment momentum is likely to expand first in China, Europe, and North America along with production programs in ADAS, automated driving, engineering vehicle intelligence, and high-precision navigation. At the same time, automation upgrades in heavy-duty vehicles, agricultural machinery, warehousing, and off-highway platforms are opening additional room for packaged, ruggedized, and firmware-configurable IMUs, meaning future growth is unlikely to come from passenger vehicles alone and is more likely to be amplified by the combined pull of passenger-car intelligence, commercial-vehicle safety, and engineering-vehicle automation.

This report is a detailed and comprehensive analysis for global Automotive 6-Axis 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 Automotive 6-Axis IMU market size and forecasts, in consumption value ($

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Million), sales quantity (Million Units), and average selling prices (US$/Unit), 2021-2032

Global Automotive 6-Axis IMU market size and forecasts by region and country, in consumption value ($ Million), sales quantity (Million Units), and average selling prices (US$/Unit), 2021-2032

Global Automotive 6-Axis IMU market size and forecasts, by Type and by Application, in consumption value ($ Million), sales quantity (Million Units), and average selling prices (US$/Unit), 2021-2032

Global Automotive 6-Axis IMU market shares of main players, shipments in revenue ($ Million), sales quantity (Million 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 Automotive 6-Axis IMU

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global Automotive 6-Axis 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 Robert Bosch GmbH, STMicroelectronics N.V., TDK Corporation, Murata Manufacturing Co., Ltd., QST Corporation Limited, Quectel Wireless Solutions Co., Ltd., ACEINNA, Inc., Panasonic Holdings Corporation, Honeywell International Inc., etc.

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

Market Segmentation

Automotive 6-Axis IMU market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts

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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

Small

Miniature

Market segment by Delivery Form

Automotive Bare-Chip IMU

Calibrated Automotive Module

Rugged Packaged IMU

Market segment by Maximum Public Gyroscope Range

300 dps and Below

301 to 500 dps

501 to 2000 dps

2001 to 4000 dps

Market segment by Application

Dead Reckoning (DR)

Internet of Vehicles (V2X)

Telematics, Electronic Toll Collection

Collision Detection and Collision Reproduction

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Anti-Theft System

Motion Start Function

Driving Comfort

Vibration Monitoring and Compensation

Major players covered

Robert Bosch GmbH

STMicroelectronics N.V.

TDK Corporation

Murata Manufacturing Co., Ltd.

QST Corporation Limited

Quectel Wireless Solutions Co., Ltd.

ACEINNA, Inc.

Panasonic Holdings Corporation

Honeywell International Inc.

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)

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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 Automotive 6-Axis IMU product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Automotive 6-Axis IMU, with price, sales quantity, revenue, and global market share of Automotive 6-Axis IMU from 2021 to 2026.

Chapter 3, the Automotive 6-Axis IMU competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Automotive 6-Axis 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 Automotive 6-Axis IMU market forecast, by regions, by Type, and by Application, with sales and revenue, from 2027 to 2032.

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 Automotive 6-Axis IMU.

Chapter 14 and 15, to describe Automotive 6-Axis IMU sales channel,

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distributors, customers, research findings and conclusion.

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