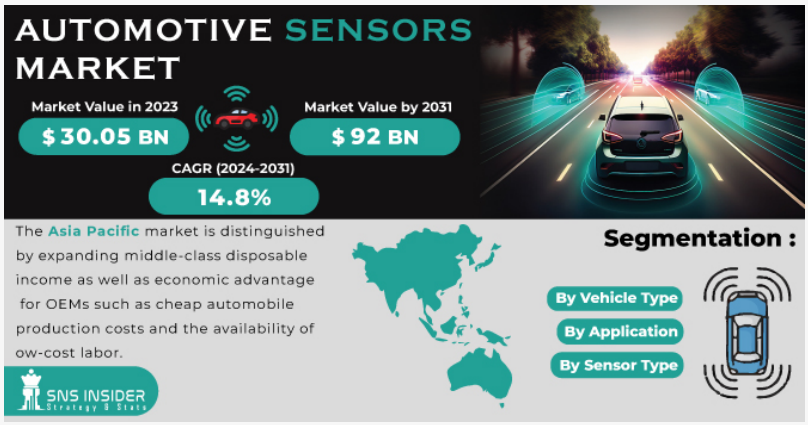
Automotive Sensors Market to Hit USD 92 Billion by 2031 Driven by Autonomous Vehicle Adoption and Safety Regulations

Automotive Sensors Market Size, Share, Growth Analysis, Industry Scope and Forecast 2024 to 2031



Automotive Sensors Market Report

AUSTIN, TEXAS, UNITED STATES, May 22, 2024 /EINPresswire.com/ -- The Automotive Sensors Market is poised for significant growth, fueled by the surging demand for advanced driver-assistance systems (ADAS) and autonomous vehicles. These advancements rely heavily on a complex network of sensors to navigate roads, detect obstacles, and ensure passenger safety. Additionally, stringent government regulations mandating the inclusion of safety features in vehicles are further driving the adoption of automotive sensors.

The Automotive Sensors Market, valued at USD 30.5 Billion in 2023, is expected to reach a staggering USD 92 Billion by 2031. This translates to a compound annual growth rate (CAGR) of 14.8% throughout the forecast period.

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Market Scope

The increasing popularity of vehicle automation and connected cars is propelling the demand for automotive sensors around the world. Consumers are prioritizing safety features and technological advancements, prompting manufacturers to integrate advanced driver-assistance systems (ADAS) into their vehicles.

Automotive sensors play a critical role in various vehicle functions:

Safety Systems: Sensors like radar, LiDAR, and cameras provide essential data for features like collision avoidance, lane departure warning, and automatic emergency braking (AEB).
Engine Management: Sensors monitor engine performance parameters like temperature, pressure, and oxygen levels, enabling efficient operation and reduced emissions.
Comfort and Convenience: Sensors for rain detection, tire pressure monitoring, and automatic climate control enhance driving comfort and convenience.
Furthermore, stringent fuel efficiency standards and regulations promoting cleaner vehicles are driving the adoption of advanced engine management systems that rely heavily on sensors. As a result, the demand for electronic sensors for position sensors in the automotive industry is anticipated to experience significant growth.

The industry's recent shift towards electrification and autonomous driving has further amplified sensor demand. Autonomous vehicles, particularly higher levels of autonomy, require a multitude of sensors to gather real-time data on their surroundings. This necessitates the integration of a wider range of sensors into these vehicles, propelling market growth.

Government Initiatives and Emphasis on Safer Automotive Systems

According to the World Health Organization (WHO), an estimated 1.24 million people die in traffic accidents annually. To address this challenge, governments are implementing stricter safety regulations and promoting the adoption of advanced safety features in vehicles, including various sensor technologies.

For instance, the National Highway Traffic Safety Administration (NHTSA) in the United States enforces stringent safety regulations, mandating certain sensor-based ADAS features in new vehicles. Similarly, regulatory bodies worldwide are introducing stricter emission standards, necessitating the use of advanced engine management systems that rely on sensors for optimal performance.

These initiatives, coupled with growing consumer demand for safety features, are compelling automakers to equip their vehicles with a wider range of sensors. This trend is expected to continue, driving the growth of the automotive sensors market.

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Key Players Analysis

Robert Bosch GmbH (Germany)
Infineon Technologies AG (Germany)
Continental AG (Germany)
NXP Semiconductors N.V. (Netherlands)
DENSO Corporation (Japan)

Analog Devices Inc. (US)
BorgWarner Inc. (US)
Sensata Technologies (US)
Allegro Microsystems Inc. (US)
ELMOS Semiconductor SE (Germany)
Aptiv plc (Ireland)
STMicroelectronics N.V. (Switzerland)
CTS Corporation (US)
Autoliv Inc. (Sweden)
TE Connectivity (Switzerland)
Valeo S.A. (France)
ZF Friedrichshafen (Germany)
Magna International (Canada)

Recent Developments in the Automotive Sensors Market

May 2023: ON Semiconductor (US) launched its Hyperlux automotive image sensor family, featuring industry-leading 150dB ultra-high dynamic range (HDR) and light emitting diode flicker mitigation (LFM) technology. This advancement offers enhanced image clarity and reduces flickering effects from headlights and traffic signals, improving camera performance in ADAS applications.

June 2022: Allegro MicroSystems, Inc. (US) introduced A33110 and A33115 magnetic position sensors specifically designed for ADAS applications. These high-precision sensors offer improved accuracy and reliability for critical functionalities like steering angle detection and lane departure warning systems.

Segment Analysis

By Sensor Type: The position sensors segment dominates the market due to the increasing demand for autonomous vehicles and ADAS applications. Position sensors are crucial for functionalities like lane departure warning, parking assistance, and cruise control.

By Application: Powertrain systems currently dominate the market due to the high concentration of sensors required for engine management, fuel injection, and emission control systems. However, the safety and control systems segment is expected to witness the fastest growth, driven by the rising adoption of ADAS features.

By Vehicle Type: Passenger cars are expected to remain the dominant segment throughout the forecast period due to their higher production volume and growing consumer preference for feature-rich vehicles. Additionally, the passenger car segment is expected to exhibit the highest CAGR due to the rapid integration of advanced technologies in these vehicles.

Impact of Russia-Ukraine War on the Automotive Sensors Market

The war has caused a tenfold increase in the price of neon gas, a critical component for certain sensor types. Additionally, restrictions on Russia, a major supplier of palladium used in automotive manufacturing, are likely to further disrupt production and drive up costs. Shortages of raw materials and disruptions in established supply chains are impacting vehicle production across the Asia-Pacific region. This, in turn, can lead to a decline in demand for automotive sensors.

The war has also contributed to a rise in steel and coking coal prices, further escalating manufacturing costs for automakers. These factors are likely to have a cascading effect on the cost of automotive sensors.

The Asia-Pacific (APAC) Region Is Expected To Dominate The Automotive Sensors Market Throughout The Forecast Period

APAC is witnessing a significant rise in vehicle sales, particularly in countries like China and India. This surge in vehicle production is driving the demand for automotive sensors. The APAC region is a major hub for EV production. As EVs rely heavily on sensors for battery management, powertrain control, and autonomous driving functionalities, their growing popularity is propelling the demand for automotive sensors in the region.

Many APAC governments are implementing policies that encourage the adoption of advanced automotive technologies, including ADAS features that rely on sensors. Additionally, lower entry barriers for new technologies in the region compared to developed markets further accelerate the adoption of sensor-based automotive systems.

Key Takeaways from the Automotive Sensors Market Study

Understanding the significant growth drivers for the automotive sensors market, including the increasing adoption of ADAS and autonomous vehicles, stringent government regulations, and the rise of electric vehicles.
Gaining in-depth analysis of the market segments by sensor type, application, and vehicle type, enabling you to identify the most promising areas for investment.
Recognizing the potential challenges posed by global disruptions and economic slowdowns, along with strategies to mitigate these risks.
Identifying the dominant region (Asia-Pacific) and the factors contributing to its leadership in the automotive sensors market.

To know about the Research Methodology@ https://www.snsinsider.com/reports/automotive-sensors-market-2304

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