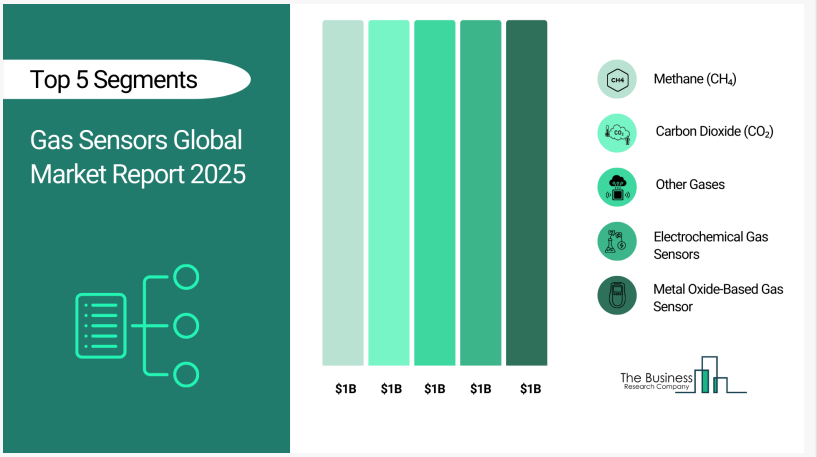
Gas Sensors Market In 2029

The Business Research Company's Gas Sensors Global Market Report 2025 - Market Size, Trends, And Global Forecast 2025-2034



Gas Sensors Market Size

LONDON, GREATER LONDON, UNITED KINGDOM, December 31, 2025 /EINPresswire.com/ -- Gas Sensors Market to Surpass $4 billion in 2029. In comparison, the Electrical And Electronics Components market, which is considered as its parent market, is expected to be approximately $110 billion by 2029, with Gas Sensors to represent around 4% of the parent market. Within the broader Electrical And Electronics industry, which is expected to be $5,240 billion by 2029, the Gas Sensors market is estimated to account for nearly 0.7% of the total market value.

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Which Will Be the Biggest Region in the Gas Sensors Market in 2029
Asia Pacific will be the largest region in the gas sensors market in 2029, valued at $1,406 million. The market is expected to grow from $908 million in 2024 at a compound annual growth rate (CAGR) of 9%. The strong growth can be attributed to the growing demand for consumer electronics and increasing adoption in the automotive industry.

Which Will Be The Largest Country In The Global Gas Sensors Market In 2029?
China will be the largest country in the gas sensors market in 2029, valued at $720 million. The market is expected to grow from $474 million in 2024 at a compound annual growth rate (CAGR) of 9%. The strong growth can be attributed to the growing demand for consumer electronics and the rising automotive industry.

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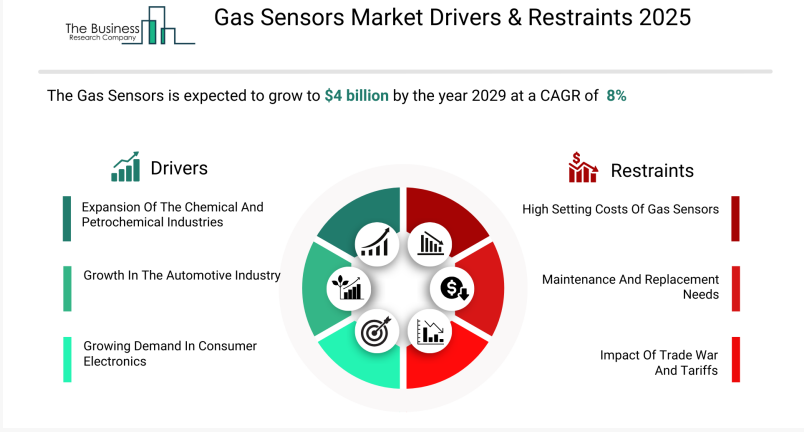
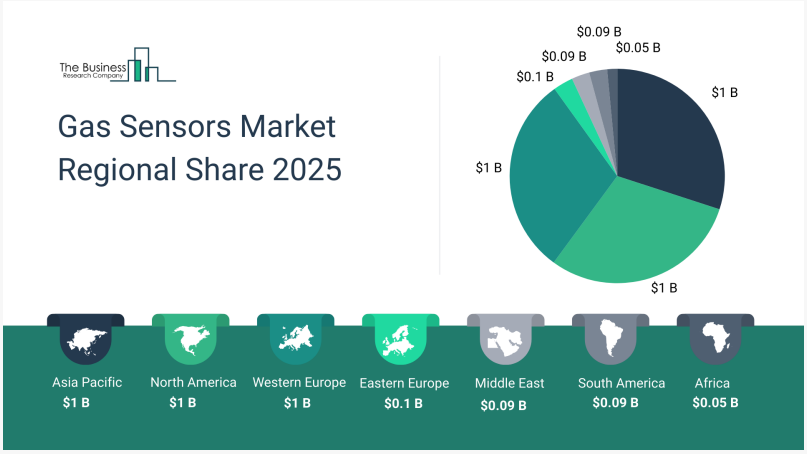
What will be Largest Segment in the Gas Sensors Market in 2029?
The gas sensors market is segmented by gas type into hydrogen sulfide (H□S), methane (CH□), carbon dioxide (CO□) and other gases. The carbon dioxide (CO□) market will be the largest segment of the gas sensors market segmented by gas type, accounting for 35% or $1,398 million of the total in 2029. The carbon dioxide (CO□) market will be supported by growing emphasis on indoor air quality monitoring, increasing implementation in HVAC and smart building systems, widespread use in industrial process control and safety, applications in medical devices like ventilators and anesthesia machines, rising demand from greenhouses and food storage facilities, heightened public awareness about carbon footprint and regulatory guidelines targeting CO□ level management in commercial spaces.



Gas Sensors Market Forecast



Gas Sensors Market Report

The gas sensors market is segmented by technology into infrared gas sensors, photo ionization sensors, electrochemical gas sensors, thermal conductivity gas sensors, metal oxide-based gas sensors, catalytic gas sensors and other technologies. The electrochemical gas sensors market will be the largest segment of the gas sensors market segmented by technology, accounting for 28% or $1,108 million of the total in 2029. The electrochemical gas sensors market will be supported by high sensitivity and selectivity to specific toxic gases, increasing use in personal safety devices and industrial PPE, cost-effectiveness for mass deployment, demand in healthcare and laboratory settings, rising implementation in confined space safety protocols, regulatory compliance in occupational safety and advancements in miniaturization for portable equipment.

The gas sensors market is segmented by end user into defense and military, healthcare, consumer electronics, automotive and transportation, industrial and other end users. The industrial market will be the largest segment of the gas sensors market segmented by end user, accounting for 30% or $1,181 million of the total in 2029. The industrial market will be supported by strict workplace safety regulations, rising automation in hazardous manufacturing processes, demand for continuous emissions monitoring, increased usage in chemical and petrochemical plants, adoption in explosion prevention systems, integration into industrial IoT platforms and

expansion of heavy industries in developing countries.

What is the expected CAGR for the Gas Sensors Market leading up to 2029?
The expected CAGR for the gas sensors market leading up to 2029 is 8%.

What Will Be The Growth Driving Factors In The Global Gas Sensors Market In The Forecast Period?
The rapid growth of the global gas sensors market leading up to 2029 will be driven by the following key factors that are expected to reshape advanced material engineering, industrial applications, and performance-driven product development worldwide.

Expansion Of The Chemical And Petrochemical Industries - The expansion of the chemical and petrochemical industries will become a key driver of growth in the gas sensors market by 2029. As the scale of chemical and petrochemical operations grows, so does the risk of gas leaks, emissions and potential explosions, making reliable gas detection systems indispensable. Gas sensors are deployed throughout production, storage and transportation processes to detect toxic and flammable gases such as methane, carbon monoxide and volatile organic compounds. Stricter government regulations and heightened safety standards in these industries further drive the adoption of advanced gas sensor technologies, including IoT-enabled and MEMS-based solutions, to enable real-time monitoring and predictive maintenance. As a result, the expansion of the chemical and petrochemical industries is anticipated to contributing to a 2.0% annual growth in the market.

Growth In The Automotive Industry - The growth in the automotive industry will emerge as a major factor driving the expansion of the gas sensors market by 2029. As automakers face increasingly stringent global emission regulations, the demand for advanced gas sensors that can accurately monitor, and control vehicle emissions is rising sharply. Additionally, the rapid adoption of electric and hybrid vehicles introduces new requirements for gas sensors, such as monitoring battery gases and fuel cell operations, while the integration of advanced driver-assistance systems (ADAS) and enhanced safety features—like alcohol detection and fuel leak sensors—further boosts the need for sophisticated gas sensing technologies. The ongoing shift toward vehicle electrification, automation and stricter safety standards means that automakers are investing heavily in innovative sensor solutions to ensure compliance, reliability and consumer safety, making gas sensors a critical component in the modern automotive landscape. Consequently, the growth in the automotive industry capabilities is projected to contributing to a 1.5% annual growth in the market.

Growing Demand In Consumer Electronics - The growing demand in consumer electronics within digital manufacturing processes will serve as a key growth catalyst for the gas sensors market by 2029. As consumer electronics devices such as smartphones, wearables and smart home systems become more prevalent, the integration of gas sensors has become essential for enhancing user safety and environmental awareness. These sensors are increasingly embedded in devices to monitor indoor air quality, detect hazardous gases like carbon monoxide and

volatile organic compounds (VOCs) and ensure compliance with health and safety regulations. Technological advancements have led to the development of miniaturized, low-power gas sensors that can be seamlessly incorporated into compact consumer devices without compromising performance. Therefore, this growing demand in consumer electronics across digital manufacturing operations is projected to supporting to a 1.0% annual growth in the market.

Favorable Government Investment - The favorable government investment will become a significant driver contributing to the growth of the gas sensors market by 2029. Governments worldwide are investing heavily in smart infrastructure initiatives, especially in rapidly urbanizing regions like Asia-Pacific, to address rising concerns about air quality and public health. These investments support the integration of gas sensors into urban environments for real-time monitoring and management of air pollutants, which is critical for effective and responsive environmental controls. Additionally, government-backed regulations and programs such as India's National Clean Air Program and the European Union's stringent emissions standards mandate the use of gas sensors across industries to ensure compliance, further boosting demand. As a result, government investment not only accelerates technological innovation and deployment of gas sensors but also ensures their widespread adoption in both residential and industrial applications, solidifying their role in modern infrastructure and public safety. Consequently, the favorable government investment strategies is projected to contributing to a 0.5% annual growth in the market.

Access the detailed Gas Sensors Market report here:
https://www.thebusinessresearchcompany.com/report/gas-sensors-global-market-report

What Are The Key Growth Opportunities In The Gas Sensors Market in 2029?
The most significant growth opportunities are anticipated in the carbon dioxide (CO_2) gas sensors market, the electrochemical gas sensors market, and the industrial gas sensors market. Collectively, these segments are projected to contribute over $1 billion in market value by 2029, driven by rising demand for real-time environmental monitoring, stricter industrial safety regulations, and increasing adoption of smart sensing technologies across manufacturing, automotive, and energy sectors. This surge reflects the accelerating deployment of advanced gas detection solutions that enable high-precision monitoring, early leak detection, and improved workplace safety, fueling transformative growth within the broader gas sensors industry.

The carbon dioxide (CO_2) gas sensors market is projected to grow by $518 million, the electrochemical gas sensors market by $414 million, and the industrial gas sensors market by $377 million over the next five years from 2024 to 2029.

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