Wireless Sensors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 100 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 Wireless Sensors Market size is estimated at USD 14.82 billion in 2025, and is expected to reach USD 48.19 billion by 2030, at a CAGR of 26.59% during the forecast period (2025-2030).

Wireless sensors offer several advantages, such as accuracy and reliability, with the help of various innovative technologies, such as RFID and Bluetooth, and the potential to make electronic devices easy to integrate. As a result, they gained significant traction in the past few years. These sensors are primarily used in factory settings for data monitoring production flow. These also find applications in Automotive, defense, building automation, and other industries, like materials handling and food and beverage. Due to the increasing quest for new energy sources, government regulations, renewable energy development, and rapid technological advancements, the wireless sensors market is propelling.

Key Highlights
- Wireless sensors are considered a vital component in smart grids for remote monitoring of power lines and transformers. They are present in service to monitor line temperature and weather conditions. Industrial automation and demand for miniaturized consumer devices across regions, such as wearables and IoT - connected devices, are among the significant factors driving the wireless sensors market.
- Due to the increased government regulation for the increased use of the sensor for safety, the demand for wireless sensors is growing. For instance, the areas with challenging environmental conditions, such as Oil rigs, Boilers, etc., present high pressure, high temperature, etc. Wireless sensors make it easy to control and monitor the facility from a safe distance.
- The industry 4.0 revolution, in which machines are becoming brighter and more intuitive, is increasing the need for wireless sensors' industrial applications. The new devices are designed to be more efficient, safe, and flexible, with the ability to monitor their performance, usage, and failure autonomously. These applications, therefore, spur the demand for highly- sensitive sensors.

- The rising adoption of IoT is another major factor driving the market's growth. This growth in IoT-connected devices is projected to fuel the demand for wireless sensors. Further, transforming the development of smart homes and buildings, smart cities, and intelligent factories demands wireless sensors, owing to the small form factor, high precision, low power consumption, and ability to control ambient parameters.
- These sensors have reduced installation costs and minimal disruption to the workforce and interiors; therefore, installing wireless sensor systems requires no wiring or structural building changes. Many companies are investing in wireless technologies, which are cost-effective, safe as well as convenient.
- For instance, Monnit Corporation recently announced its ALTA Soil Moisture Sensor's availability to meet the AgriTech market's demands. The innovative Soil Moisture Sensor assists farmers, commercial growers, and greenhouse managers in easily connecting their precision irrigation operations to the Internet of Things (IoT). The defense sector is embracing wireless sensor technology, as these sensors can monitor their premises, identify suspicious activity, and track valuable assets.
- However, the demand for high-performance, cost-efficient, and reliable sensors has increased, leading to higher spending in R&D activities by market vendors. These technological advancements in nanotechnology and micro-technology are expected to propel the market growth of wireless sensors over the forecast period.

Wireless Sensors Market Trends

Energy and Power to Hold Significant Market Share

- Energy conservation is increasingly essential to reduce any enterprise's power consumption and associated costs and minimize the environmental impact, including a business's ecological footprint. For improved energy conservation, accurate wireless sensor measurements are required in portable and stationary weather stations, wind energy systems, testing devices for diesel truck emissions, wind engineering concerning new building design aerodynamics, high-altitude weather research balloons, ocean research, water pollution devices, atmospheric studies, and smokestack mercury sampling.
- Zero-power wireless sensors require energy processing low power management circuitry to monitor the transducer output power, store energy, and deliver power to the rest of the wireless sensor. Energy harvesting helps in powering wireless sensor networks in industrial apps. Advancements in low-power and reliable wireless communications and sensor and energy harvesting technologies make this type of communication more practical and efficient than a wired infrastructure.
- With futuristic innovations, like electric cars and self-driving cars, the demand for these wireless pressure sensors is assumed to increase in the automotive sector. Powertrain applications represent more than 50% of the business, followed by safety, with tire pressure management systems (TPMS) being the most significant single automotive application. Driven by carbon dioxide emission reduction and automation, wireless pressure sensors will increasingly be adopted and used in the future.
- Energy harvesting-based autonomous wireless sensor nodes are a convenient and cost-effective solution. Using energy harvesting removes one of the critical factors limiting the proliferation of wireless nodes. The scarcity of power sources has the characteristics necessary to deliver the energy and power to the sensor node for years without battery replacement. Significant economic advantages are realized when zero wireless power sensors are deployed vs. hard-wired solutions. According to BP, primary energy consumption in India recently amounted to some 35.4 exajoules, thus driving the demand for wireless sensors in the energy and power industry.

Asia Pacific to Witness Significant Growth

- The Asia Pacific is one of the largest regions in the electrical and electronics manufacturing market. The region is also a significant vendor of wireless sensor technologies, especially in China and Japan. China is also the world's largest car market and

the world's largest production site for cars, including electric cars, with much growth potential. According to the China Association of Automobile Manufacturers (CAAM), recently, approximately 317,000 commercial vehicles were sold in China. Sales in China accounted for about 32.56% of global motor vehicle sales.
- As these industries account for a significant portion of the wireless sensor market, the region offers an opportunity over the forecast period. The growing concept of connected cars and regulations regarding automotive safety is also expected to drive the adoption of wireless sensors in the region.
- In automobiles, hydraulic brakes are a crucial component in passenger safety. The ability to control a vehicle using brakes is down to a complex blend of components, including pressure sensors. According to Auto Punditz, In the financial year 2022, the leading type of electric vehicle sold in India was two-wheelers, reaching around 231 thousand units, thus driving the demand for wireless pressure sensors in the automotive industry.
- Another reason for increasing the adoption of wireless sensors is the region's high activity level in deploying them to enhance its growing IT healthcare market and innovate new healthcare equipment and devices.
- Recently, Yokogawa Electric Corporation announced the release of the Sushi Sensor, an OpreX brand wireless solution, in Japan. The sensor is a compact wireless device with integrated sensing and communication functions that are intended to monitor plant equipment vibration and surface temperature.

Wireless Sensors Industry Overview

The Wireless Pressure Sensors Market is highly competitive. The high expense on research and development, partnerships, collaborations, and acquisitions are the prime growth strategies adopted by the regional companies to sustain the intense competition. Key players in the market are Honeywell International Inc., Schneider Electric SE, Emerson Electric Co., Texas Instruments Incorporated, Siemens AG, ABB Ltd., Rockwell Automation Inc, Pasco Scientific, and many more.

- October 2022 - Siemens partnered with Volta Trucks to accelerate commercial fleet electrification. Pressure is a crucial parameter in an electric vehicle's liquid cooling system. Pressure sensors are vital for feedback for cooling system regulation and optimization and to detect pressure loss that could suggest a leak.
- June 2022 - Wireless pressure sensors are also used during fracturing, acidizing, and cementing applications for similar pressure monitoring and control purposes. The wireless pressure sensor has the function of measuring the gauge pressure of gases and liquids in piping. ABB Partnered with Think Gas, a city gas distribution company, to automate operations across Think Gas' gas network. The wireless pressure sensors help easy installation for a production site to support direct installation into piping, and wetted material is highly resistant to corrosion.

Additional Benefits:

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

Table of Contents:

Wireless Sensors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 100 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	2025-05-05
		Signature