

Battery-free Sensors Market with COVID-19 Impact Analysis, by Sensor Type (Temperature Sensors, Humidity/Moisture Sensors, Pressure Sensors), Frequency, Industry (Automotive, Logistics, Healthcare, Food & Beverages), and Region - Global Forecast to 2026

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Abstracts

The global battery-free sensors market size is projected to grow from USD 32 million in 2021 to USD 109 million by 2026; it is expected to grow at a CAGR of 27.6% from 2021 to 2026. With rapid technological advancements, battery-free sensors are increasingly adopted in IoT applications to improve production efficiency and reduce operational and maintenance costs in the wake of COVID-19. Additionally, the ongoing miniaturization of medical and electronic devices and the growing implementation of automated condition monitoring solutions in smart factories are expected to boost the growth of the battery-free sensors market during the forecast period.

In the prevailing COVID-19 situation, the expected growth of the battery-free sensors market is expected to decline as the pandemic is restricting the supply of batteries and other components due to severe disruptions in businesses and the global economy. The current situation has impacted the supply chain of the battery industry. Key components for batteries are mainly manufactured in Asia Pacific. The COVID-19 situation has exposed the overdependency on the region for key raw materials, especially China. Battery manufacturers in the US, Germany, and Australia are highly impacted by the shutdown of operations in China and other Asia Pacific countries. It has also resulted in limited production leading to a serious decline in business inputs. The recovery depends on government assistance, as well as the level of corporate debt and how the companies and markets cope with the trimmed demand.

“Ultra High frequency segment expected to hold the largest market share during the forecast period.”

At present, most battery-free sensor manufacturers offer UHF sensors for various applications. These sensors have much longer read ranges (up to 20 feet) than that of low-frequency and high-frequency sensors and can be mounted on metal; hence, UHF sensors are ideal for industrial applications. UHF sensors also allow multiple sensors to read with the help of one reader. Thus, UHF sensors work well in a wireless sensor network. These factors contribute to the high demand for UHF battery-free sensors. Similarly, high-frequency sensors hold a significant market share owing to the high deployment of these sensors in medical devices, smartphones, and supply chain applications.

“Logistics industry is expected to grow at the highest CAGR during the forecast period.”

In recent years, logistics has emerged as a significant market for sensors. Smart sensors increase the automated collection and processing of data and broaden management visibility across the supply chain to help companies reduce operating costs, improve asset efficiency, and generate incremental revenue. Battery-free sensors with RFID technology enable touch-free identification and tracking of items and have helped transform traditional inventory management. RFID enables a more automated approach that can offer increased accuracy and real-time inventory tracking at a very low cost. These sensors allow for more traceability of inventory, potentially reducing the risk of inventory shrinkage or loss. More reliable and current information can also strengthen demand-planning capabilities, potentially reducing out-of-stock and overstock situations. Moreover, advancements in battery-free sensors technology have generated savings not only from inventory theft protection but also from reduced spoilage. Hence, the logistics industry is expected to be the fastest-growing market from 2021 to 2026.

“APAC is projected to grow at the highest CAGR during the forecast period.”

Battery-free sensors market in APAC is expected to grow at the highest CAGR during 2021-2026. Ongoing industrialization, growing adoption of predictive maintenance tools, and increasing competitive pressure to achieve operational efficiency are fueling the growth of the battery-free sensors market in this region. The expansion of manufacturing activities resulting from the migration of production bases to Asian countries, such as China, India, and South Korea, with low labor costs, drives the

demand for battery-free sensors in the region. However, the outbreak of COVID-19 has impacted the manufacturing facilities of all verticals across the world, forcing them to shut down. However, production has resumed in a few facilities in China, thereby initiating the manufacturing of some essentials.

Break-up of the profiles of primary participants:

By Company Type – Tier 1 – 40%, Tier 2 – 35%, and Tier 3 – 25%

By Designation – C-level Executives – 45%, Managers – 35%, and Others – 20%

By Region – North America - 30%, Europe – 20%, APAC – 40%, and RoW – 10%

ON Semiconductor (UK), Farsens (Spain), Axzon (Rfmicron) (US), Inductosense (UK), Phase IV Engineering (US), Powercast (US), Distech Controls (US), EnOcean (Germany), DCO Systems (UK), and Everactive (US), are some of the major players in battery-free sensors market.

The Battery-free sensors market has been segmented into frequency, sensor type, industry and region. The Battery-free sensors market has been studied for North America, Europe, Asia Pacific (APAC), and the Rest of the World (RoW).

Reasons to buy the report:

Illustrative segmentation, analysis, and forecast of the market based on device type, technology, sales channel, and application, and region have been conducted to give an overall view of the battery-free sensors market.

A value chain analysis has been performed to provide in-depth insights into the battery-free sensors market ecosystem.

The report includes pricing analysis, patent analysis, ecosystem analysis as well as technology and case study analysis pertaining to battery-free sensors.

The key drivers, restraints, opportunities, and challenges pertaining to the battery-free sensors market have been detailed in this report.

Detailed information regarding the COVID-19 impact and related updates on the battery-free sensors market has been provided in the report.

The report includes a detailed competitive landscape of the market, along with key players, as well as in-depth analysis of their revenues and market share.

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*Details on Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

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