

Asia Pacific Radiation Hardened Feedback Sensors Market Forecast to 2031 - Regional Analysis - by Sensor (Resolver, Encoder, Hall Effect Sensor, Potentiometer, and Others) and Application (Space, Aerospace and Defense, Nuclear Power Plant, and Others)

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Abstracts

The Asia Pacific radiation hardened feedback sensors market was valued at US\$ 34.20 million in 2023 and is anticipated to reach US\$ 51.18 million by 2031; it is estimated to register a CAGR of 5.2% from 2023 to 2031.

Growing Space Exploration Mission Boosts Asia Pacific Radiation Hardened Feedback Sensors Market

Space exploration has always been an attractive endeavor for humankind, pushing the boundaries of knowledge and understanding of the universe. However, the harsh atmosphere of space presents numerous challenges, such as exposure to high levels of radiation. To overcome these challenges, scientists and engineers have developed radiation hardened feedback sensors that ensure the success and safety of space exploration missions. In space, cosmic rays are the primary source of radiation, which consists of highly energetic particles that cause malfunctions and disruptions in sensitive electronic components, compromising the functionality and reliability of spacecraft systems. This has apparently surged the demand for radiation hardened feedback sensors that can withstand the harsh radiation environment of space.

Growing space exploration activities across the globe have surged the demand for high-performance sensors. The organization also planned numerous space mission such as

Chang'e 7 - Launch of Chinese lunar survey mission (2026), Lucy - NASA asteroid mission makes flyby of Trojan asteroid Eurybates (2027), ExoMars Rover - Launch of ESA Mars rover, Rosalind Franklin (2028), Asteroid Apophis passes Earth at an altitude of 32,000 km (2029), Lucy - NASA asteroid mission makes third Earth flyby (2030), DAVINCI - Launch of NASA Venus flyby and atmospheric probe (2031), and NASA asteroid mission makes flyby of Trojan asteroid binary pair Patroclus-Menoetius (2033). Radiation hardened feedback sensors play a key role in collecting accurate and reliable data during space missions. They provide critical information about the conditions, performance, and status of various systems used in a spacecraft.

Asia Pacific Radiation Hardened Feedback Sensors Market Overview

The radiation hardened feedback sensors market in China is projected to expand at a significant rate in the near future due to the increasing government initiatives in semiconductor manufacturing. According to the Center for Strategic & International Studies report, China, the world's largest consumer of semiconductors, accounted for a staggering 53.7% of global demand in 2020. China domestically produces ~16% of its semiconductor requirements. China launched several initiatives, including the National Integrated Circuit Industry Investment Fund (CIIF), which is a state-backed fund supporting the development of the domestic chip industry. The semiconductor industry plays an important role in the development of advanced electronic components used in space exploration missions, satellite communication systems, and deep-space probes. Radiation hardened feedback sensors are essential for spacecrafts, and other devices requiring semiconductor technologies that can withstand the harsh radiation environment of space. Therefore, the increasing government initiatives to accelerate semiconductor manufacturing across the country are projected to benefit the radiation hardened feedback sensors market.

Asia Pacific Radiation Hardened Feedback Sensors Market Revenue and Forecast to 2031 (US\$ Million)

Asia Pacific Radiation Hardened Feedback Sensors Market Segmentation

The Asia Pacific radiation hardened feedback sensors market is categorized into sensor, application, and country.

Based on sensor, the Asia Pacific radiation hardened feedback sensors market is segmented into resolver, encoder, hall effect sensor, potentiometer, and others. The resolver segment held the largest market share in 2023.

By application, the Asia Pacific radiation hardened feedback sensors market is segmented into space, aerospace and defense, nuclear power plant, and others. The space segment held the largest market share in 2023.

By country, the Asia Pacific radiation hardened feedback sensors market is segmented into China, Japan, India, South Korea, Australia, and the Rest of Asia Pacific. China dominated the Asia Pacific radiation hardened feedback sensors market share in 2023.

Power Device Corporation, Honeywell International Inc, Magics Technologies NV, and Netzer Precision Position Sensors A.C.S. Ltd are some of the leading companies operating in the Asia Pacific radiation hardened feedback sensors market.

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