

# Global Radiation-Hardened Electronics for Space Market 2023-2029

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# **Abstracts**

Radiation-hardened electronics are designed to withstand the harsh conditions of space, where exposure to radiation can cause damage and failure to standard electronic components. The dose of radiation in space comes from many sources including cosmic rays, solar flares and the Van Allen radiation belts surrounding the Earth. Spacecraft are equipped with radiation-hardened electronic components such as microprocessors, memory, and power management devices. These components are designed to withstand the radiation environment of space and maintain their functionality over long periods of time. The global radiation-hardened electronics for space market is expected to increase by USD 0.3 billion, at a compound annual growth rate (CAGR) of 1.36% from 2023 to 2029, according to the latest edition of the Global Radiation-Hardened Electronics for Space Market Report.

The report covers market size and growth, segmentation, regional breakdowns, competitive landscape, trends and strategies for global radiation-hardened electronics for space market. It presents a quantitative analysis of the market to enable stakeholders to capitalize on the prevailing market opportunities. The report also identifies top segments for opportunities and strategies based on market trends and leading competitors' approaches.

This industry report offers market estimates and forecasts of the global market, followed by a detailed analysis of the platform, manufacturing technique, material, component, and region. The global market for radiation-hardened electronics for space can be segmented by platform: deep space probe, launch vehicle, satellite. Globally, the satellite segment made up the largest share of the radiation-hardened electronics for space market. Radiation-hardened electronics for space market is further segmented by manufacturing technique: rad-hard by software, rad-hard by process, rad-hard by



design. The rad-hard by design segment captured the largest share of the market in 2022. Based on material, the radiation-hardened electronics for space market is segmented into: silicon, gallium nitride, silicon carbide, others. According to the research, the silicon segment had the largest share in the global radiation-hardened electronics for space market. On the basis of component, the radiation-hardened electronics for space market also can be divided into: onboard computer, microprocessor and microcontroller, transmitter and receiver, power source, memory and solid state recorder, field-programmable gate array (FPGA), application-specific integrated circuit (ASIC), sensor. The onboard computer, microprocessor and microcontroller segment held the largest revenue share in 2022. Radiation-hardened electronics for space market by region is categorized into: North America, Europe, Asia-Pacific, MEA (Middle East and Africa), Latin America.

#### Market Segmentation

By platform: deep space probe, launch vehicle, satellite

By manufacturing technique: rad-hard by software, rad-hard by process, rad-hard by design

By material: silicon, gallium nitride, silicon carbide, others

By component: onboard computer, microprocessor and microcontroller, transmitter and receiver, power source, memory and solid state recorder, field-programmable gate array (FPGA), application-specific integrated circuit (ASIC), sensor

By region: North America, Europe, Asia-Pacific, MEA (Middle East and Africa), Latin America

The report also provides a detailed analysis of several leading radiation-hardened electronics for space market vendors that include BAE Systems plc, Cobham Limited, Renesas Electronics Corporation, STMicroelectronics N.V., Maxwell Technologies Inc., Infineon Technologies AG, Texas Instruments, Inc., among others. In this report, key players and their strategies are thoroughly analyzed to understand the competitive outlook of the market.

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#### Scope of the Report

To analyze and forecast the market size of the global radiation-hardened electronics for space market.

To classify and forecast the global radiation-hardened electronics for space market based on platform, manufacturing technique, material, component, region.

To identify drivers and challenges for the global radiation-hardened electronics for space market.



To examine competitive developments such as mergers & acquisitions, agreements, collaborations and partnerships, etc., in the global radiation-hardened electronics for space market.

To identify and analyze the profile of leading players operating in the global radiationhardened electronics for space market.

Why Choose This Report

Gain a reliable outlook of the global radiation-hardened electronics for space market forecasts from 2023 to 2029 across scenarios.

Identify growth segments for investment.

Stay ahead of competitors through company profiles and market data.

The market estimate for ease of analysis across scenarios in Excel format.

Strategy consulting and research support for three months.

Print authentication provided for the single-user license.



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Deep space probe Launch vehicle Satellite

#### PART 6. MARKET BREAKDOWN BY MANUFACTURING TECHNIQUE

Rad-hard by software Rad-hard by process Rad-hard by design

#### PART 7. MARKET BREAKDOWN BY MATERIAL

Silicon
Gallium nitride
Silicon carbide
Others



#### PART 8. MARKET BREAKDOWN BY COMPONENT

Onboard computer, microprocessor and microcontroller Transmitter and receiver Power source Memory and solid state recorder Field-programmable gate array (FPGA) Application-specific integrated circuit (ASIC) Sensor

#### PART 9. MARKET BREAKDOWN BY REGION

North America Europe Asia-Pacific MEA (Middle East and Africa) Latin America

#### **PART 10. KEY COMPANIES**

BAE Systems plc Cobham Limited Renesas Electronics Corporation STMicroelectronics N.V. Maxwell Technologies Inc. Infineon Technologies AG Texas Instruments, Inc.

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