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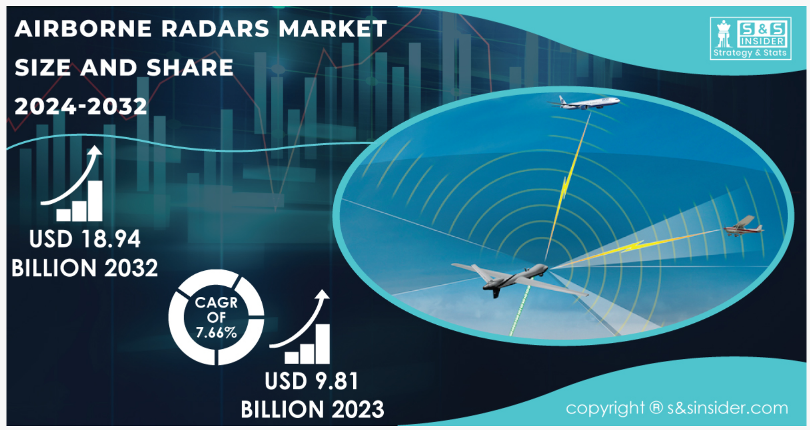
Airborne Radars Market Expected to Reach USD 18.94 Billion by 2032, Driven by Defense Modernization Initiatives

Growing Demand for Advanced Radar Systems to Enhance National Security and Technological Superiority



Airborne Radars Market Size and Growth Report

AUSTIN, TX, UNITED STATES, November 5, 2024 /EINPresswire.com/ -- Market Size & Growth Insights

As Per the S&S Insider,“The Airborne Radars Market Size valued at USD 9.81 Billion in 2023, is anticipated to reach USD 18.94 Billion by 2032, growing at a CAGR of 7.66% during the forecast period from 2024 to 2032.

Increased defense and aerospace modernization investments globally are expected to drive the growth of the airborne radars market. Governments and defense organizations are dedicating large amounts of funds to enhance airborne platforms with state-of-the-art radar systems, to uphold their technological edge and strengthen national security. The rising use of manned and unmanned planes has also increased the need for advanced airborne radars, leading to growth prospects in the market. As an illustration, India's Defence Acquisition Council recently gave the green light to purchases totaling USD 10.18 billion to enhance the nation's defense capabilities, such as obtaining modern weapons, armored vehicles, and the Air Defence Tactical Control Radar. This takeover improves both air defense systems and assists in monitoring, identifying, and following different airborne targets. Due to these advancements, there is significant potential for growth in the airborne radars market, fueled by improvements in radar technology and government efforts to enhance defense capabilities.

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SWOT Analysis of Key Players as follows:

-Lockheed Martin Corporation
-Rockwell Collins Inc.
-Saab AB
-Honeywell International Inc
-General Dynamics Corporation
-Rheinmetall AG
-BAE Systems
-Northrop Grumman Corporation
-Raytheon Technologies
-Thales Group
-Leonardo S.p.A.
-Hensoldt
-L3Harris Technologies Inc.
-Elbit Systems Ltd.
-Israel Aerospace Industries
-Indra
-Telephonics Corporation
-OPTIMARE Systems GmbH
-Echodyne Corp.
-Saab Group

Segment Analysis

By Component Type

The antennas segment led the airborne radars market, holding a 23.2% share in 2023, and is expected to maintain its dominance throughout the forecast period. The importance of phased-array antennas and electronically scanned arrays (ESAs) cannot be overstated, as they are vital for the high-performance capabilities of airborne radar systems. Phased-array antennas allow for high-frequency, ultra-wideband electronic beam scanning, enabling quick target acquisition and tracking. This technology's advantages make it an essential component in modern radar systems, enhancing their effectiveness in various military applications.

By Mode Type

The Air-To-Ground commanded the largest market share at 46% in 2023. The growing demand for multi-role aircraft is a key driver for this segment's expansion. Many modern military aircraft are equipped with multi-functional radar systems, capable of executing air-to-ground missions alongside other roles. This versatility enables military forces to maximize their aerial capabilities, ensuring they can respond efficiently in various mission scenarios.

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By Installation Type

In 2023, the retrofit segment held the biggest market share at 67%. Keeping the retrofit segment secure requires timely cybersecurity upgrades. Upgrading enables the integration of strong cybersecurity features to modern digital radar systems that are interconnected and capable of data sharing. Enhanced cybersecurity measures in upgraded systems can improve defense against cyber threats while preserving the integrity and confidentiality of critical mission data.

Regional Analysis

-North America held the largest share of 32.8% in the airborne radars market in 2023 due to its advanced defense infrastructure and ongoing modernization efforts. Companies such as Raytheon Technologies and Northrop Grumman are heavily focused on creating advanced radar technologies, showing the U.S. military's strong commitment to investing in next-generation airborne radar systems. An illustration is Raytheon's AN/APG-79 radar system which has improved the F/A-18 Super Hornet's operational abilities, demonstrating the area's dedication to top-notch defense solutions.
-The Asia-Pacific region is expected to become the fastest-growing market for airborne radars market during 2024-2032, driven by increasing defense budgets and modernization initiatives among countries like India, China, and Japan. For instance, the Defence Acquisition Council in India has authorized significant funding for advanced radar systems to enhance national security. Enterprises such as Hindustan Aeronautics Limited (HAL) are progressing in creating their own radar technologies, like the Uttam Active Electronically Scanned Array (AESA) radar, showcasing the region's increasing expertise in this sector.

Recent Developments

-June 2023-USD 91.8 million in funding from the National Science Foundation (NSF) has been awarded to a groundbreaking airborne radar created by the National Center for Atmospheric Research (NCAR) that has the potential to transform our capacity to monitor, comprehend, and forecast severe weather events.
-June 2023-The US National Science Foundation (NSF) has granted close to USD 92m to the US National Center for Atmospheric Research (NCAR) for the development of innovative airborne radar technology.
-September 2024-A fresh tail number soared above NASA's Armstrong Flight Research Center in Edwards, California. Pilots flew a Gulfstream IV (G-IV) to assess how it handles and to help pilots become acquainted with it prior to starting structural changes.

Future Trends

The airborne radars market is set to experience several significant changes in the upcoming years. It is anticipated that combining artificial intelligence (AI) and machine learning (ML) will improve radar systems' abilities in identifying and following targets, ultimately improving operational efficiency. Furthermore, progress in making radar smaller will make it easier to create lighter systems for drones, expanding the possibilities for different uses. The increasing focus on cybersecurity will also boost the need for protected radar communications, guaranteeing the security of important information. Ultimately, as countries prioritize enhancing their defense capabilities in light of changing security risks, the demand for advanced airborne radar solutions will increase.

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