

# **Global Active Phased Array Radar Market Size Study, by Platform (Land-Based, Naval, Airborne, Spaceborne), by Frequency Band (S-Band, C-Band, X-Band, Ka-Band, W-Band), by Function (Early Warning, Air Traffic Control, Anti-Ship Warfare, Ballistic Missile Defense), by Power Output (Low Power, Medium Power, High Power), by Antenna Type (Planar, Conformal, Phased Array) and Regional Forecasts 2022-2032**

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## **Abstracts**

The Global Active Phased Array Radar Market is valued at approximately USD 8.29 billion in 2023 and is anticipated to grow with a healthy growth rate of more than 9.79% over the forecast period 2024-2032. Active Phased Array Radar (APAR) is a sophisticated radar system that utilizes an array of individually controlled antennas or elements to detect and track objects such as aircraft, missiles, and ships. Each element in the array can be electronically adjusted to steer the radar beam without moving the entire antenna. This allows for rapid scanning and high precision in target detection and tracking. Unlike traditional radar systems that use a mechanical rotating antenna, APAR offers faster response times, improved resolution, and greater reliability due to its solid-state design. APAR systems are widely used in advanced military applications and air traffic control for their ability to provide real-time, accurate situational awareness. Furthermore, advancements in military technology are a primary driver of the active phased array radar market. These radars offer superior detection, tracking, and electronic warfare (EW) resistance compared to their predecessors, prompting widespread adoption by military forces worldwide. This trend is expected to continue as older radar systems are replaced with active phased array technology, driving market

growth.

The active phased array radar market is experiencing significant growth, driven by evolving military technologies and the increasing demand for enhanced defense capabilities. Growing concerns over aerial threats are prompting substantial investments in advanced radar systems. Emerging opportunities include the development of multi-function phased array radars, which combine multiple functions within a single unit, offering enhanced situational awareness and flexibility. The integration of artificial intelligence (AI) and machine learning (ML) algorithms is also expanding capabilities, enabling real-time data analysis and faster threat detection and tracking. Furthermore, the growing demand for air traffic control also propels the market. Active phased array radars provide increased range and resistance to EW, making them ideal for this application. Moreover, the increasing use of active phased array radars in commercial applications, such as weather radars and autonomous vehicles, contributes to market growth. These radars provide detailed images of precipitation and wind flows, essential for accurate weather forecasting and autonomous vehicle navigation. As the number of both amateur and commercial applications rises, the demand for these systems will follow, leading to a gradual substitution of passive phased array radars.

The key region in the Active Phased Array Radar Market includes North America, Europe, Asia Pacific, Latin America, and Middle East & Africa. In 2023, North America dominates the market in terms of revenue, driven by the presence of major defense contractors and high adoption of advanced radar systems by the U.S. military. The region's advanced defense capabilities, driven by significant investments in military technology, play a crucial role. The presence of leading defense contractors and technology companies, such as Raytheon and Northrop Grumman, ensures continuous innovation and development in APAR systems. Additionally, North America's strategic defense initiatives and programs, like the U.S. Department of Defense's focus on modernizing radar systems, further bolster market growth. Europe is expected to witness significant growth due to increasing investments in defense modernization programs and rising demand for air defense systems. The Asia Pacific region is anticipated to be the fastest-growing, driven by the growing defense budgets of countries such as China and India and increasing demand for surveillance and early warning systems.

Major market players included in this report are:

CEIEC

China Electronics Technology Group Corporation

Selex ES

BAE Systems

L3Harris Technologies

Kongsberg Gruppen

Airbus Group

Aselsan

Indra Sistemas

Lockheed Martin

Raytheon Technologies

Saab

Thales Group

Leonardo S.p.A.

Northrop Grumman

The detailed segments and sub-segment of the market are explained below:

By Platform:

Land-Based

Naval

Airborne

Spaceborne

By Frequency Band:

S-Band

C-Band

X-Band

Ka-Band

W-Band

By Function:

Early Warning

Air Traffic Control

Anti-Ship Warfare

Ballistic Missile Defense

By Power Output:

Low Power

Medium Power

High Power

By Antenna Type:

Planar

Conformal

Phased Array

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Rest of Latin America

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

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