

Global Surface Radars Market Size Study, By Platform (Critical Infrastructure, Vehicle-Mounted, Shipborne, Unmanned Surface Vehicles), By Application (Surveillance, Air-Defense, Perimeter Security, Battlefield ISR), By Frequency Band, By Dimension, and Regional Forecasts 2022-2032

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Abstracts

The global surface radars market is valued at approximately USD 16.38 billion in 2023 and is anticipated to grow at a CAGR of 5.4% over the forecast period 2024-2032, reaching USD 26.30 billion by 2032. The volume of surface radar units is expected to increase from 4,690 units in 2024 to 6,113 units by 2032. The market is experiencing robust growth due to escalating border conflicts, security threats, and increasing investments in air defense, maritime surveillance, and critical infrastructure protection.

Governments worldwide are heavily investing in military modernization programs to improve threat detection, tracking, and reconnaissance capabilities. The integration of Advanced Electronically Scanned Array (AESA) radars, AI-powered detection systems, and multi-domain integration is revolutionizing military and homeland security operations. Moreover, increasing demand for counter-drone systems, battlefield ISR, and perimeter security solutions is driving the adoption of advanced surface radar technologies.

Technological advancements are further propelling market expansion. Innovations in stealth detection radars, quantum radar technology, and electronic warfare capabilities are transforming the effectiveness of radar systems against stealth aircraft, hypersonic missiles, and UAV threats. Major defense contractors and radar manufacturers are making substantial R&D investments to develop next-generation radar solutions to gain

a competitive advantage in the global defense industry.

However, high costs of advanced radar systems, integration complexities, and regulatory challenges could act as restraints on market growth. Despite these challenges, ongoing geopolitical tensions, rising cross-border security concerns, and smart city initiatives are expected to drive sustained demand for surface radars across military and civilian applications.

The key regions considered for the global surface radars market study include North America, Europe, Asia Pacific, Latin America, and the Middle East & Africa.

Asia Pacific is expected to dominate the market by 2024, with China, India, Japan, and South Korea leading in military modernization and regional defense spending. The growing need for airspace monitoring, maritime security, and missile defense capabilities is fueling market expansion.

North America remains a major contributor, driven by the presence of key defense contractors, increasing demand for homeland security solutions, and the integration of AI-driven radar technologies in military operations.

Europe is witnessing significant growth, with countries like the UK, Germany, and France investing in advanced radar systems for air defense, border security, and naval modernization.

The Middle East is experiencing increased demand for high-performance radar systems due to geopolitical conflicts, growing threats from UAVs and missile attacks, and military collaborations with Western defense manufacturers.

Major Market Players Included in This Report:

Lockheed Martin Corporation (US)

RTX (US)

BAE Systems (UK)

Northrop Grumman (US)

Israel Aerospace Industries (Israel)

Thales (France)

Saab AB (Sweden)

Elbit Systems Ltd. (Israel)

Aselsan A.S (Turkey)

Bharat Electronics Limited (BEL) (India)

Leonardo S.p.A. (Italy)

L3Harris Technologies, Inc. (US)

Indra (Spain)

Teledyne FLIR LLC (US)

Hensoldt (Germany)

The Detailed Segments and Sub-Segments of the Market are Explained Below:

By Platform

Critical Infrastructure Protection Radars

Vehicle-Mounted Radars

Shipborne Radars

Unmanned Surface Vehicles (USVs) Radars

By Application

Surveillance & Reconnaissance

Air Defense Systems

Perimeter Security

Battlefield ISR (Intelligence, Surveillance & Reconnaissance)

Counter-Drone Operations

Coastal & Maritime Surveillance

By Frequency Band

L-Band

S-Band

C-Band

X-Band

Ku-Band

Ka-Band

Multi-Band & Hybrid Systems

By Dimension

2D Radars

3D Radars

4D Radars (Advanced Tracking Systems)

By Range

Short-Range Radars (Up to 50km)

Medium-Range Radars (50km - 200km)

Long-Range Radars (Above 200km)

By Region

North America

U.S.

Canada

Mexico

Europe

UK

Germany

France

Italy

Spain

Asia Pacific

China

Japan

India

South Korea

Australia

Latin America

Brazil

Argentina

Middle East & Africa

Saudi Arabia

UAE

South Africa

Years Considered for the Study:

Historical Year – 2022

Base Year – 2023

Forecast Period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 Years (2022-2032)

Annualized Revenue and Regional-Level Analysis for Each Market Segment

Competitive Landscape and Market Share of Key Players

Analysis of Key Business Strategies and Recommendations for Future Market

Approach

Supply Chain and Demand-Side Analysis

Emerging Technologies and Innovations in Surface Radar Systems

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