

Military Radar Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

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Report description:

The Global Military Radar Market is poised for robust growth, reaching USD 14.8 billion in 2024 and projected to expand at a CAGR of 5.6% between 2025 and 2034. This surge is driven by escalating defense budgets worldwide as nations respond to mounting security concerns and geopolitical tensions. Governments are prioritizing investments in advanced radar systems to modernize their defense capabilities, enhance national security, and counter emerging threats. The growing adoption of next-generation radar technologies, including phased array and active electronically scanned array (AESA) systems, underscores the emphasis on improving detection accuracy, tracking precision, and situational awareness. Enhanced functionality, such as long-range detection and rapid threat identification, positions radar technology as a cornerstone of modern military strategies. In addition, collaborations between defense contractors and governments are spurring innovation, propelling the development of cutting-edge radar systems tailored to evolving combat and surveillance needs.

The market is segmented by components, including antennas, transmitters, receivers, power amplifiers, stabilization systems, duplexers, digital signal processors, graphical user interfaces, and others. Antennas dominate this segment, holding a 24.7% market share in 2024. Their critical role in radar functionality stems from their ability to convert electrical signals into electromagnetic waves and vice versa. This capability determines radar performance in detection, tracking, and targeting, making antennas essential for achieving superior range, accuracy, and resolution. Innovations in antenna technology, such as lightweight materials and improved beamforming techniques, are further enhancing their efficiency and reliability, cementing their importance in the overall radar ecosystem.

The market is also categorized by platform into ground-based, naval, airborne, and space systems. Among these, the airborne segment is emerging as the fastest-growing category, projected to grow at a CAGR of 6.2% during the forecast period. Airborne radars deployed on fighter jets, surveillance aircraft, and UAVs play a pivotal role in enhancing reconnaissance and combat capabilities. These systems excel in long-range detection and tracking, enabling militaries to counter advanced threats, including stealth aircraft and missile systems. The integration of phased array and AESA technologies further elevates their capabilities by

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offering faster scanning speeds, wider frequency coverage, and higher resolution, which significantly improve operational efficiency and situational awareness in complex battle scenarios.

North America is set to dominate the global military radar market, expected to generate USD 10 billion by 2034. This leadership, spearheaded by the United States, reflects substantial defense budgets and a strategic focus on technological advancements. The region prioritizes investments in modern radar systems for surveillance, early warning, and combat management. Emerging technologies like AI integration are enhancing radar capabilities, making them more adaptive and effective for sophisticated military operations. Canada also plays a vital role, contributing through advanced radar development and international collaborations aimed at fortifying defense infrastructure, further driving regional market growth.

Table of Contents:

Report Content

Chapter 1 Methodology & Scope

1.1 Market scope & definitions

1.2 Base estimates & calculations

1.3 Forecast calculations

1.4 Data sources

1.4.1 Primary

1.4.2 Secondary

1.4.2.1 Paid sources

1.4.2.2 Public sources

Chapter 2 Executive Summary

2.1 Industry synopsis, 2021-2034

Chapter 3 Industry Insights

3.1 Industry ecosystem analysis

3.1.1 Factor affecting the value chain

3.1.2 Profit margin analysis

3.1.3 Disruptions

3.1.4 Future outlook

3.1.5 Manufacturers

3.1.6 Distributors

3.2 Supplier landscape

3.3 Profit margin analysis

3.4 Key news & initiatives

3.5 Regulatory landscape

3.6 Impact forces

3.6.1 Growth drivers

3.6.1.1 Increasing defense budgets and modernization efforts

3.6.1.2 Advancements in radar technology and capabilities

3.6.1.3 Rising demand for advanced surveillance systems

3.6.1.4 Enhanced threat detection and countermeasure needs

3.6.1.5 Integration with AI and autonomous platforms

3.6.2 Industry pitfalls & challenges

3.6.2.1 High cost of advanced radar systems

3.6.2.2 Regulatory and export control restrictions

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- 3.7 Growth potential analysis
- 3.8 Porter's analysis
- 3.9 PESTEL analysis
- Chapter 4 Competitive Landscape, 2024
 - 4.1 Introduction
 - 4.2 Company market share analysis
 - 4.3 Competitive positioning matrix
 - 4.4 Strategic outlook matrix
- Chapter 5 Market Estimates & Forecast, By Component, 2021-2034 (USD Million)
 - 5.1 Key trends
 - 5.2 Antennas
 - 5.2.1 Parabolic reflector antennas
 - 5.2.2 Slotted waveguide antennas
 - 5.2.3 Phased array antennas
 - 5.2.4 Multiple Input-Multiple output antennas
 - 5.2.5 Active scanned array antennas
 - 5.2.6 Passive scanned array antennas
 - 5.3 Transmitters
 - 5.3.1 Microwave Tube-Based Transmitters
 - 5.3.2 Solid-State electronic transmitters
 - 5.4 Receivers
 - 5.4.1 Analog receivers
 - 5.4.2 Digital receivers
 - 5.5 Power amplifiers
 - 5.5.1 Traveling wave tube amplifiers
 - 5.5.1.1 Solid-State power amplifiers
 - 5.5.1.1.1 Gallium arsenide
 - 5.5.1.1.2 Gallium nitride
 - 5.5.1.1.3 Silicon carbide
 - 5.6 Duplexers
 - 5.6.1 Branch-Type duplexers
 - 5.6.2 Balanced-Type duplexers
 - 5.6.3 Circulator duplexers
 - 5.7 Digital signal processors
 - 5.8 Stabilization systems
 - 5.9 Graphical user interfaces
 - 5.10 Others
- Chapter 6 Market Estimates & Forecast, By Waveform, 2021-2034 (USD Million)
 - 6.1 Key trends
 - 6.2 Frequency-Modulated continuous wave
 - 6.3 Doppler
 - 6.3.1 Conventional doppler
 - 6.3.2 Pulse-Doppler
- Chapter 7 Market Estimates & Forecast, By Technology, 2021-2034 (USD Million)
 - 7.1 Key trends
 - 7.2 Software-Defined radars
 - 7.3 Conventional radars

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7.4 Quantum radars

Chapter 8 Market Estimates & Forecast, By Range, 2021-2034 (USD Million)

8.1 Key trends

8.2 Short (<50 Kms)

8.3 Medium (50-200 Kms)

8.4 Long (>200 Kms)

Chapter 9 Market Estimates & Forecast, By Platform, 2021-2034 (USD Million)

9.1 Key trends

9.2 Ground-Based

9.2.1 Fixed radars

9.2.2 Vehicle-Based radars

9.2.3 Man-Portable radars

9.3 Naval

9.3.1 Vessel-Based radars

9.3.2 Coastal radars

9.3.3 USV-Mounted radars

9.4 Airborne

9.4.1 Manned aircraft radars

9.4.2 UAV-Mounted radars

9.4.3 Aerostats-Based radar

9.5 Space

9.5.1 Satellites

9.5.2 Spacecraft

Chapter 10 Market Estimates & Forecast, By Application, 2021-2034 (USD Million)

10.1 Key trends

10.2 Airspace Monitoring & Traffic management

10.3 Air & Missile defense

10.4 Weapon guidance

10.5 Ground Surveillance & Intruder Detection

10.6 Vessel Traffic Security & Surveillance

10.7 Airborne mapping

10.8 Navigation

10.9 Mine Detection & Underground mapping

10.10 Ground Force Protection & Counter-Mapping

10.11 Weather monitoring

10.12 Ground penetration

10.13 Maritime Patrolling, Search, & Rescue

10.14 Border security

10.15 Space situational awareness

10.16 Others

Chapter 11 Market Estimates & Forecast, By Region, 2021-2034 (USD Million)

11.1 Key trends

11.2 North America

11.2.1 U.S.

11.2.2 Canada

11.3 Europe

11.3.1 UK

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- 11.3.2 Germany
- 11.3.3 France
- 11.3.4 Italy
- 11.3.5 Spain
- 11.3.6 Russia
- 11.4 Asia Pacific
 - 11.4.1 China
 - 11.4.2 India
 - 11.4.3 Japan
 - 11.4.4 South Korea
 - 11.4.5 Australia
- 11.5 Latin America
 - 11.5.1 Brazil
 - 11.5.2 Mexico
- 11.6 MEA
 - 11.6.1 South Africa
 - 11.6.2 Saudi Arabia
 - 11.6.3 UAE
- Chapter 12 Company Profiles
 - 12.1 Aselsan A.S.
 - 12.2 BAE Systems plc
 - 12.3 Boeing Company
 - 12.4 Cobham plc
 - 12.5 FLIR Systems, Inc.
 - 12.6 General Dynamics Corporation
 - 12.7 Hensoldt AG
 - 12.8 Honeywell International
 - 12.9 Israel Aerospace Industries
 - 12.10 L3Harris Technologies, Inc.
 - 12.11 Leonardo S.P.A.
 - 12.12 Lockheed Martin Corporation
 - 12.13 Northrop Grumman Corporation
 - 12.14 Raytheon Technologies Corporation
 - 12.15 Rheinmetall AG
 - 12.16 Saab AB
 - 12.17 Thales Group

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