

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

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Abstracts

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 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.

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