

Radar Market Advances with AI, Defense Innovation, and Demand for Autonomous Vehicle & Weather Tech | DataMIntelligence

Radar market accelerates as AI, defense spending, and autonomous systems drive innovations in surveillance, weather, and mobility technologies.

SOUTH DAKOTA, SD, UNITED STATES, July 28, 2025 /EINPresswire.com/ -- [Radar Market](#) growth is fueled by rising defense expenditures, the proliferation of autonomous vehicles, increased aviation traffic, and expanding use cases in weather monitoring and maritime navigation. The technology plays a crucial role in detecting, tracking, and imaging objects through

radio wave-based sensing, with applications spanning air traffic control, border security, automotive safety, space exploration, meteorology, and critical infrastructure surveillance. Technological advancements in phased array systems, 3D imaging, synthetic aperture radar (SAR), and AI-powered signal processing are driving radar performance to new heights, meeting the requirements of both civil and military operations.

“

Radar Market accelerates as AI, defense spending, and autonomous systems drive innovations in surveillance, weather, and mobility technologies.”

DataM Intelligence

Radar market reached US\$ 24,012.56 million in 2022 and is projected to grow significantly to reach US\$ 41,026.41 million by 2031, expanding at a CAGR of 5.8% during the forecast period (2024–2031). The rapid shift towards intelligent transport systems, autonomous defense platforms, and precision agriculture is further boosting radar deployments across geographies. Emerging market players, together with established defense giants, are

accelerating the pace of innovation, integrating radar solutions into drones, vehicles, satellites, and coastal surveillance systems.



Download Latest Sample Report : <https://www.datamintelligence.com/download-sample/radar-market>

Radar Market Recent Key Developments and Technological Advancements :-

July 2025 – Northrop Grumman Corporation unveiled its next-generation multifunction radar (MFR) system with AI-based clutter rejection for better target discrimination in dense environments, optimized for naval destroyers and border surveillance.

June 2025 – Raytheon Technologies Corporation introduced a compact, high-resolution radar module for drones and small UAVs, enhancing reconnaissance and ISR (Intelligence, Surveillance, and Reconnaissance) missions.

May 2025 – Thales Group demonstrated its new digital air surveillance radar in Paris, capable of 3D target mapping with a 30% extended range over traditional systems. The radar is designed to integrate seamlessly with NATO's IAMD networks.

April 2025 – Hensoldt AG deployed its radar-augmented imaging sensor on Germany's weather satellites, allowing the collection of layered meteorological data to improve early warning systems for extreme weather.

Radar Market Acquisitions and Mergers :-

In Q2 2025, Saab AB acquired a Scandinavian startup specializing in short-range radar for autonomous vehicles, aiming to expand its footprint in the automotive and drone radar segments.

Lockheed Martin Corporation finalized a partnership with a Japanese defense electronics firm to co-develop spaceborne synthetic aperture radar (SAR) systems for dual-use applications in reconnaissance and disaster monitoring.

L3Harris Technologies Inc. merged its radar division with SRC, Inc. to combine complementary capabilities in electronic warfare and counter-UAS (unmanned aerial system) operations, targeting growth in tactical and homeland security markets.

Radar Market Opportunities :-

The radar market is ripe with opportunities across both defense and civilian domains. The increasing global demand for border and critical infrastructure security, along with growing investment in autonomous systems, opens avenues for compact, low-power, and high-resolution radar technologies.

The rapid expansion of urban air mobility (UAM) and eVTOL aircraft presents a unique growth

vector, as these platforms require lightweight and real-time radar systems for airspace navigation and collision avoidance. Additionally, space-based radar constellations for Earth observation, climate tracking, and national security are gaining attention from government agencies and private satellite operators.

Developing regions in Asia-Pacific and Latin America are accelerating radar procurement for weather monitoring, air defense modernization, and smart farming, presenting long-term commercial and public sector contracts.

Market Segmentation

By Type:

- Pulse Radar
- Continuous Wave (CW) Radar
- Frequency Modulated Continuous Wave (FMCW) Radar
- Doppler Radar
- Synthetic Aperture Radar (SAR)
- Weather Surveillance Radar

By Application:

- Military & Defense
 - Air Defense
 - Ground Surveillance
 - Naval Monitoring
- Automotive
 - ADAS & Autonomous Vehicles
- Aviation
 - Air Traffic Control
- Weather Forecasting
- Maritime
- Space-Based Systems
- Industrial & Infrastructure
- Smart Cities
- Disaster Management

By Platform:

- Ground-Based
- Airborne
- Spaceborne
- Naval

By Frequency Band:

L-Band
S-Band
C-Band
X-Band
Ku-Band
Ka-Band

By Region:

North America
Europe
Asia-Pacific
Latin America
Middle East & Africa

Radar Market Key Players are :-

The radar industry is shaped by global innovators and defense leaders, including:

ASELSAN A.S. – Known for tactical ground-based radar systems in the Middle East and Central Asia.

Saab AB – Offers naval and airborne radar platforms optimized for real-time situational awareness.

Rockwell Collins – Specializes in radar avionics and integrated surveillance solutions.

Northrop Grumman Corporation – Leads in defense radars, including MFR and ballistic missile tracking.

Thales Group – Strong portfolio in civil aviation, border control, and NATO-compliant radars.

Raytheon Technologies Corporation – Delivers cutting-edge radar for aircraft, missile defense, and space.

Hensoldt AG – Known for multi-domain surveillance, weather radars, and signal intelligence systems.

L3Harris Technologies Inc. – Focuses on tactical and homeland security radar for government contracts.

Lockheed Martin Corporation – Key player in missile defense and next-gen spaceborne radar.

SRC, Inc. – Renowned for counter-UAS and electronic warfare radar development.

Latest News – USA :-

In July 2025, the U.S. Department of Defense awarded Raytheon Technologies a \$620 million contract to develop next-generation radar systems for multi-theater air and missile defense, with delivery starting 2027.

Northrop Grumman began field trials of its ultra-long-range ground surveillance radar for border security in Texas, incorporating AI analytics for real-time threat classification.

In May 2025, Lockheed Martin successfully launched its radar-equipped small satellite under the Pentagon's low-Earth orbit defense constellation to provide near-instant ISR capabilities.

Latest News – Japan :-

In July 2025, Japan's Ministry of Defense partnered with Thales Group to pilot an AI-assisted air surveillance radar system in Okinawa, aimed at tracking hypersonic threats in the Indo-Pacific region.

Mitsubishi Electric launched its first spaceborne SAR satellite co-developed with Lockheed Martin in June 2025, supporting real-time disaster monitoring and military reconnaissance.

In April 2025, Japan's meteorological agency began using Hensoldt's phased-array radar for more accurate typhoon and seismic event prediction, improving early-warning protocols across coastal cities.

Conclusion :-

The radar market is evolving rapidly as innovation meets strategic need. With expanding applications in defense, automotive safety, aerospace, and environmental monitoring, radar systems are more indispensable than ever. As governments and commercial entities continue to prioritize situational awareness, early detection, and autonomous systems, radar technology will remain central to next-generation solutions. The future of the radar market lies in multi-functional, AI-integrated, and miniaturized platforms capable of delivering high performance under increasingly complex operational scenarios.

Unlock 360° Market Intelligence with DataM Subscription Services:

<https://www.datamintelligence.com/reports-subscription>

Power your decisions with real-time competitor tracking, strategic forecasts, and global investment insights all in one place.

- Competitive Landscape
- Sustainability Impact Analysis
- KOL / Stakeholder Insights
- Unmet Needs & Positioning, Pricing & Market Access Snapshots
- Market Volatility & Emerging Risks Analysis
- Quarterly Industry Report Updated
- Live Market & Pricing Trends
- Import-Export Data Monitoring
- Consumer Behavior & Demand Analysis
- Packaging Innovation Insights

Have a look at our Subscription Dashboard:

<https://www.youtube.com/watch?v=x5oEiqEqTWg>

Browse more related reports :

[Anti Drone Market](#)

[Space Commerce Market](#)

Sai Kumar

DataM Intelligence 4market Research LLP

+1 877-441-4866

[email us here](#)

Visit us on social media:

[LinkedIn](#)

[X](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/834684418>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.