

Multiple Input, Multiple Output (MIMO) Radar Antenna Market Size, Share & Trends Analysis Report By Product

The Business Research Company's Multiple Input, Multiple Output (MIMO) Radar Antenna Global Market Report 2025 - Market Size, Trends, And Forecast 2025-2034

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What Is The Multiple Input, Multiple Output (MIMO) Radar Antenna Market Size And Growth? In recent years, [the market for multiple-input, multiple-output \(MIMO\) radar antennas](#) has seen an enormous expansion. After starting at \$1.00 billion in 2024, it is projected to enhance to \$1.12 billion in 2025, a compound annual growth rate (CAGR) of 12.7%. This historical growth can be attributed to several factors, including the increased utilization of phased array radar systems, a surge in the acceptance of defence electronic warfare systems, the escalating requirement for weather tracking and remote sensing, growth in the aerospace and aviation industry, and rising cross-border security threats.

[The market size of the multiple-input, multiple-output \(MIMO\) radar antenna](#) is anticipated to experience a swift expansion in the coming years, anticipated to reach \$1.79 billion in 2029, with a compound annual growth rate (CAGR) of 12.3%. This growth through the forecasted period can be ascribed to factors such as the merger with autonomous vehicle ecosystems, escalating demand for space exploration and satellite monitoring, development of intelligent transportation infrastructures, the rising use of drone swarm technologies, and a growing attention towards cognitive radar and AI-influenced signal processing. The imminent trends expected during the forecast period encapsulate merging with quantum sensing technologies, embracing digital twin simulations for radar systems, the rise of cloud-borne radar data processing, the fusion of radar with lidar and optical sensors, plus the concepts of bio-inspired antenna designs.

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<https://www.thebusinessresearchcompany.com/sample.aspx?id=28729&type=smp>

What Are The Current Leading Growth Drivers For Multiple Input, Multiple Output (MIMO) Radar

Antenna Market?

The expanding implementation of 5G networks is projected to fuel the multiple input, multiple output (MIMO) radar antenna market's growth. 5G networks, as fifth-generation wireless technology systems, offer improved mobile connectivity with notably higher data speeds, reduced latency, and increased capacity compared to earlier network generations. The swift proliferation of 5G networks is propelled by the rising demand for high-velocity wireless connectivity in various sectors, including smart cities, autonomous vehicles, and IoT applications. These require advanced infrastructure capable of supporting hefty data transmission and ultra-reliable low-latency communications. The setting up of 5G networks intensifies the demand for MIMO radar antennas, as these systems necessitate advanced antenna arrays for enabling beamforming capabilities and spatial multiplexing critical for 5G's sophisticated performance characteristics. For example, Ericsson, a telecommunications company based in Sweden, predicted in May 2025 that 5G mobile subscriptions are anticipated to expand from 1.62 billion in 2023 to 6.29 billion by 2030. Consequently, the rising implementation of 5G networks is stimulating the [growth of multiple input, multiple output \(MIMO\) radar antenna market](#).

Which Companies Are Currently Leading In The Multiple Input, Multiple Output (MIMO) Radar Antenna Market?

Major players in the Multiple Input, Multiple Output (MIMO) Radar Antenna Global Market Report 2025 include:

- Huawei Technologies Co Ltd
- RTX Corporation
- Lockheed Martin Corporation
- Qualcomm Incorporated
- Ericsson
- Nokia Corporation
- Keysight Technologies
- Skyworks Solutions Inc
- Qorvo Inc
- Analog Devices Inc

What Are The Future Trends Of The Multiple Input, Multiple Output (MIMO) Radar Antenna Market?

Major firms engaged in the multiple-input, multiple-output (MIMO) radar antenna market are prioritizing the creation of advanced products such as uncontrolled airspace monitoring radar systems, in an effort to enhance situational awareness in both the defense and commercial sectors. One of these advanced products is capable of tracking and identifying planes and drones in zones that lack a formal air traffic control system, thereby improving situational awareness and averting unsanctioned airspace infiltrations. For instance, in September 2024, HENSOLDT, a German company that specializes in the manufacture of sensor technologies for defense and security-related applications, innovated a compact, interference-immune MIMO radar system for uncontrolled airspace monitoring, especially of city areas. This was a part of the MIMO Air project, which was helmed by HENSOLDT alongside several partners and underwritten

by the Federal Ministry of Economics and Climate Protection (BMWK). This radar system, confirmed via flight tests involving drones and a research helicopter done by the German Aerospace Center (DLR) in August 2024, consistently detects small drones and aircraft in uncontrolled airspace. It also assists in navigation, obstacle avoidance, and landing using AI to adjust to environmental factors.

How Is The Multiple Input, Multiple Output (MIMO) Radar Antenna Market Segmented?

The multiple-input, multiple-output (MIMO) radar antenna market covered in this report is segmented as

- 1) By Type: Active Multiple Input, Multiple Output (MIMO), Passive Multiple Input, Multiple Output (MIMO), Hybrid Multiple Input, Multiple Output (MIMO)
- 2) By Frequency Band: L-Band, S-Band, C-Band, X-Band, Ku-Band, Ka-Band, Other Frequency Bands
- 3) By Application: Automotive, Aerospace And Defense, Industrial, Security And Surveillance, Other Applications
- 4) By End-User: Military, Commercial, Research, Other End-Users

Subsegments:

- 1) By Active Multiple Input, Multiple Output (MIMO): Active Electronically Scanned Array (AESA) Radar, Phased Array Radar, Digital Beamforming Radar, Solid-State Radar
- 2) By Passive Multiple Input, Multiple Output (MIMO): Passive Electronically Scanned Array (PESA) Radar, Reflector Antenna Systems, Passive Beamforming Antenna Systems, Metamaterial-Based Antennas
- 3) By Hybrid Multiple Input, Multiple Output (MIMO): Hybrid Active-Passive Antenna Systems, Reconfigurable Intelligent Surface (RIS) Enabled Antennas, Adaptive Beamforming Hybrid Systems, Multi-Band Hybrid Radar Antennas

View the full multiple input, multiple output (mimo) radar antenna market report:

<https://www.thebusinessresearchcompany.com/report/multiple-input-multiple-output-mimo-radar-antenna-global-market-report>

Which Is The Dominating Region For The Multiple Input, Multiple Output (MIMO) Radar Antenna Market?

The most significant region in the Multiple Input, Multiple Output (MIMO) Radar Antenna Global Market Report 2025 was North America for the year considered. Yet, the expected fastest growth is projected in Asia-Pacific. The regions detailed in the report include Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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