Anti Jamming Equipment - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 146 pages | Mordor Intelligence

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Report description:

The Anti Jamming Equipment Market size is estimated at USD 5.77 billion in 2025, and is expected to reach USD 9.01 billion by 2030, at a CAGR of 9.31% during the forecast period (2025-2030).

Anti-jamming solutions are essential across a range of applications. Unmanned vehicles, automated robotic platforms, time synchronization systems, and various military vehicles face threats due to the challenges in receiving GNSS signals. The swift evolution of jammers, compounded by industrial noise, has heightened the demand for interference immunity to ensure reliable operations. This increased demand has led to significant advancements in anti-jamming technologies, which are now more sophisticated and effective than ever.

Key Highlights
- Jamming can disrupt wireless transmissions, leading to denial of service (DOS), insertion of unwanted messages, original content corruption, and blocking critical messages, all while interfering with radio signals. The impact of jamming on communication systems can be severe, causing significant operational disruptions and potential security breaches. Therefore, developing and deploying robust anti-jamming solutions are crucial for maintaining the integrity and reliability of wireless communication networks.
- GPS technology is developing, focusing on miniaturization, weight reduction, and heightened accuracy. GPS satellites act as precise timekeepers, relaying both time and orbital data. A receiver pinpoints its Earth location by analyzing signals from at least three satellites.
- The increasing deployment of General Packet Radio Services (GPRS) infrastructure drives the demand for anti-jamming equipment, particularly in sectors reliant on secure and reliable communications. GPRS enhances data transfer capabilities for mobile networks, facilitating machine-to-machine (M2M) communication, IoT devices, and mobile internet access. As more devices

connect, the potential for interference and jamming increases, particularly in critical applications like defense, transportation, and emergency services.
- The demand for fully autonomous drones is rising across industries, from agriculture and construction to search and rescue operations. These systems rely on continuous communication with GPS and ground stations. Jamming could cause a loss of control, making anti-jamming technology vital for safety and operational success. Further, the market is expected to benefit from the increased demand for unmanned airborne vehicles and systems and the development of low-cost GPS anti-jamming solutions during the forecast period.
- The complexity of manufacturing anti-jamming equipment poses several challenges that can restrain the market's growth. This complexity arises from the need to meet high performance, cost-effectiveness, and adaptability standards, especially in military, defense, and commercial applications.

Anti Jamming Equipment Market Trends

Defense Holds Major Share

- The growth of GPS technology in military applications is driven by the need for precision, real-time situational awareness, secure communication, the increasing use of autonomous systems, and the constant threat of electronic warfare. As military technology evolves, GPS remains a critical enabler of modern defense operations, fueling further demand for advanced GPS systems.
- Ongoing conflicts have increased the demand for anti-jamming systems due to the growing use of unmanned systems for casualty evacuations. These systems are crucial for military operations, making it essential to protect them from interference. Anti-jamming technologies mitigate jamming risks, ensuring the reliability of unmanned systems in casualty evacuations.
- Substantial growth opportunities arise from the high demand for durability and resistance to enemy technology in military applications. This demand primarily focuses on unmanned aerial vehicles (UAVs) for surveillance, reconnaissance, and combat operations. Additionally, there is a need for munitions, guided systems, and cost-effective GPS anti-jamming solutions.
- The use of autonomous military systems like drones, unmanned ground vehicles, and robotic systems is increasing. These systems depend heavily on GPS for navigation and mission execution. In contested environments, jamming or spoofing GPS signals could disable or mislead these systems. Anti-jamming equipment protects these autonomous platforms and ensures their operational effectiveness. According to IFR, spending on military robotics is anticipated to rise by USD 16.5 billion by 2025.
- Many countries are modernizing their military forces and integrating advanced GPS technologies for better operational capabilities. As part of these modernization programs, governments invest heavily in anti-jamming solutions to protect GPS-reliant systems such as missile guidance systems, command and control (C2) infrastructure, surveillance, and intelligence-gathering platforms. This increasing investment is driving the growth of the anti-jamming market in the defense sector.

Asia Pacific to Register Major Growth

- China's swift economic growth and integration into the global landscape have deepened its reliance on dependable navigation and communication systems. The transportation and logistics sectors, heavily dependent on GPS and satellite-based navigation, utilize these technologies for route optimization, cargo tracking, and ensuring the smooth transit of goods and individuals. Thus, both public and private sectors are prioritizing investments in anti-jamming solutions.
- In February 2024, Chinese scientists unveiled electronic warfare (EW) equipment capable of swiftly detecting, decoding, and neutralizing enemy signals. It empowers the People's Liberation Army (PLA) to effortlessly monitor signals within the gigahertz range, including frequencies utilized by amateur radio. Moreover, the equipment boasts signal processing chips and AI integration, bolstering China's capacity to counteract jamming and ensure uninterrupted communication.

- The increase in the defense budget has prompted the government to enhance its defense capabilities and to implement additional anti-jamming technology to bolster national security. In addition to defense advancements, Japan's aviation sector is experiencing notable expansion. This industry necessitates the development of potential jammers to disrupt the GNSS signals of aircraft, which is becoming essential for navigation, targeting, and reconnaissance operations where dependability is crucial.
- The anti-jamming equipment market presents significant growth opportunities, driven by heightened investments in research and development and an increasing demand for anti-jamming solutions across diverse sectors. For instance, in December 2023, Israel Aerospace Industries (IAI) signed a contract with Korea Aerospace Industries (KAI) to provide its ADA system for the Light Armed Helicopter (LAH) program. As part of this agreement, IAI will provide its ADA system, a GPS Anti-Jamming solution designed to mitigate interference from multiple jammers from various directions.

Anti-Jamming Equipment Industry Overview

The market is dominated by major players like RTX Corporation, Chelton Limited, L3Harris Technologies Inc., BAE Systems PLC, etc., that offer superior technology and foster their growth through their existing distribution channels. These technology leaders are investing in product innovation and mergers and acquisition activities to maintain a competitive edge in the market.

Few major vendors command a significant market share, and effective government regulations associated with the technology have led to the moderate consolidation of the anti-jamming equipment market in the last few years.

However, the emergence of start-ups and new players in the market and growing government interest in commercial solutions, combined with increasing investments in new players, has increased the competition in the market.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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