

5G in Defense Market Scope, Share, Key Driver, Key Players, Analysis and Forecast

Surge in autonomous defense vehicles, robots & drones, supportive government initiatives toward 5G development & increase in demand for surveillance activities.

WILMINGTON, DE, UNITED STATES, June 20, 2025 /EINPresswire.com/ -- The global [5G in defense market size](#) was pegged at \$551 million in 2020 and is estimated to hit \$76.01 billion by 2030, registering a CAGR of 67.7% from 2021 to 2030.



The global 5G in defense market is gaining momentum due to the growing use of autonomous defense vehicles, drones, and robotics; increased government support for 5G development; and a rising demand for advanced surveillance operations. Despite these drivers, concerns over cybersecurity vulnerabilities in 5G networks and the high costs associated with infrastructure deployment pose challenges to market expansion. Nevertheless, ongoing technological advancements and efforts to modernize military infrastructure are expected to unlock significant growth opportunities in the years ahead.

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In defense and security operations, 5G networks are set to transform Intelligence, Surveillance, and Reconnaissance (ISR) systems, streamline logistics, and support next-generation command-and-control (C2) capabilities. The integration of 5G technology will also enable greater adoption of augmented and virtual reality (AR/VR), dynamic spectrum management, distributed command structures, and smart military warehousing solutions. With speeds reaching up to 10 gigabits per second approximately 100 times faster than 4G—and significantly lower latency, 5G will allow near-instantaneous communication through edge computing. This ensures data processing happens close to sensors and effectors, drastically reducing delay and improving real-time responsiveness.

Additionally, the integration of emerging technologies such as artificial intelligence (AI), machine learning, and mobile ad hoc networks (MANETs) will further enhance defense capabilities. High-speed 5G networks especially those operating in the millimeter-wave spectrum will support the rapid functioning of high-performance data processors, including field-programmable gate arrays (FPGAs), general-purpose GPUs (GPGUs), and other specialized computing systems. These capabilities enable seamless communication with strategic cloud infrastructure, strengthening the military's digital transformation and operational readiness.

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The global 5G in defense market is analyzed across communication infrastructure, core network technology, network type, chipset, platform, and region. On the basis of communication infrastructure, the small cell segment contributed to more than two-fifths of the total market share in 2020, and is projected to lead the trail during the forecast period. At the same time, the radio access network segment would portray the fastest CAGR of 70.40% from 2021 to 2030.

On the basis of region, Asia-Pacific held the major share in 2020, generating nearly two-fifths of the global market. The segment is also projected to exhibit the fastest CAGR of 72.2% from 2021 to 2030. The other regions analyzed through the report include North America, Europe, and LAMEA.

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Asia-Pacific dominates the market in terms of revenue, followed by North America, Europe, and LAMEA. China dominated the global 5G in defense market share in 2020, and is expected to grow at a significant rate during the forecast period, due to increase in investments by the government to accelerate the deployment of 5G infrastructure in the country.

The leading market players analyzed in the global [5G in defense industry](#) report include Huawei Investment & Holding Co., Ltd, Wind River Systems, Inc., Nokia Corporation, Samsung Electronics Co., Ltd, NEC Corporation, Ligado Networks, Thales Group, L3Harris Technologies, Inc., Telefonaktiebolaget LM Ericsson, and Raytheon Technologies Corporation. These market players have adopted different strategies including partnership, expansion, collaboration, joint ventures, and others to reinforce their status in the industry.

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