

# 5G in Defense Market to Surpass USD 11969 Million by 2030, Fueled by Technological Prowess

5G in defense is transforming military operations with its high-speed, low-latency connectivity, enhancing communication and enabling advanced applications

MARKET SIZE

11969 MN BY 2030

TAU.56 MN IN 2022

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amalgamation of advanced technologies, propelling the defense sector into a new era of communication and operational efficiency.

The 5G in Defense Market, valued at USD 740.56 Million in 2022, is anticipated to experience an



5G in defense is revolutionizing connectivity, enabling faster, more secure communication, and empowering next-gen military applications worldwide."

According to SNS Insider Research exceptional surge, reaching a staggering market size of USD 11969 Million by 2030. This remarkable trajectory is underlined by a compound annual growth rate of 41.60%, expected over the forecast period from 2023 to 2030.

The emergence of fifth-generation wireless (5G) technology signifies a pivotal moment in the evolution of

communication systems, ushering in a transformative era characterized by unparalleled advancements. This groundbreaking technology promises not only faster data transfers but also an exponential increase in system capacity and a significant reduction in battery usage. Its

unique ability to connect a multitude of devices simultaneously positions 5G as a revolutionary force within the defense sector.

In the realm of defense, 5G is poised to redefine Intelligence, Surveillance, and Reconnaissance (ISR) systems, introducing unprecedented levels of efficiency and effectiveness. The capability to seamlessly connect and coordinate numerous devices in real-time will elevate the sophistication of ISR operations, enhancing situational awareness and response capabilities. Moreover, 5G's influence extends to innovative methods of command and control (C2), introducing dynamic approaches to decision-making and coordination within defense operations.

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- Raytheon Technologies Corporation
- Ligado Networks
- Wind River Systems, Inc
- Thales Group
- L3Harris Technologies, Inc
- Telefonaktiebolaget LM Ericsson
- Huawei Investment & Holding Co., Ltd
- Nokia Corporation
- Samsung Electronics Co., Ltd
- NEC Corporation., and other players.

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The market analysis delves into the transformative impact of 5G technology, showcasing its pivotal role in supporting an impressive one million devices over a square mile. This capability marks a revolutionary stride, enabling seamless connectivity among an extensive array of sensors and devices. The high-speed network and minimal latency inherent in 5G technology amplify the performance of independent systems. Notably, this is vividly demonstrated by the accelerated and more efficient communication between unmanned aerial vehicles and their controllers, setting a new standard for responsiveness and precision in military operations.

Leading nations, including China, the United States, and Israel, spearhead the testing and implementation of 5G technology within their military bases. Their proactive adoption underscores the recognition of 5G's potential to enhance the efficiency of independent systems and interconnected devices. This strategic integration positions these countries at the forefront of leveraging cutting-edge technology to bolster their defense capabilities.

The burgeoning Internet of Things (IoT) landscape acts as a potent driver for the 5G market, offering a landscape of possibilities. 5G's low latency and high power applications seamlessly align with the diverse needs of IoT applications. The technology facilitates long-distance IoT applications, promoting efficient communication between a myriad of connected devices and

systems. Beyond connectivity, the market benefits from the imperative need for seamless internet connectivity, accompanied by a simultaneous reduction in power consumption. This dual advantage propels the growth trajectory of the 5G market, creating an environment where technological innovation not only meets but exceeds the evolving demands of defense and interconnected systems, setting the stage for a future defined by heightened connectivity, efficiency, and strategic advantage.

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Among communication infrastructure segments, Small Cell dominates, providing a flexible and scalable solution. In the core network technology segment, Mobile Edge Computing (MEC) takes the lead, offering localized processing capabilities critical for low-latency applications. The Land platform emerges as a dominant force among platform segments, while the Military sector holds sway among end-users. Enhanced Mobile Broadband (EMBB) dominates the network type segment, catering to high-speed communication needs.

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- Small cell
- Macro Cell

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- Software-Defined Networking (SDN)
- Fog Computing (FC)
- Mobile Edge Computing (MEC)
- Network Functions Virtualization (NFV)

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- Land
- Naval
- Airborne

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- Military
- Homeland security

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- Enhanced Mobile Broadband (EMBB)
- Ultra-Reliable Low-Latency Communications (URLLC)
- Massive Machine-Type Communications (MMTC)

- Application-specific integrated circuit (ASIC) Chip-set
- Radio Frequency Integrated Circuit (RFIC) Chip-set
- Millimeter Wave (mm wave) Chip-set

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- Low
- Medium
- High

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- New Implementation
- Upgradation

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North America is anticipated to lead the global 5G in Defense Market, owing to its rapidly growing wireless network and the presence of key market players. The region's commitment to advanced communication technologies, coupled with a rising demand for high-speed telecommunications networks, solidifies its dominance. Europe is poised for significant adoption, driven by investments in advanced communication technologies and the development of intelligent infrastructure based on IoT. Asia-Pacific is set for substantial growth, fueled by continuous internet infrastructure development and a growing demand for 5G technologies across countries like India, Japan, and China.

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- The advent of 5G technology revolutionizes defense communication and operational efficiency.
- The market is driven by the dominance of Small Cell infrastructure, Mobile Edge Computing, and the growing demand for EMBB.
- North America leads in technological adoption, while Europe and Asia-Pacific show significant potential for market growth.

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- Booz Allen Hamiltonsecured a \$10 million contract to design, implement, test, and manage Private 5G cellular networks and asset tracking solutions for the U.S. Navy in Guam, marking a

significant milestone in the deployment of private 5G technology in defense.

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18.1 Competitive Benchmarking

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