

5G in Defense Market on the Rise: Expected Demand of US\$ 76,014.64 million by 2030

By communication infrastructure, the radio access network segment is expected to register a significant growth during the forecast period.

WILMINGTON, DE, UNITED STATES, November 20, 2024 / EINPresswire.com/ -- The global <u>5G in</u> <u>defense market</u> was valued at \$551 million in 2020, and is projected to reach \$ 76,014.64 million by 2030, registering a CAGR of 67.7%.



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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.

For the defense and security purposes, 5G networks will upgrade Intelligence, Surveillance and Reconnaissance (ISR) systems and signal processing, modernize logistics operations, and allow enhanced command-and-control applications. In addition, 5G could offer broad access to augmented and virtual reality, dynamic spectrum use, distributed command and control, and 5G smart warehousing to the military forces. The speed offered by 5G is 10 gigabits per seconds, which is 100 times faster than 4G technology and has a low latency. The low delay is attained with the help of edge computing where processing and generation of data is performed as near as possible to the end points, comprising effectors and sensors, where these can locally transmit and receive data with each other with virtually nil waiting period.

The incorporation of technologies such as machine learning, artificial intelligence (AI), and mobile ad hoc networking (MANET) will enhance the defense capabilities of the armed forces.

The fast out-turn of millimeter-wave 5G has the capability to keep extraordinary-fast microprocessors, field-programmable gate arrays (FPGAs), general-purpose graphics processing units (GPGPU), and several other data-processing systems - even while exchanging data from the strategic cloud infrastructure.

By communication infrastructure, the global 5G in defense market has been segmented into small cell, macro cell, and radio access network (RAN). The small cell segment accounted for the highest revenue in 2020, owing to their unique capability to handle high density of low-power and low-speed rates. Moreover, small cells possess the capacity of handling Internet of Things (IoT) devices mobile consumers and broadband. Moreover, the radio access network (RAN) segment is anticipated to show a significant CAGR during the forecast period. 5G RAN features complex critical and sensitive software to enhance the 5G network. The growth in use of RAN for secure and low latency network acts as a driver for the growth of the 5G in defense market.

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By network type, the global 5G in defense market has been segmented into enhanced mobile broadband, ultra-reliable low latency communications, and massive machine type communications. The enhanced mobile broadband segment dominated the 5G in defense segment in 2020 as it offers prolonged internet connectivity capabilities which further increase its application in defense industry. Moreover, enhanced mobile broadband provides a use case for connecting smart gears such as body cams and battlefield sensors of the military to the command base and provide real-time assistance in hypercritical mission environments. Therefore, high prospects of ultra-reliable low latency communications in delivering very low end-to-end latency, high reliability, and dynamic multiplexing design, which promotes machine-to-machine, human-to-machine, or human-to-human communication, which are anticipated to boost the growth of the 5G in defense market during the forecast period.

Increase in number of autonomous defense vehicles, drones, and robots; rise in support of government toward development of 5G, and surge in demand for surveillance activities are expected to drive the global 5G in defense market growth during the forecast period. However, cybersecurity threats to 5G network and high infrastructure costs for the deployment of 5G are anticipated to hamper the growth of the market during the forecast period. Moreover, technological advancements in 5G network and upgradation of military bases are expected to offer lucrative opportunities for the market in future.

COVID-19 Impact Analysis

The COVID impact on the 5G in defense market is unpredictable and it is expected to remain in force till the second quarter of 2021.

The COVID-19 outbreak forced governments across the globe to divert their investments and

other activities from 5G technologies to strengthen healthcare services for managing the spread of the virus. This led to significant delays in the deployment of 5G services across several nations.

Moreover, nationwide lockdowns disrupted supply-chain as several 5G component manufacturers had to partially or fully shut down their operations.

The adverse impacts of the COVID-19 pandemic have resulted in delays in activities and initiatives regarding development of innovative 5G technologies.

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Key Findings Of The Study

By communication infrastructure, the radio access network segment is expected to register a significant growth during the forecast period.

By core network technology, the fog computing segment is anticipated to exhibit significant growth in the near future.

By network type, the massive machine type communications segment is projected to lead the global 5G in Defense market owing to higher CAGR as compared to ultra-reliable low latency communications segment.

By chipset, the millimeter wave chipset segment is projected to lead the global 5G in Defense market owing to higher CAGR as compared other chipset types.

By platform, the airborne is anticipated to exhibit significant growth in the near future.

By region, Asia Pacific is anticipated to register the highest CAGR during the forecast period.

Market Key Players

Key players operating in the global 5G in Defense market include Telefonaktiebolaget LM Ericsson, Huawei Investment & Holding Co., Ltd, Nokia Corporation, Samsung Electronics Co., Ltd, NEC Corporation, Thales Group, L3Harris Technologies, Inc., Raytheon Technologies Corporation, Ligado Networks, and Wind River Systems, Inc.

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