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5G in Defense Market by Platform (Land, Naval, Airborne), Solution (Communication Network,Chipset, Core Network), End User, Network Type, Installation and Region (North America, Europe, Asia Pacific, LA, MEA) - Global Forecast to 2028

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Abstracts

The 5G in Defense market is estimated to be USD 0.9 Billion in 2023 to USD 2.3 billion by 2028, at a CAGR of 19.9% from 2023 to 2028. Due to a number of factors, the global market for 5G in defense are expanding significantly.

The fifth generation of cellular networks, known as 5G, represents a significant advancement in telecommunications technology. It offers speeds up to 100 times faster than its predecessor, 4G, opening up unprecedented possibilities for individuals and enterprises alike. The enhanced connectivity speeds, remarkably low latency, and expanded bandwidth that 5G provides are driving progress in societies and reshaping various industries. This transformation is greatly improving everyday experiences for people.

The growth of the market is being driven by the increasing demand for low latency networks which can improve command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems, more reliable and quicker communication with unmanned systems, including drones (UAVs), unmanned ground vehicles (UGVs), and autonomous naval vessels. Faster data speeds and lower latency can support AR and VR applications for training simulations and on-the-battlefield data visualization.

“Land Segment: The largest share of the 5G in Defense Market by platform in 2023.” Based on Platform, the 5G in Defense Market has been segmented into Land, Naval,

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and Airborne. Land shares the largest market value in 2023. The 5G spectrum's millimeter-wave, characterized by its high frequency and short wavelength, can facilitate real-time communication in areas requiring heightened security, such as military bases and command posts. Conversely, the low-frequency, long-wavelength spectrum can be harnessed for long-range communication needs. There are a number of factors driving the growth of the land 5G in Defense Market, including: The increasing demand for secure and reliable communications, growing use of unmanned, need for global coverage, development of new technologies etc. The land 5G in Defense Market's growth is a reflection of the evolving strategic, operational, and technological landscapes of modern ground warfare. As the nature of conflicts and technological paradigms shift, so too will the requirements and solutions in the land 5G technology sector.

” Communication Infrastructure: The largest segment of the 5G in Defense Market by solution in 2023“

Small cell segment from communication network growth is attributed to the rise in disposable income across different economies, coupled with increased consumption of high data rates.Also, small cells enhance signal broadcasting across the high band, boosting signal performance. For instance, 5G mid-band signals from an outdoor antenna may not offer consistent reliability indoors. By using small cells positioned strategically, the signal's reliability and performance can be significantly improved.

” Ultra-reliable and low-latency communications (URLLC): The Second largest share of the 5G in Defense Market by network type segment in 2023.”

Ultra-reliable and low-latency communications (URLLC) is a service category supported by 5G in defense, which offers significant advantages for various industries and applications. By leveraging satellite-based networks, URLLC can provide ultra-reliable connectivity, free from terrestrial interference, ensuring critical applications remain consistently available. 5G in defense enables low-latency connectivity, crucial for applications where even minimal delays can have a substantial impact. For instance, industrial automation can benefit from this technology by enhancing efficiency and productivity through real-time communication among sensors and actuators. Similarly, autonomous vehicles can operate safely and efficiently by leveraging 5G in defense to enable seamless and instantaneous communication between vehicles and surrounding infrastructure. These examples highlight the transformative potential of 5G in defense in enabling a wide range of innovative URLLC applications.

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The largest segment of the 5G in Defense Market by end user in 2023: Military

The Military segment of the 5G in defense market has a lot of applications such as: The low latency of 5G is crucial for the operation of drones (UAVs), unmanned ground vehicles (UGVs), and other robotic systems. These systems can be used for surveillance, bomb disposal, and even combat. 5G can support the streaming of high-definition video feeds from reconnaissance platforms, providing timely intelligence and a comprehensive view of the battlefield. Real-time data flow powered by 5G can significantly improve situational awareness and decision-making, allowing commanders to react swiftly to changing battle conditions. With 5G, soldiers can be equipped with wearable devices that monitor vital signs, location, or environmental conditions, transmitting data in real-time to medical or command centers.

” Medium Operational Frequency: The largest share of the 5G in Defense Market by operational frequency segment in 2023.” Based on operational frequency segment, the 5G in Defense Market has been segmented into low, medium and high. Based on the numbers, medium operational frequency secured the largest market share in their usage. Mid-band 5G operates in the frequency range of 1.7GHz to 2.5GHz. It provides an optimal combination of both speed and coverage, delivering connectivity over extensive areas with speeds between 100 to 900 Mbps. The mid-band 5G is particularly beneficial for applications such as enhanced mobile broadband (eMBB) and Ultra Reliable Low Latency Communications, as well as for autonomous vehicles. Additionally, it supports sectors like media and entertainment, healthcare, smart urban planning, and intelligent agriculture.

” New Implementation Segment: The segment to grow by fastest CAGR in the forecasted period of the 5G in Defense Market by Installation “

The new implementation market refers to an independent 5G network market. The new implementation of 5G includes both New Radio and Core. This network provides an end-to-end 5G experience to users. The network can interoperate with the existing 4G or LTE network to provide service continuity between the two network generations. 5G Core uses a cloud-aligned service-based architecture (SBA) that supports control plane function interaction, reusability, flexible connections, and service discovery that spans all functions.

The deployment of the new implementation architecture network can be capital intensive. It includes all use cases, including eMBB and those dependent on URLLC and mMTC. With the operating data rate of 20 Gbps or 10Gbps, it has a latency of 1 ms

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(comparatively lower than NSA) and a network density of 1 million devices/km2.

“Japan to account for the largest CAGR in the 5G in Defense Market in forecasted year.”

The Japanese government has been proactive in formulating policies and strategies to ensure the rapid deployment of 5G networks. The Ministry of Internal Affairs and Communications (MIC) has played a significant role in setting guidelines and spectrum allocations for 5G. In April 2022, the Japanese government established an ambitious 5G target aiming to provide 5G network coverage to 99% of its populace by the fiscal year ending 2030. This initiative is primarily overseen by the Ministry of Internal Affairs and Communications (MIC). Back in 2019, MIC granted 5G spectrum access to leading telecommunication entities, namely NTT Docomo, KDDI au, SoftBank, and the newer entrant, Rakuten Mobile, paving the way for them to develop 5G infrastructures. By March 2021, all these carriers had commenced commercial 5G services across every prefecture in Japan. As of 2022, over 20,000 mmWave gNodeBs have been deployed by these four primary service providers. Furthermore, there's a commitment to install additional nodes as per the obligations set by the MIC, with a targeted completion by early 2024. This pact emphasizes collaboration in 5G technology, artificial intelligence, and a spectrum of other vital domains. Both strategic allies have resolved to expand their partnership, placing emphasis on advancing the supply chain initiative within the Indo-Pacific zone.

Break-up of profiles of primary participants in the 5G in Defense Market: %li%By Company Type: Tier 1–55%; Tier 2–20%; and Tier 3–25%

By Designation: C Level–75%; Manager Level–25%;

By Region: North America–20%; Europe–25%; Asia Pacific–30%; Latin America–15%, MEA-10% Prominent companies in the 5G in defense Market are Ericsson (Sweden), Huawei (China), Nokia Networks (Finland), Samsung Electronics Co Ltd. (South Korea), NEC (Japan), Thales Group (France), L3Harris Technologies, Inc. (US), Raytheon Technologies (US), Ligado Networks (US), and Wind River Systems, Inc. (US). Research Coverage: The market study covers the 5G in Defense market across segments. It aims at estimating the market size and the growth potential of this market across different segments, such as platform, solution, end user, installation, operational frequency, network type and region. The study also includes an in-depth competitive analysis of the key players in the market, along with their company

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profiles, key observations related to product and business offerings, recent developments, and key market strategies. Key benefits of buying this report: This report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall 5G in defense market and its subsegments. The report covers the entire ecosystem of the 5G in defense industry and will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report will also help stakeholders understand the pulse of the market and provide them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

• Analysis of key drivers (Use of 5G in situational awareness operations, rise in technological innovations in 5G, growing use ofth of autonomous and connected devices, transitioning from legacy systems to cloud-based solutions, increasing demand for high-speed and, low-latency connectivity), restraints (High investments in early phases and Lack of established protocols and standards) , opportunities(Rise in virtual networking architecture), challenges(Security concerns on collaboration with 5G suppliers) and there are several factors that could influence the growth of the 5G in Defense Market.

• Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the 5G in Defense Market.

• Market Development: Comprehensive information about lucrative markets – the report analyses of the 5G in Defense Market across varied regions

• Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the 5G in Defense Market.

• Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like Ericsson (Sweden), Huawei (China), Nokia Networks (Finland), Samsung Electronics Co Ltd. (South Korea), NEC (Japan), Thales Group (France), L3Harris Technologies, Inc. (US), Raytheon Technologies (US), Ligado Networks (US), and Wind River Systems, Inc. (US)..

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15 COMPANY PROFILES

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*Details on Business Overview, Products Offered, Recent Developments, MnM View, Right to win, Strategic choices made, Weaknesses and competitive threats might not be captured in case of unlisted companies.

16 APPENDIX

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