+357 96 030922
info@marketpublishers.com

5G Standalone Network Market Forecasts to 2032 – Global Analysis By Component (Solutions and Services), Spectrum Type, Network Type, Application, End User and By Geography

https://marketpublishers.com/r/56C0A351B213EN.html
Date: December 2025
Pages: 200
Price: US$ 4,150.00 (Single User License)
ID: 56C0A351B213EN

Abstracts

According to Stratistics MRC, the Global 5G Standalone Network Market is accounted for $3.70 billion in 2025 and is expected to reach $74.67 billion by 2032 growing at a CAGR of 53.6% during the forecast period. A 5G Standalone (SA) network is the pure form of next-generation wireless technology that functions without relying on any 4G components. Built on a dedicated 5G core, it provides extremely low latency, faster speeds, and stable performance essential for advanced use cases. With capabilities like network slicing, integrated edge processing and large-scale IoT connectivity, SA networks offer customized solutions for diverse sectors. This architecture boosts security, optimizes spectrum usage, and supports critical operations such as autonomous systems, remote healthcare, and instant data-driven decisions. As digital innovation expands, 5G Standalone networks serve as the backbone for highly scalable and future-oriented communication frameworks.

According to GSMA Intelligence, data indicates that 5G connections worldwide reached 1.6 billion in 2024 and are forecast to rise to 5.5 billion by 2030, representing over half (51%) of all mobile connections by 2029.

Market Dynamics:

Driver:

Rising demand for ultra-low latency connectivity

+357 96 030922
info@marketpublishers.com

The expanding need for extremely low latency communication is significantly accelerating the adoption of 5G Standalone networks, especially as industries deploy solutions that rely on instant responsiveness. Advanced applications like driverless mobility, smart factories, remote medical procedures, and next-generation immersive technologies require performance measured in mere milliseconds, achievable only through a pure 5G core. This architecture ensures stability, minimizes delay variations, and supports dependable behavior for critical workflows. As organizations upgrade their systems and embrace automation, demand for fast, latency-free connectivity rises rapidly. Consequently, telecom providers and enterprises are prioritizing SA infrastructure to deliver seamless, real-time data transmission essential for emerging digital use cases.

Restraint:

High deployment and infrastructure costs

The significant capital required for deploying 5G Standalone networks forms a major barrier to their rapid expansion. Establishing a standalone 5G core demands investment in new base stations, enhanced transport layers, cloud-native network functions, and distributed edge systems. Shifting infrastructure from 4G to a fully modernized environment increases financial pressure and slows commercial rollout. Additionally, dense small-cell coverage, extensive fiber connectivity, and continuous system upgrades add to overall expenditure. For many operators, balancing high initial spending with slow revenue returns becomes difficult. These cost challenges are even more severe in developing regions, where restricted budgets and low ARPU make widespread SA adoption less feasible.

Opportunity:

Development of advanced consumer and immersive technologies

The rise of new-age consumer applications—including VR, AR, cloud gaming, holographic content, and immersive digital experiences—presents strong opportunities for the 5G Standalone ecosystems. These use cases require exceptional speed, minimal latency, and stable performance, all of which SA networks provide through a fully independent 5G core. By enabling smooth, real-time interactions, SA enhances visual quality and reduces delays in immersive environments. Growing demand for advanced entertainment allows operators to explore premium service offerings. Furthermore, SA supports the evolution of metaverse platforms, interactive media, and

+357 96 030922
info@marketpublishers.com

next-generation digital applications, positioning it as a vital driver of future consumer technology innovation.

Threat:

Cyber security vulnerabilities in cloud-native architectures

Security risks within cloud-native systems represent a major threat to the 5G Standalone market, as SA infrastructure depends on virtualized cores and container-based components. Although this design enhances scalability, it simultaneously broadens potential entry points for cyber attacks, including data breaches, DDoS attempts, and vendor-related vulnerabilities. The software-driven integration of core, RAN, and edge layers heightens exposure to misconfigurations and malicious activity. Since SA supports sensitive, real-time operations, even minor security failures can disrupt key services and weaken confidence among users and enterprises. Without advanced protection measures, automated detection, and strict governance, security concerns could slow the transition to SA networks globally.

Covid-19 Impact:

COVID-19 created both challenges and opportunities for the 5G Standalone Network market. As remote working, digital services, and online collaboration grew dramatically, operators saw increased pressure to enhance network performance, encouraging broader interest in SA capabilities. Yet, global supply chain issues, delayed equipment deliveries, halted field operations, and postponed regulatory processes slowed the rollout of SA infrastructure. Many enterprises also deferred investments in private 5G due to budget constraints. Despite short-term delays, the pandemic underscored the importance of dependable, high-speed connectivity, accelerating long-term digitalization efforts. This shift reinforced the strategic role of 5G SA in supporting automation, cloud integration, and next-generation communication models.

The sub-6 GHz segment is expected to be the largest during the forecast period

The sub-6 GHz segment is expected to account for the largest market share during the forecast period due to its superior mix of coverage, performance stability, and deployment practicality. Its mid-range frequencies enable extensive reach, allowing networks to operate effectively across diverse geographic regions. Sub-6 GHz supports consistent indoor penetration, dependable mobility, and robust capacity, making it well-suited for delivering early 5G SA services. Operators choose this band because it offers a cost-effective path to large-scale rollouts without the technical constraints seen in higher-frequency alternatives. Its flexibility and reliability make it the preferred spectrum choice for building broad, high-quality SA infrastructure across multiple industries and markets.

The URLLC (ultra-reliable low-latency communications) segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the URLLC (ultra-reliable low-latency communications) segment is predicted to witness the highest growth rate because it benefits most from the capabilities of a fully native 5G core, which enables extremely low latency and exceptional reliability. These features are vital for mission-critical environments such as automated factories, autonomous mobility, precision medicine, and critical infrastructure operations. SA networks provide the responsiveness, connection stability, and guaranteed service levels required for real-time control, remote interventions, industrial robotics, and life-critical applications. With enterprises increasingly adopting automation and intelligent systems, demand for URLLC-powered use cases continues to accelerate. This strong momentum makes URLLC the fastest-expanding segment in the SA market landscape.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, driven by fast-paced digital innovation, high mobile penetration, and substantial telecom investments. Countries including China, Japan, South Korea, and Australia have rolled out advanced SA networks supported by proactive policies, strong operator readiness, and early access to suitable spectrum bands. The region is rapidly expanding smart factories, connected infrastructure, IoT deployments, and dense urban applications that benefit from SA’s low latency and enhanced reliability. With operators increasingly focusing on private 5G, network slicing, and enterprise-grade services, Asia-Pacific continues to be the leading region for the deployment, adoption, and scaling of 5G SA technologies.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, supported by aggressive operator rollouts, strong enterprise modernization efforts, and early readiness for cloud-native deployments. The region’s mature telecom landscape, favorable regulatory policies, and rising demand for SA-enabled capabilities

+357 96 030922
info@marketpublishers.com

across industries drive rapid growth. Expanding private 5G adoption, increasing reliance on edge computing, and rising use of low-latency and high-reliability applications further elevate market momentum. Enterprises in fields such as healthcare, transportation, manufacturing, and smart infrastructure are accelerating SA implementations. Continuous innovation from network vendors and cloud providers positions North America as the fastest-expanding region for 5G SA advancements.

Key players in the market

Some of the key players in 5G Standalone Network Market include Ericsson, Nokia, Huawei Technologies Co., Ltd., Samsung Electronics Co., Ltd., ZTE Corporation, Cisco Systems, Inc., Hewlett Packard Enterprise Company, Oracle Corporation, NEC Corporation, T-Mobile US, Inc., China Mobile Limited, Reliance Jio Infocomm Limited, Amantya Technologies Pvt. Ltd., Rakuten Mobile, Inc. and Mavenir Systems, Inc.

Key Developments:

In November 2025, Nokia and Latvijas Mobilais Telefons (LMT) announced a strategic agreement to integrate Nokia's cutting-edge 5G radio technology with LMT's proven defense solutions. This collaboration will result in a high-capacity, secure, and resilient tactical communications system specifically designed for dedicated use cases in the region.

In October 2025, Ericsson and global technology group e& have entered a multi-year agreement to upgrade e& UAE's 5G Core Network by deploying Ericsson's advanced cloud-native technologies. The agreement, made at GITEX GLOBAL 2025, encompasses the modernization of core network applications from Ericsson's dual-mode 5G Core solutions, running on a combination of Ericsson Cloud Native Infrastructure Solution and e&'s own cloud.

In March 2025, ZTE Corporation has signed a strategic agreement with TAWAL, the first TowerCo in the Kingdom of Saudi Arabia, specializing in designing, building, and managing state-of-the-art telecom towers, to drive innovation and accelerate digital transformation across various sectors. The partnership aims to promote the adoption of modern technologies and integrate state-of-the-art solutions to support TAWAL's digital transformation strategy.

Components Covered:

+357 96 030922
info@marketpublishers.com

- Solutions
- Services

Spectrum Types Covered:

- Sub-6 GHz
- mmWave

Network Types Covered:

- Public SA Networks
- Private SA Networks

Applications Covered:

- eMBB (Enhanced Mobile Broadband)
- URLLC (Ultra-Reliable Low-Latency Communications)
- mMTC (Massive Machine-Type Communications)

End Users Covered:

- Telecom Operators
- Enterprises
- Government & Public Safety

Regions Covered:

+357 96 030922
info@marketpublishers.com

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:
- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

+357 96 030922
info@marketpublishers.com

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

5 GLOBAL 5G STANDALONE NETWORK MARKET, BY COMPONENT

5.1 Introduction
5.2 Solutions
  5.2.1 5G RAN
  5.2.2 5G Core
  5.2.3 Transport
5.3 Services
  5.3.1 Integration & Deployment
  5.3.2 Consulting & Advisory
  5.3.3 Managed Services

6 GLOBAL 5G STANDALONE NETWORK MARKET, BY SPECTRUM TYPE

6.1 Introduction
6.2 Sub-6 GHz
6.3 mmWave

7 GLOBAL 5G STANDALONE NETWORK MARKET, BY NETWORK TYPE

7.1 Introduction
7.2 Public SA Networks
7.3 Private SA Networks

8 GLOBAL 5G STANDALONE NETWORK MARKET, BY APPLICATION

8.1 Introduction
8.2 eMBB (Enhanced Mobile Broadband)
8.3 URLLC (Ultra-Reliable Low-Latency Communications)
8.4 mMTC (Massive Machine-Type Communications)

9 GLOBAL 5G STANDALONE NETWORK MARKET, BY END USER

9.1 Introduction
9.2 Telecom Operators
9.3 Enterprises
9.4 Government & Public Safety

10 GLOBAL 5G STANDALONE NETWORK MARKET, BY GEOGRAPHY

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

12 COMPANY PROFILING

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: 5G Standalone Network Market Forecasts to 2032 – Global Analysis By Component (Solutions and Services), Spectrum Type, Network Type, Application, End User and By Geography

Product link: https://marketpublishers.com/r/56C0A351B213EN.html

Price: US$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/56C0A351B213EN.html