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Cloud Native 5G Core Market Forecasts to 2032 – Global Analysis By Component (Network Functions, Management and Orchestration, Service-Based Architecture, Security Solutions and Other Components), Deployment Mode, Network, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Cloud Native 5G Core Market is accounted for $4.6 billion in 2025 and is expected to reach $19.2 billion by 2032 growing at a CAGR of 22.5% during the forecast period. Cloud Native 5G Cores are modular, scalable architecture built using cloud-native principles such as containerization, microservices, and orchestration. It enables dynamic deployment, automation, and efficient resource utilization across hybrid and multi-cloud environments. Designed for agility and resilience, it supports rapid service innovation, network slicing, and real-time scalability. This architecture decouples network functions, allowing independent upgrades and fault isolation, thereby enhancing operational efficiency, reducing latency, and accelerating time-to-market for telecom operators and enterprise use cases.

Market Dynamics:

Driver:

Operators are adopting cloud-native cores to dynamically scale services

Telecom operators are increasingly transitioning to cloud-native 5G cores to enable dynamic scaling, service agility, and faster deployment cycles. These architectures leverage containerized microservices and orchestration platforms, allowing real-time

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network adjustments based on traffic demands. The shift supports cost-effective expansion and enhances operational flexibility across hybrid and multi-cloud environments. With growing demand for low-latency applications and enterprise-grade connectivity, cloud-native cores are becoming central to next-generation network strategies.

Restraint:

Requires significant architectural and operational changes

Telecom providers must invest in new skill sets, DevOps workflows, and container orchestration tools such as Kubernetes. The transition also demands rigorous testing, security validation, and integration with existing OSS/BSS systems, which can delay deployment timelines. Additionally, managing distributed workloads across multi-vendor environments introduces challenges in fault isolation, performance monitoring, and lifecycle management. These complexities may hinder adoption among operators with limited cloud maturity.

Opportunity:

Integration of AI/ML for predictive maintenance and traffic optimization

AI-driven analytics can proactively detect anomalies, forecast demand spikes, and automate resource allocation, improving network reliability and efficiency. Telecom providers are exploring closed-loop automation and intent-based orchestration to reduce manual intervention and enhance service quality. These capabilities also support advanced use cases such as autonomous networks, dynamic slicing, and real-time SLA enforcement, positioning cloud-native cores as enablers of intelligent connectivity.

Threat:

Regulatory and compliance challenges

Operators must navigate region-specific mandates related to data localization, lawful interception, and cross-border traffic management. Inconsistent policies across jurisdictions can complicate cloud infrastructure planning and limit scalability. Moreover, concerns around vendor neutrality, open interfaces, and cybersecurity governance may slow adoption, especially in markets with stringent oversight. These regulatory hurdles

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pose strategic risks for multinational rollouts and public-private partnerships.

Covid-19 Impact:

The COVID-19 pandemic catalyzed digital transformation across telecom operations, accelerating the shift toward cloud-native architectures. With increased demand for remote work, virtual collaboration, and digital services, operators prioritized flexible, software-defined networks capable of rapid scaling. Cloud-native cores enabled remote provisioning, automated updates, and centralized monitoring, reducing reliance on physical infrastructure. While initial supply chain disruptions affected hardware availability, the crisis underscored the need for resilient, cloud-based network models.

The management and orchestration segment is expected to be the largest during the forecast period

The management and orchestration segment is expected to account for the largest market share during the forecast period due to its critical role in automating lifecycle operations across cloud-native environments. These platforms coordinate containerized network functions, monitor performance, and enforce policy-driven workflows. The segment also benefits from integration with AI engines and service assurance frameworks, enabling real-time visibility and control. Its scalability and vendor-agnostic capabilities make it indispensable for multi-cloud deployments.

The standalone 5G segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the standalone 5G segment is predicted to witness the highest growth rate driven by its ability to deliver full 5G capabilities independent of legacy LTE infrastructure. Unlike non-standalone models, SA cores support advanced features such as network slicing, ultra-reliable low-latency communication (URLLC), and massive machine-type communication (mMTC). Enterprises and governments are increasingly deploying SA cores for private networks, smart manufacturing, and mission-critical applications.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to aggressive 5G rollouts, strong government support, and rapid digitalization across key economies. Countries like China, Japan, South Korea, and India are

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investing heavily in telecom infrastructure and cloud-native technologies. Strategic partnerships between telcos and hyperscalers are also accelerating cloud-native core deployments, positioning Asia Pacific as a global leader in 5G transformation.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR propelled by expanding mobile broadband penetration, rising IoT adoption, and favorable regulatory reforms. Emerging markets are prioritizing cloud-native architectures to overcome legacy constraints and support scalable connectivity. The region's focus on innovation, combined with competitive telecom pricing, is fostering rapid growth and technological advancement in cloud-native core solutions.

Key players in the market

Some of the key players in Cloud Native 5G Core Market include Ericsson, Nokia, Huawei Technologies, Samsung Electronics, ZTE Corporation, Mavenir, Cisco Systems, NEC Corporation, HPE, Juniper Networks, VMware, Microsoft, Amazon Web Services, Affirmed Networks, Casa Systems, Intel Corporation, and Red Hat.

Key Developments:

In October 2025, Samsung introduced Galaxy XR, an AI-native extended reality device built on Android XR ecosystem. It supports multimodal interaction and immersive productivity. The device is priced at $1,799.99 and targets enterprise and consumer markets.

In October 2025, Nokia announced plans to launch millimeter-wave Fixed Wireless Access products in India within six months. The initiative targets enterprise and hyperscaler growth, with several deals lined up. It supports private 5G and broadband expansion.

In September 2025, Huawei introduced the WATCH GT 6 series, MatePad 12 X, nova 14 smartphones, and FreeBuds 7i. The launch emphasized wearable innovation and seamless productivity. It reflects Huawei's push into premium consumer tech.

Components Covered:

- Network Functions

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- Management and Orchestration
- Service-Based Architecture
- Security Solutions
- Other Components

Deployment Modes Covered:

- Public Cloud
- Private Cloud
- Hybrid Cloud

Networks Covered:

- Standalone 5G
- Non-Standalone 5G

Applications Covered:

- Enhanced Mobile Broadband (eMBB)
- Ultra-Reliable Low Latency Communications (URLLC)
- Massive Machine Type Communications (mMTC)
- Smart Cities
- Industrial Automation
- Other Applications

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End Users Covered:

- Telecom Operators
- Enterprises
- Government & Public Sector
- Managed Service Providers
- System Integrators
- Other End Users

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain

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- 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

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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:

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

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

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