

5G Core Market Outlook 2025-2034: Market Share, and Growth Analysis By Component (Solutions, Services), By Deployment (Cloud, On-Premises), By Network Function, By End-User

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Abstracts

The 5G Core Market is valued at USD 8.9 billion in 2025 and is projected to grow at a CAGR of 50.1% to reach USD 344.4 billion by 2034. The 5G core market is a crucial part of the 5G network architecture, providing the intelligence and control functions necessary for 5G services. This market encompasses the software and hardware used to build the 5G core network, including network function virtualization (NFV) and cloud-native technologies. The 5G core enables advanced features such as network slicing, edge computing, and service-based architecture (SBA), which are essential for supporting diverse 5G use cases.

The market is characterized by rapid innovation in software-defined networking (SDN), cloud computing, and virtualization technologies. The adoption of cloud-native architectures and microservices is enabling greater flexibility and scalability in the 5G core. The integration of AI and machine learning is also enhancing network automation and optimization. Furthermore, the increasing adoption of open interfaces and standards is promoting interoperability and reducing vendor lock-in. The market is also seeing a trend towards edge core deployments, which bring processing and storage closer to the end-users.

Geographically, the 5G core market is expanding globally, with significant activity in developed regions and emerging economies. Developed regions are leading the way in technology adoption, driven by their advanced telecommunications infrastructure and strong research and development capabilities. Emerging economies are also investing heavily in 5G core infrastructure to support their digital transformation. The market's

future is promising, with continuous innovation and increasing adoption expected to drive growth.

Key Insights 5G Core Market

Cloud-Native Architectures: Adoption of cloud-native architectures and microservices for flexibility and scalability.

Network Slicing: Implementation of network slicing to support diverse 5G use cases.

Edge Computing: Deployment of edge core networks to bring processing and storage closer to end-users.

AI and Machine Learning Integration: Use of AI for network automation and optimization.

Open Interfaces and Standards: Adoption of open interfaces and standards for interoperability.

5G Network Deployment: Rapid deployment of 5G networks globally.

Demand for Advanced 5G Services: Increasing demand for advanced 5G services, such as enhanced mobile broadband, ultra-reliable low-latency communication, and massive machine-type communication.

Network Virtualization: Adoption of NFV and SDN for greater flexibility and efficiency.

Edge Computing Requirements: Need for edge computing to support latency-sensitive applications.

Digital Transformation: Digital transformation initiatives across various industries.

Integration Complexity: The complexity of integrating cloud-native technologies and legacy systems.

Security Concerns: Ensuring the security of the 5G core network.

Interoperability: Ensuring interoperability between different vendors' 5G core solutions.

Scalability and Performance: Achieving scalability and high performance in the 5G core.

Skill Gap: Shortage of skilled professionals with expertise in 5G core technologies.

5G Core Market Segmentation

By Component

Solutions

Services

By Deployment

Cloud

On-Premises

By Network Function

Access and Mobility Management (AMF)

Session Management Function (SMF)

User Plane Function (UPF)

Policy Control Function (PCF)

Network Exposure Function (NEF)

Network Repository Function (NRF)

Unified Data Management (UDM)

Authentication Server Function (AUSF)

Application Function (AF)

Network Slicing Selection Function (NSSF)

By End-User

Telecom Operators

Enterprises

Key Companies Analysed

Nokia Corporation

Huawei Technologies Co. Ltd.

Samsung Electronics Co. Ltd.

Cisco Systems Inc.

Affirmed Networks Inc.

ZTE Corporation

NEC Corporation

Oracle Corporation

Telefonaktiebolaget LM Ericsson

Hewlett Packard Enterprise Company LP

HRMavenir Systems Inc.

Druid Software Ltd.

IPLOOK Technologies

AT&T Inc.

Orange SA

VMware Inc.

Athonet

Ciena Corporation

F5 Networks Inc.

Altiostar Networks

Parallel Wireless Pvt. Ltd

Reliance Industries Limited

Wind River Systems Inc. (Acquired by TPG Capital)

Juniper Networks Inc.

Amdocs

Datang Telecom Group

Alpha Networks Inc.

Dell Technologies Inc.

Bharti Airtel Limited

Rakuten Mobile Inc.

5G Core Market Analytics

The report employs rigorous tools, including Porter's Five Forces, value chain mapping, and scenario-based modeling, to assess supply–demand dynamics. Cross-sector

influences from parent, derived, and substitute markets are evaluated to identify risks and opportunities. Trade and pricing analytics provide an up-to-date view of international flows, including leading exporters, importers, and regional price trends.

Macroeconomic indicators, policy frameworks such as carbon pricing and energy security strategies, and evolving consumer behavior are considered in forecasting scenarios. Recent deal flows, partnerships, and technology innovations are incorporated to assess their impact on future market performance.

5G Core Market Competitive Intelligence

The competitive landscape is mapped through OG Analysis' proprietary frameworks, profiling leading companies with details on business models, product portfolios, financial performance, and strategic initiatives. Key developments such as mergers & acquisitions, technology collaborations, investment inflows, and regional expansions are analyzed for their competitive impact. The report also identifies emerging players and innovative startups contributing to market disruption.

Regional insights highlight the most promising investment destinations, regulatory landscapes, and evolving partnerships across energy and industrial corridors.

Countries Covered

North America — 5G Core market data and outlook to 2034

United States

Canada

Mexico

Europe — 5G Core market data and outlook to 2034

Germany

United Kingdom

France

Italy

Spain

BeNeLux

Russia

Sweden

Asia-Pacific — 5G Core market data and outlook to 2034

China

Japan

India

South Korea

Australia

Indonesia

Malaysia

Vietnam

Middle East and Africa — 5G Core market data and outlook to 2034

Saudi Arabia

South Africa

Iran

UAE

Egypt

South and Central America — 5G Core market data and outlook to 2034

Brazil

Argentina

Chile

Peru

** We can include data and analysis of additional countries on demand.*

Research Methodology

This study combines primary inputs from industry experts across the 5G Core value chain with secondary data from associations, government publications, trade databases, and company disclosures. Proprietary modeling techniques, including data triangulation, statistical correlation, and scenario planning, are applied to deliver reliable market sizing and forecasting.

Key Questions Addressed

What is the current and forecast market size of the 5G Core industry at global, regional, and country levels?

Which types, applications, and technologies present the highest growth potential?

How are supply chains adapting to geopolitical and economic shocks?

What role do policy frameworks, trade flows, and sustainability targets play in shaping demand?

Who are the leading players, and how are their strategies evolving in the face of global uncertainty?

Which regional “hotspots” and customer segments will outpace the market, and

what go-to-market and partnership models best support entry and expansion?

Where are the most investable opportunities—across technology roadmaps, sustainability-linked innovation, and M&A—and what is the best segment to invest over the next 3–5 years?

Your Key Takeaways from the 5G Core Market Report

Global 5G Core market size and growth projections (CAGR), 2024-2034

Impact of Russia-Ukraine, Israel-Palestine, and Hamas conflicts on 5G Core trade, costs, and supply chains

5G Core market size, share, and outlook across 5 regions and 27 countries, 2023-2034

5G Core market size, CAGR, and market share of key products, applications, and end-user verticals, 2023-2034

Short- and long-term 5G Core market trends, drivers, restraints, and opportunities

Porter's Five Forces analysis, technological developments, and 5G Core supply chain analysis

5G Core trade analysis, 5G Core market price analysis, and 5G Core supply/demand dynamics

Profiles of 5 leading companies—overview, key strategies, financials, and products

Latest 5G Core market news and developments

Additional Support

With the purchase of this report, you will receive

An updated PDF report and an MS Excel data workbook containing all market tables and figures for easy analysis.

7-day post-sale analyst support for clarifications and in-scope supplementary data, ensuring the deliverable aligns precisely with your requirements.

Complimentary report update to incorporate the latest available data and the impact of recent market developments.

** The updated report will be delivered within 3 working days*

Contents

1. TABLE OF CONTENTS

- 1.1 List of Tables
- 1.2 List of Figures

2. GLOBAL 5G CORE MARKET SUMMARY, 2025

- 2.1 5G Core Industry Overview
 - 2.1.1 Global 5G Core Market Revenues (In US\$ billion)
- 2.2 5G Core Market Scope
- 2.3 Research Methodology

3. 5G CORE MARKET INSIGHTS, 2024-2034

- 3.1 5G Core Market Drivers
- 3.2 5G Core Market Restraints
- 3.3 5G Core Market Opportunities
- 3.4 5G Core Market Challenges
- 3.5 Tariff Impact on Global 5G Core Supply Chain Patterns

4. 5G CORE MARKET ANALYTICS

- 4.1 5G Core Market Size and Share, Key Products, 2025 Vs 2034
- 4.2 5G Core Market Size and Share, Dominant Applications, 2025 Vs 2034
- 4.3 5G Core Market Size and Share, Leading End Uses, 2025 Vs 2034
- 4.4 5G Core Market Size and Share, High Growth Countries, 2025 Vs 2034
- 4.5 Five Forces Analysis for Global 5G Core Market
 - 4.5.1 5G Core Industry Attractiveness Index, 2025
 - 4.5.2 5G Core Supplier Intelligence
 - 4.5.3 5G Core Buyer Intelligence
 - 4.5.4 5G Core Competition Intelligence
 - 4.5.5 5G Core Product Alternatives and Substitutes Intelligence
 - 4.5.6 5G Core Market Entry Intelligence

5. GLOBAL 5G CORE MARKET STATISTICS – INDUSTRY REVENUE, MARKET SHARE, GROWTH TRENDS AND FORECAST BY SEGMENTS, TO 2034

- 5.1 World 5G Core Market Size, Potential and Growth Outlook, 2024- 2034 (\$ billion)
- 5.1 Global 5G Core Sales Outlook and CAGR Growth By Component, 2024- 2034 (\$ billion)
- 5.2 Global 5G Core Sales Outlook and CAGR Growth By Deployment, 2024- 2034 (\$ billion)
- 5.3 Global 5G Core Sales Outlook and CAGR Growth By Network Function, 2024- 2034 (\$ billion)
- 5.4 Global 5G Core Sales Outlook and CAGR Growth By End-User, 2024- 2034 (\$ billion)
- 5.5 Global 5G Core Market Sales Outlook and Growth by Region, 2024- 2034 (\$ billion)

6. ASIA PACIFIC 5G CORE INDUSTRY STATISTICS – MARKET SIZE, SHARE, COMPETITION AND OUTLOOK

- 6.1 Asia Pacific 5G Core Market Insights, 2025
- 6.2 Asia Pacific 5G Core Market Revenue Forecast By Component, 2024- 2034 (USD billion)
- 6.3 Asia Pacific 5G Core Market Revenue Forecast By Deployment, 2024- 2034 (USD billion)
- 6.4 Asia Pacific 5G Core Market Revenue Forecast By Network Function, 2024- 2034 (USD billion)
- 6.5 Asia Pacific 5G Core Market Revenue Forecast By End-User, 2024- 2034 (USD billion)
- 6.6 Asia Pacific 5G Core Market Revenue Forecast by Country, 2024- 2034 (USD billion)
 - 6.6.1 China 5G Core Market Size, Opportunities, Growth 2024- 2034
 - 6.6.2 India 5G Core Market Size, Opportunities, Growth 2024- 2034
 - 6.6.3 Japan 5G Core Market Size, Opportunities, Growth 2024- 2034
 - 6.6.4 Australia 5G Core Market Size, Opportunities, Growth 2024- 2034

7. EUROPE 5G CORE MARKET DATA, PENETRATION, AND BUSINESS PROSPECTS TO 2034

- 7.1 Europe 5G Core Market Key Findings, 2025
- 7.2 Europe 5G Core Market Size and Percentage Breakdown By Component, 2024- 2034 (USD billion)
- 7.3 Europe 5G Core Market Size and Percentage Breakdown By Deployment, 2024- 2034 (USD billion)
- 7.4 Europe 5G Core Market Size and Percentage Breakdown By Network Function,

2024- 2034 (USD billion)

7.5 Europe 5G Core Market Size and Percentage Breakdown By End-User, 2024- 2034 (USD billion)

7.6 Europe 5G Core Market Size and Percentage Breakdown by Country, 2024- 2034 (USD billion)

7.6.1 Germany 5G Core Market Size, Trends, Growth Outlook to 2034

7.6.2 United Kingdom 5G Core Market Size, Trends, Growth Outlook to 2034

7.6.2 France 5G Core Market Size, Trends, Growth Outlook to 2034

7.6.2 Italy 5G Core Market Size, Trends, Growth Outlook to 2034

7.6.2 Spain 5G Core Market Size, Trends, Growth Outlook to 2034

8. NORTH AMERICA 5G CORE MARKET SIZE, GROWTH TRENDS, AND FUTURE PROSPECTS TO 2034

8.1 North America Snapshot, 2025

8.2 North America 5G Core Market Analysis and Outlook By Component, 2024- 2034 (\$ billion)

8.3 North America 5G Core Market Analysis and Outlook By Deployment, 2024- 2034 (\$ billion)

8.4 North America 5G Core Market Analysis and Outlook By Network Function, 2024- 2034 (\$ billion)

8.5 North America 5G Core Market Analysis and Outlook By End-User, 2024- 2034 (\$ billion)

8.6 North America 5G Core Market Analysis and Outlook by Country, 2024- 2034 (\$ billion)

8.6.1 United States 5G Core Market Size, Share, Growth Trends and Forecast, 2024- 2034

8.6.1 Canada 5G Core Market Size, Share, Growth Trends and Forecast, 2024- 2034

8.6.1 Mexico 5G Core Market Size, Share, Growth Trends and Forecast, 2024- 2034

9. SOUTH AND CENTRAL AMERICA 5G CORE MARKET DRIVERS, CHALLENGES, AND FUTURE PROSPECTS

9.1 Latin America 5G Core Market Data, 2025

9.2 Latin America 5G Core Market Future By Component, 2024- 2034 (\$ billion)

9.3 Latin America 5G Core Market Future By Deployment, 2024- 2034 (\$ billion)

9.4 Latin America 5G Core Market Future By Network Function, 2024- 2034 (\$ billion)

9.5 Latin America 5G Core Market Future By End-User, 2024- 2034 (\$ billion)

9.6 Latin America 5G Core Market Future by Country, 2024- 2034 (\$ billion)

9.6.1 Brazil 5G Core Market Size, Share and Opportunities to 2034

9.6.2 Argentina 5G Core Market Size, Share and Opportunities to 2034

10. MIDDLE EAST AFRICA 5G CORE MARKET OUTLOOK AND GROWTH PROSPECTS

10.1 Middle East Africa Overview, 2025

10.2 Middle East Africa 5G Core Market Statistics By Component, 2024- 2034 (USD billion)

10.3 Middle East Africa 5G Core Market Statistics By Deployment, 2024- 2034 (USD billion)

10.4 Middle East Africa 5G Core Market Statistics By Network Function, 2024- 2034 (USD billion)

10.5 Middle East Africa 5G Core Market Statistics By Network Function, 2024- 2034 (USD billion)

10.6 Middle East Africa 5G Core Market Statistics by Country, 2024- 2034 (USD billion)

10.6.1 Middle East 5G Core Market Value, Trends, Growth Forecasts to 2034

10.6.2 Africa 5G Core Market Value, Trends, Growth Forecasts to 2034

11. 5G CORE MARKET STRUCTURE AND COMPETITIVE LANDSCAPE

11.1 Key Companies in 5G Core Industry

11.2 5G Core Business Overview

11.3 5G Core Product Portfolio Analysis

11.4 Financial Analysis

11.5 SWOT Analysis

12 APPENDIX

12.1 Global 5G Core Market Volume (Tons)

12.1 Global 5G Core Trade and Price Analysis

12.2 5G Core Parent Market and Other Relevant Analysis

12.3 Publisher Expertise

12.2 5G Core Industry Report Sources and Methodology

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