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# 5g Chipsets Market Forecasts to 2032 – Global Analysis By Type (Modem Chips, Radio Frequency Integrated Circuits (RFICs), Application-Specific Integrated Circuits (ASICs), Field-Programmable Gate Arrays (FPGAs), System-on-Chip (SoC) and Other Types), Operating Frequency, Processing Node Type, Deployment Type, End User and By Geography

https://marketpublishers.com/r/5A9E513B2DBDEN.html
Date: August 2025
Pages: 200
Price: US$ 4,150.00 (Single User License)
ID: 5A9E513B2DBDEN

## Abstracts

According to Stratistics MRC, the Global 5g Chipsets Market is accounted for $55.40 billion in 2025 and is expected to reach $183.93 billion by 2032 growing at a CAGR of 18.7% during the forecast period. 5G chipsets are specialized integrated circuits that provide ultra-fast data speeds, low latency, and enhanced network reliability by enabling devices to connect to next-generation 5G networks. In order to maximize connectivity, these chipsets combine elements for processing 5G signals, controlling several frequency bands, and enabling technologies like massive MIMO and beamforming. They are present in smartphones, Internet of Things devices, automobiles, and networking equipment, and they are essential for enabling applications like augmented reality, real-time gaming, autonomous driving, and smart cities. 5G chipset designs are constantly being improved by major manufacturers such as Qualcomm, MediaTek, Samsung, and Huawei in order to improve performance, energy efficiency, and compatibility with changing network standards.

According to an IEEE International Roadmap for Devices and Systems (IRDS™) report, the deployment of 5G networks is projected to generate up to $1.9 trillion in economic output in the United States by 2035, significantly boosting demand for semiconductors, including 5G chipsets.

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Market Dynamics:

Driver:

Growing needs for faster internet

Faster and more dependable internet connectivity is essential for the modern digital lifestyle, particularly given the rise in cloud-based services, online gaming, and video streaming. Customers anticipate buffer-free, fluid experiences on their laptops, smartphones, and other linked gadgets. These fast data transfers are made possible by 5G chipsets, which support higher frequency bands and sophisticated network protocols. One major factor driving manufacturers to create more potent and efficient 5G chipsets is the growing consumer expectation for instant access to information and blazingly fast downloads. Additionally, the demand for faster, reliable connectivity will only increase as more people use smart devices, which will drive the market even more.

Restraint:

High costs of development and manufacturing

Advanced 5G chipset design and manufacturing require large investments in R&D and state-of-the-art semiconductor fabrication facilities. The intricacy of incorporating advanced signal processing, power management features, and multiple frequency bands raises manufacturing costs dramatically. Adoption may be slowed, particularly in price-sensitive markets, by these high costs, which result in more costly final products. The market may be less diverse if smaller manufacturers find it difficult to compete. Furthermore, 5G chipset adoption and widespread deployment are made more difficult by the expense of updating current infrastructure and device compatibility, which raises the overall financial burden on consumers and service providers.

Opportunity:

Growing uptake of connected infrastructure and smart cities

5G chipsets have a big chance as smart city projects gain traction around the globe. The vast networks of interconnected devices that make up smart cities, including traffic sensors, smart lighting, and public safety systems, depend on incredibly dependable, low-latency communication. 5G chipsets make it possible for smooth connectivity and real-time data exchange, which are essential for better quality of life and effective urban

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management. Moreover, large-scale IoT deployments will increase demand for sophisticated 5G chipsets, propelling market expansion and technological advancement, as governments and the private sector make significant investments in developing smart infrastructure.

Threat:

Intensive rivalry between chipset producers

There is fierce competition among the leading companies in the 5G chipset market, including Qualcomm, MediaTek, Samsung, and Huawei. Though it also strains profit margins, this fierce competition spurs quick innovation. Technology and economies of scale may be too much for smaller businesses to keep up with. Price wars and aggressive marketing can drive some manufacturers out of the market by lowering profitability. Additionally, it can be difficult to retain customers when there are frequent product launches and short technology cycles. For chipset manufacturers, this competitive climate makes long-term growth strategies more difficult by raising the risk of market fragmentation and possibly slowing down industry consolidation.

Covid-19 Impact:

The COVID-19 pandemic affected the market for 5G chipsets in a variety of ways. Global supply chain disruptions, manufacturing halts, and lockdowns, on the one hand, caused production and deployment delays for 5G devices and infrastructure, which momentarily slowed market expansion. However, the pandemic hastened every industry's digital transformation, raising the need for fast internet to facilitate cloud services, telemedicine, online learning, and remote work. This spike in demand for connectivity increased interest in 5G chipsets and technology. Overall, COVID-19 ultimately demonstrated the vital importance of 5G, resulting in renewed investment and long-term growth prospects in the chipset market, despite initial setbacks that impacted short-term supply and rollout schedules.

The system-on-chip (SoC) segment is expected to be the largest during the forecast period

The system-on-chip (SoC) segment is expected to account for the largest market share during the forecast period. SoCs provide a small and energy-efficient solution that is crucial for 5G devices by combining several parts, including the modem, processor, memory, and radio frequency modules, onto a single chip. Because of this integration,

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SoCs are highly preferred in smartphones, Internet of Things devices, and other mobile gadgets because they improve performance while lowering size, cost, and power consumption. As manufacturers prioritize effective, scalable solutions for next-generation wireless communication, their dominance in the market is driven by their ability to support complex 5G functionalities and multi-band connectivity within a single chip.

The connected vehicles segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the connected vehicles segment is predicted to witness the highest growth rate. The growing use of advanced driver-assistance systems (ADAS), autonomous driving technologies, and improved in-vehicle connectivity is what is causing this quick expansion. Connected cars can communicate with infrastructure, other cars, and cloud platforms more efficiently owing to 5G's ultra-low latency and high-speed data transfer capabilities, which enhance user experience and safety. The need for advanced 5G chipsets is further fueled by the automotive industry's transition to electric and smart vehicles. Moreover, the expansion of the 5G chipset market in the upcoming years will be significantly influenced by connected vehicles, as this segment's growth reflects the larger trend of digitization and connectivity in transportation.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, fueled by the existence of significant semiconductor producers, the fast urbanization of the world, and the extensive use of 5G technologies in nations like South Korea, Japan, and China. The area gains from robust government programs encouraging the rollout of 5G infrastructure as well as strong consumer demand for smartphones and other connected devices with 5G capabilities. The market is further boosted by the expanding investments in smart cities and IoT applications, as well as the thriving telecom sector. Additionally, APAC's dominance in the global 5G chipset market is cemented by its expanding digital ecosystem and cost-effective manufacturing capabilities.

Region with highest CAGR:

Over the forecast period, the Middle East & Africa (MEA) region is anticipated to exhibit the highest CAGR. Growing investments in telecom infrastructure, government programs to increase digital connectivity, and the growing uptake of 5G technology in

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important industries like smart cities, industrial automation, and connected devices are all contributing factors to this quick growth. MEA is positioned as a high-growth region for the deployment of 5G chipsets in the upcoming years due to the region's increasing demand for cutting-edge communication technologies, as well as its comparatively unexplored market potential and improving economic conditions. Collaborations between telecom operators and technology providers that speed up the rollout of 5G also contribute to this surge.

Key players in the market

Some of the key players in 5g Chipsets Market include Broadcom Inc., Infineon Technologies AG, Qualcomm Technologies Inc., Analog Devices, Inc., MediaTek Inc., Qorvo Inc., Huawei Technologies Co., Ltd., NXP Semiconductors N.V., Intel Corporation, Apple Inc., Samsung Electronics Co. Ltd, Renesas Electronics Corporation, Marvell Technology Group, Skyworks Solutions, Inc., Texas Instruments, Inc. and Unisoc Communications, Inc.

Key Developments:

In May 2025, Qualcomm Technologies, Inc. and Xiaomi Corporation are celebrating 15 years of collaboration and have executed a multi-year agreement. The relationship between Qualcomm Technologies and Xiaomi has been pivotal in driving innovation across the technology industry and the companies are committed to delivering industry-leading products and solutions across various device categories globally.

In April 2025, Infineon and Marvell Technology, Inc. have entered into a definitive transaction agreement for a purchase price of US$2.5 billion in cash. The transaction is subject to regulatory approvals. Infineon Technologies AG is accelerating the build-up of its system capabilities for software-defined vehicles with the acquisition of Marvell Technology’s Automotive Ethernet business, complementing and expanding its own market-leading microcontroller business.

In November 2024, Broadcom Inc. and Telia Company announced the expansion of their longtime partnership with a new multi-year agreement, which will see Telia further modernize and transform its telco and cloud infrastructure with the VMware product portfolio. Telia, a Nordic and Baltic telecommunications leader and Nordic media house, will continue its network and IT cloud journey with both VMware Telco Cloud Platform and VMware Cloud Foundation as the basis of its modern cloud platform.

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Types Covered:

- Modem Chips
- Radio Frequency Integrated Circuits (RFICs)
- Application-Specific Integrated Circuits (ASICs)
- Field-Programmable Gate Arrays (FPGAs)
- System-on-Chip (SoC)
- Other Types

Operating Frequencies Covered:

- Sub-6 GHz
- 24-39 GHz (mmWave mid-band)
- Above 39 GHz (extended mmWave)

Processing Node Types Covered:

- 7 nm
- 10 nm
- Above 28 nm

Deployment Types Covered:

- Telecom Base Station Equipment
- Smartphones/Tablets

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- Connected Vehicles
- Connected Devices
- Broadband Access Gateway Devices
- Other Deployment Types

End Users Covered:

- Industrial Automation
- Energy & Utilities
- IT & Telecom
- Consumer Electronics
- Automotive & Transportation
- Healthcare
- Other End Users

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany

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- UK
- Italy
- France
- Spain
- Rest of Europe

Asia Pacific

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- Australia
- New Zealand
- South Korea
- Rest of Asia Pacific

South America

- Argentina
- Brazil
- Chile
- Rest of South America

Middle East & Africa

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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

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Company Profiling

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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)

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## Competitive Benchmarking

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

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# Contents

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## 10 GLOBAL 5G CHIPSETS MARKET, BY GEOGRAPHY

+357 96 030922
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## 11 KEY DEVELOPMENTS



## 12 COMPANY PROFILING

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# List Of Tables

## LIST OF TABLES

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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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