

# Chipset and Processors Market Forecasts to 2034 – Global Analysis By Architecture (ARM, x86, RISC-V, ASIC and DSP), Core Count, Application, End User and By Geography

<https://marketpublishers.com/r/C38A6F24DC4BEN.html>

Date: April 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: C38A6F24DC4BEN

## Abstracts

According to Statistics MRC, the Global Chipset and Processors Market is accounted for \$139.6 billion in 2026 and is expected to reach \$209.4 billion by 2034 growing at a CAGR of 5.2% during the forecast period. Processors and chipsets are essential elements of contemporary computing architecture, responsible for executing instructions and enabling communication between system components. The processor serves as the central unit that handles calculations, logic processing, and control tasks, whereas the chipset manages data transfer between the CPU, memory, storage devices, and external peripherals. Their combined functionality directly influences the performance, efficiency, and responsiveness of electronic devices. Continuous advancements in semiconductor design have resulted in more compact, high-speed, and energy-efficient chips. These technologies are applied across smartphones, computers, servers, automotive electronics, and Internet of Things devices, supporting global technological progress and innovation across industries.

According to IDC, the global semiconductor market—which includes chipsets and processors is projected to grow by over 15% in 2025, driven primarily by artificial intelligence (AI) and high-performance computing (HPC).

Market Dynamics:

Driver:

Increasing demand for artificial intelligence computing

The growth of artificial intelligence applications is strongly boosting the chipset and processors industry. AI systems depend on powerful computing hardware to process vast amounts of information, run machine learning algorithms, and deliver real-time insights. Advanced processors, including GPUs and AI-specific chips, are being widely used in both cloud and edge environments. Organizations across sectors such as healthcare, automotive, and finance are adopting AI solutions, increasing the need for high-performance semiconductor components. Continuous innovation in chip design is helping improve efficiency and processing capability. This widespread adoption of AI technologies is driving strong global demand for processors and chipsets.

#### Restraint:

##### High manufacturing and R&D costs

The semiconductor industry is heavily constrained by the high expenses involved in chip design, production, and research activities. Advanced processors require cutting-edge manufacturing technologies and precision engineering, which significantly increases production costs. Establishing fabrication facilities involves massive capital investment, making it difficult for new entrants to participate. Moreover, continuous upgrades in technology demand ongoing research spending to stay competitive. These financial pressures reduce profit margins and restrict innovation speed for smaller firms. As a result, the overall growth of the chipset and processors market is hindered by the substantial cost burden associated with development and large-scale manufacturing processes worldwide.

#### Opportunity:

##### Rising demand for cloud computing and data centers

The growth of cloud computing and data center networks provides significant opportunities for the semiconductor industry. Cloud platforms rely on powerful processors to manage computing workloads, data storage, and virtualization processes efficiently. Increasing adoption of online services, software-as-a-service platforms, and digital applications is fueling data center expansion. These infrastructures require advanced chipsets to ensure high performance, scalability, and energy efficiency. As businesses continue migrating to cloud-based solutions, the need for robust computing hardware is increasing. This ongoing digital transformation is expected to drive sustained demand for processors and chipsets across global cloud computing

environments.

Threat:

Rapid technological changes and short product lifecycles

The fast pace of technological innovation in the semiconductor industry creates a major threat due to shrinking product lifespans. New processor models are frequently introduced with enhanced capabilities, making older versions outdated quickly. Companies are forced to continuously develop advanced chips to maintain competitiveness. This ongoing cycle increases research and development costs and reduces the time available to recover investments. Businesses that fail to innovate rapidly risk losing customers and market position. The short lifecycle of semiconductor products creates financial instability and operational pressure, making technological obsolescence a critical threat to the chipset and processors market.

Covid-19 Impact:

The COVID-19 outbreak greatly affected the semiconductor industry by interrupting production and global supply networks. Factory closures and workforce limitations slowed down chip manufacturing, resulting in shortages across multiple sectors. Meanwhile, demand for digital devices increased sharply as people shifted to remote working, virtual learning, and online entertainment. This sudden rise in demand, combined with reduced supply, created significant market imbalance. Transportation and trade restrictions further impacted the availability of components. Despite these challenges, the crisis encouraged rapid digital adoption and increased investment in technologies such as cloud services and artificial intelligence.

The ARM segment is expected to be the largest during the forecast period

The ARM segment is expected to account for the largest market share during the forecast period because of its efficiency, adaptability, and broad usage across multiple electronic devices. It is especially popular in smartphones, portable gadgets, and embedded systems where low power consumption is essential. ARM's design focuses on simplified instructions, enabling faster processing with reduced energy usage. This makes it highly suitable for modern mobile computing and IoT applications. Its licensing model allows manufacturers to create customized chip solutions, increasing adoption across industries.

The automotive systems segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the automotive systems segment is predicted to witness the highest growth rate, driven by the evolution of smart and electric vehicles. Increasing adoption of autonomous driving technologies, connected car features, and electrification is boosting demand for advanced semiconductor solutions. Vehicles now require powerful processors to manage navigation, safety systems, infotainment, and real-time decision-making from multiple sensors. The automotive industry's shift toward digitalization and automation is accelerating chip integration. Continuous innovation in mobility technologies is further strengthening semiconductor usage, making automotive applications the fastest-growing segment in the global chipset and processors market.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share because of its well-established semiconductor ecosystem and large-scale electronics production capabilities. It is home to major manufacturing hubs and leading chipmakers that support global supply chains. High demand for consumer electronics, including smart phones, computers, and smart devices, further boosts market growth. The availability of affordable labor, advanced fabrication facilities, and strong government initiatives enhances production efficiency. Additionally, rapid technological adoption across industries strengthens regional consumption.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, driven by rapid advancements in digital technologies and strong innovation capabilities. The region has a highly developed technological ecosystem, with extensive use of artificial intelligence, cloud platforms, and high-performance computing systems. Major investments in semiconductor research and design further support market expansion. Growing adoption of 5G networks, autonomous vehicles, and edge computing applications is increasing demand for advanced processors. The presence of leading technology firms and continuous digital transformation initiatives position North America as the region with the highest growth rate in the global semiconductor industry.

Key players in the market

Some of the key players in Chipset and Processors Market include NVIDIA Corporation,

Advanced Micro Devices, Inc. (AMD), Intel Corporation, Qualcomm Technologies, Inc., MediaTek Inc., Apple Inc., Samsung Electronics Co., Ltd., Huawei Technologies Co., Ltd., Broadcom Inc., Marvell Technology Group Ltd., UNISOC (Shanghai) Technologies Co., Ltd., Texas Instruments Inc., Renesas Electronics Corporation, NXP Semiconductors N.V., STMicroelectronics N.V., VIA Technologies Inc., SiFive Inc. and Ampere Computing LLC.

#### Key Developments:

In September 2025, NVIDIA and Intel Corporation announced a collaboration to jointly develop multiple generations of custom data center and PC products that accelerate applications and workloads across hyperscale, enterprise and consumer markets. The companies will focus on seamlessly connecting NVIDIA and Intel architectures using NVIDIA NVLink — integrating the strengths of NVIDIA's AI and accelerated computing with Intel's leading CPU technologies and x86 ecosystem to deliver cutting-edge solutions for customers.

In June 2025, Qualcomm Incorporated announced that it has reached an agreement with Alphawave IP Group plc regarding the terms and conditions of a recommended acquisition by Aqua Acquisition Sub LLC, an indirect wholly-owned subsidiary of Qualcomm Incorporated, for the entire issued and to be issued ordinary share capital of Alphawave Semi at an implied enterprise value of approximately US\$2.4 billion.

In May 2025, Samsung Electronics announced that it has signed an agreement to acquire all shares of FiltGroup, a leading global HVAC solutions provider, for €1.5 billion from European investment firm Triton. With the global applied HVAC market experiencing rapid growth, the acquisition reinforces Samsung's commitment to expanding and strengthening its HVAC business.

#### Architectures Covered:

ARM

x86

RISC-V

ASIC

DSP

Core Counts Covered:

Single-core

Dual-core

Quad-core

Octa-core

High-core (?16 cores)

Applications Covered:

Smartphones

Tablets

Laptops & PCs

Automotive Systems

Routers & Gateways

Industrial IoT Devices

Wearables

End Users Covered:

Consumer Electronics

Automotive Industry

Healthcare IT

Industrial Automation

Telecommunications

Defense & Aerospace

### Regions Covered:

#### North America

United States

Canada

Mexico

#### Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

### Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

### South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

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

## Contents

### **1 EXECUTIVE SUMMARY**

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

### **2 RESEARCH FRAMEWORK**

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
  - 2.4.1 Data Collection (Primary and Secondary)
  - 2.4.2 Data Modeling and Estimation Techniques
  - 2.4.3 Data Validation and Triangulation
  - 2.4.4 Analytical and Forecasting Approach

### **3 MARKET DYNAMICS AND TREND ANALYSIS**

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

### **4 COMPETITIVE AND STRATEGIC ASSESSMENT**

- 4.1 Porter's Five Forces Analysis
  - 4.1.1 Supplier Bargaining Power
  - 4.1.2 Buyer Bargaining Power
  - 4.1.3 Threat of Substitutes
  - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

## **5 GLOBAL CHIPSET AND PROCESSORS MARKET, BY ARCHITECTURE**

- 5.1 ARM
- 5.2 x86
- 5.3 RISC-V
- 5.4 ASIC
- 5.5 DSP

## **6 GLOBAL CHIPSET AND PROCESSORS MARKET, BY CORE COUNT**

- 6.1 Single-core
- 6.2 Dual-core
- 6.3 Quad-core
- 6.4 Octa-core
- 6.5 High-core (?16 cores)

## **7 GLOBAL CHIPSET AND PROCESSORS MARKET, BY APPLICATION**

- 7.1 Smartphones
- 7.2 Tablets
- 7.3 Laptops & PCs
- 7.4 Automotive Systems
- 7.5 Routers & Gateways
- 7.6 Industrial IoT Devices
- 7.7 Wearables

## **8 GLOBAL CHIPSET AND PROCESSORS MARKET, BY END USER**

- 8.1 Consumer Electronics
- 8.2 Automotive Industry
- 8.3 Healthcare IT
- 8.4 Industrial Automation
- 8.5 Telecommunications
- 8.6 Defense & Aerospace

## 9 GLOBAL CHIPSET AND PROCESSORS MARKET, BY GEOGRAPHY

### 9.1 North America

9.1.1 United States

9.1.2 Canada

9.1.3 Mexico

### 9.2 Europe

9.2.1 United Kingdom

9.2.2 Germany

9.2.3 France

9.2.4 Italy

9.2.5 Spain

9.2.6 Netherlands

9.2.7 Belgium

9.2.8 Sweden

9.2.9 Switzerland

9.2.10 Poland

9.2.11 Rest of Europe

### 9.3 Asia Pacific

9.3.1 China

9.3.2 Japan

9.3.3 India

9.3.4 South Korea

9.3.5 Australia

9.3.6 Indonesia

9.3.7 Thailand

9.3.8 Malaysia

9.3.9 Singapore

9.3.10 Vietnam

9.3.11 Rest of Asia Pacific

### 9.4 South America

9.4.1 Brazil

9.4.2 Argentina

9.4.3 Colombia

9.4.4 Chile

9.4.5 Peru

9.4.6 Rest of South America

### 9.5 Rest of the World (RoW)

9.5.1 Middle East

- 9.5.1.1 Saudi Arabia
- 9.5.1.2 United Arab Emirates
- 9.5.1.3 Qatar
- 9.5.1.4 Israel
- 9.5.1.5 Rest of Middle East
- 9.5.2 Africa
  - 9.5.2.1 South Africa
  - 9.5.2.2 Egypt
  - 9.5.2.3 Morocco
  - 9.5.2.4 Rest of Africa

## **10 STRATEGIC MARKET INTELLIGENCE**

- 10.1 Industry Value Network and Supply Chain Assessment
- 10.2 White-Space and Opportunity Mapping
- 10.3 Product Evolution and Market Life Cycle Analysis
- 10.4 Channel, Distributor, and Go-to-Market Assessment

## **11 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES**

- 11.1 Mergers and Acquisitions
- 11.2 Partnerships, Alliances, and Joint Ventures
- 11.3 New Product Launches and Certifications
- 11.4 Capacity Expansion and Investments
- 11.5 Other Strategic Initiatives

## **12 COMPANY PROFILES**

- 12.1 NVIDIA Corporation
- 12.2 Advanced Micro Devices, Inc. (AMD)
- 12.3 Intel Corporation
- 12.4 Qualcomm Technologies, Inc.
- 12.5 MediaTek Inc.
- 12.6 Apple Inc.
- 12.7 Samsung Electronics Co., Ltd.
- 12.8 Huawei Technologies Co., Ltd.
- 12.9 Broadcom Inc.
- 12.10 Marvell Technology Group Ltd.
- 12.11 UNISOC (Shanghai) Technologies Co., Ltd.

- 12.12 Texas Instruments Inc.
- 12.13 Renesas Electronics Corporation
- 12.14 NXP Semiconductors N.V.
- 12.15 STMicroelectronics N.V.
- 12.16 VIA Technologies Inc.
- 12.17 SiFive Inc.
- 12.18 Ampere Computing LLC

## List Of Tables

### LIST OF TABLES

- Table 1 Global Chipset and Processors Market Outlook, By Region (2023-2034) (\$MN)
- Table 2 Global Chipset and Processors Market Outlook, By Architecture (2023-2034) (\$MN)
- Table 3 Global Chipset and Processors Market Outlook, By ARM (2023-2034) (\$MN)
- Table 4 Global Chipset and Processors Market Outlook, By x86 (2023-2034) (\$MN)
- Table 5 Global Chipset and Processors Market Outlook, By RISC-V (2023-2034) (\$MN)
- Table 6 Global Chipset and Processors Market Outlook, By ASIC (2023-2034) (\$MN)
- Table 7 Global Chipset and Processors Market Outlook, By DSP (2023-2034) (\$MN)
- Table 8 Global Chipset and Processors Market Outlook, By Core Count (2023-2034) (\$MN)
- Table 9 Global Chipset and Processors Market Outlook, By Single-core (2023-2034) (\$MN)
- Table 10 Global Chipset and Processors Market Outlook, By Dual-core (2023-2034) (\$MN)
- Table 11 Global Chipset and Processors Market Outlook, By Quad-core (2023-2034) (\$MN)
- Table 12 Global Chipset and Processors Market Outlook, By Octa-core (2023-2034) (\$MN)
- Table 13 Global Chipset and Processors Market Outlook, By High-core (?16 cores) (2023-2034) (\$MN)
- Table 14 Global Chipset and Processors Market Outlook, By Application (2023-2034) (\$MN)
- Table 15 Global Chipset and Processors Market Outlook, By Smartphones (2023-2034) (\$MN)
- Table 16 Global Chipset and Processors Market Outlook, By Tablets (2023-2034) (\$MN)
- Table 17 Global Chipset and Processors Market Outlook, By Laptops & PCs (2023-2034) (\$MN)
- Table 18 Global Chipset and Processors Market Outlook, By Automotive Systems (2023-2034) (\$MN)
- Table 19 Global Chipset and Processors Market Outlook, By Routers & Gateways (2023-2034) (\$MN)
- Table 20 Global Chipset and Processors Market Outlook, By Industrial IoT Devices (2023-2034) (\$MN)
- Table 21 Global Chipset and Processors Market Outlook, By Wearables (2023-2034)

(\$MN)

Table 22 Global Chipset and Processors Market Outlook, By End User (2023-2034)

(\$MN)

Table 23 Global Chipset and Processors Market Outlook, By Consumer Electronics (2023-2034) (\$MN)

Table 24 Global Chipset and Processors Market Outlook, By Automotive Industry (2023-2034) (\$MN)

Table 25 Global Chipset and Processors Market Outlook, By Healthcare IT (2023-2034) (\$MN)

Table 26 Global Chipset and Processors Market Outlook, By Industrial Automation (2023-2034) (\$MN)

Table 27 Global Chipset and Processors Market Outlook, By Telecommunications (2023-2034) (\$MN)

Table 28 Global Chipset and Processors Market Outlook, By Defense & Aerospace (2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

## I would like to order

Product name: Chipset and Processors Market Forecasts to 2034 – Global Analysis By Architecture (ARM, x86, RISC-V, ASIC and DSP), Core Count, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/C38A6F24DC4BEN.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](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/C38A6F24DC4BEN.html>