

# **Memory Integrated Circuits Market Forecasts to 2030 – Global Analysis By Product Type (Volatile Memory and Non-Volatile Memory), End User (Consumer Electronics, IT & Telecommunication, Automotive, Industrial, Aerospace & Defense and Healthcare) and By Geography**

<https://marketpublishers.com/r/MD6CD8FDB34FEN.html>

Date: February 2025

Pages: 150

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

ID: MD6CD8FDB34FEN

## **Abstracts**

According to Statistics MRC, the Global Memory Integrated Circuits Market is accounted for \$95.6 billion in 2024 and is expected to reach \$145.1 billion by 2030 growing at a CAGR of 7.2% during the forecast period. Semiconductor devices called memory integrated circuits (ICs) are made to store digital data. They represent binary data (0s and 1s) using arrays of memory cells, usually transistors or capacitors. Random Access Memory (RAM) for short-term storage and Read-Only Memory (ROM) for long-term storage are important types. In order to process and store data, memory integrated circuits (ICs) are crucial parts of computers, smartphones, and other electronic devices.

According to the Semiconductor Industry Association (SIA), global semiconductor industry sales reached \$574.1 billion in 2022.

Market Dynamics:

Driver:

Increasing demand for consumer electronics

Modern consumer electronics require high-capacity and high-speed memory solutions

to support advanced features like augmented reality, high-resolution cameras, and seamless multitasking. Additionally, the proliferation of IoT devices and smart home technologies further boosts demand for efficient memory ICs. This trend is fueled by rising disposable incomes and technological advancements, making consumer electronics a key driver of market growth.

#### Restraint:

##### High manufacturing costs

The production of memory ICs involves complex processes, advanced materials, and cutting-edge manufacturing technologies, leading to high costs. Innovations like 3D NAND and DRAM scaling require significant investments in research and development, specialized equipment, and skilled labor. These factors increase the overall cost of production, limiting affordability for certain applications. Moreover, price competition among manufacturers pressures profit margins, posing a challenge to the widespread adoption of advanced memory ICs.

#### Opportunity:

##### Growth in data centers

Increasing reliance on cloud computing, big data analytics, and AI-driven applications necessitates high-performance memory solutions with large storage capacities and fast processing speeds. Memory ICs like DRAM and NAND flash are critical for handling the massive data loads in hyper scale data centers. As businesses continue to migrate operations to the cloud, this trend is expected to drive sustained demand for advanced memory technologies.

#### Threat:

##### Environmental concerns

The manufacturing of memory ICs has a substantial environmental impact due to high energy consumption, greenhouse gas emissions, and the use of hazardous materials. The production process involves significant water usage and generates toxic waste, raising concerns about sustainability. Additionally, improper disposal of electronic waste contributes to pollution. These environmental challenges necessitate stricter regulations and sustainable practices, which may increase production costs and complicate

compliance for manufacturers.

#### Covid-19 Impact:

The COVID-19 pandemic disrupted the memory IC market due to supply chain interruptions and reduced manufacturing capacity. Lockdowns delayed production schedules and impacted raw material availability. However, increased reliance on remote work and digital infrastructure during the pandemic drove demand for consumer electronics and data centers, partially offsetting losses. Post-pandemic recovery efforts have accelerated investments in semiconductor manufacturing, ensuring long-term market growth.

The non-volatile memory segment is expected to be the largest during the forecast period

The non-volatile memory segment is expected to account for the largest market share during the forecast period due to its ability to retain data without power, making it essential for applications like smartphones, SSDs, and IoT devices. Technologies such as NAND flash are widely used in consumer electronics and enterprise storage solutions due to their durability and scalability. The segment's growth is driven by advancements in 3D NAND technology that enhance storage density while reducing costs. Its versatility across various industries ensures its continued leadership in the market.

The IT & telecommunication segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the IT & telecommunication segment is predicted to witness the highest growth rate due to increasing adoption of 5G networks and cloud computing technologies. Memory ICs are critical for supporting high-speed data transmission and storage in telecommunications infrastructure like base stations and routers. Additionally, the proliferation of AI-driven applications in telecom accelerates demand for advanced memory solutions.

#### Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to its position as a global hub for semiconductor manufacturing and consumer electronics production. Countries like China, South Korea, and Japan lead in

producing advanced memory ICs driven by strong domestic demand for smartphones, IoT devices, and automotive electronics. Additionally, government initiatives supporting technological innovation further bolster regional growth.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR owing to advancements in AI technologies and increased investments in cloud infrastructure. The region's strong focus on research and development drives innovation in high-performance memory solutions. Additionally, rising adoption of autonomous vehicles and smart devices contributes to robust growth in this market.

Key players in the market

Some of the key players in Memory Integrated Circuits Market include Advanced Micro Devices (AMD), Analog Devices, Inc., Broadcom Inc., Cypress Semiconductor Corporation, Fujitsu Limited, Infineon Technologies AG, Intel Corporation, Integrated Silicon Solution Inc., Macronix International Co., Ltd., Maxim Integrated Products, Inc., Micron Technology, Inc., NVIDIA Corporation, NXP Semiconductors N.V., Renesas Electronics Corporation, Samsung Electronics Co., Ltd., SK Hynix Inc., STMicroelectronics N.V. and Taiwan Semiconductor Manufacturing Company (TSMC).

Key Developments:

In January 2025, Micron Technology, Inc. announced expansions across its crucial consumer memory and storage portfolio, including unveiling the high-speed Crucial P510 SSD, and expanding density and form factor options across its existing DRAM portfolio to enable broader choice and flexibility for consumers. The P510 features read and write speeds of up to 11,000/9,550 megabytes per second (MB/s), bringing blazing fast Gen5 performance to the masses.

In December 2024, Broadcom Inc. announced the availability of its 3.5D eXtreme Dimension System in Package (XDSiP™) platform technology, enabling consumer AI customers to develop next-generation custom accelerators (XPUs). The 3.5D XDSiP integrates more than 6000 mm<sup>2</sup> of silicon and up to 12 high bandwidth memory (HBM) stacks in one packaged device to enable high-efficiency, low-power computing for AI at scale. Broadcom has achieved a significant milestone by developing and launching the industry's first Face-to-Face (F2F) 3.5D XPU.

In October 2024, AMD announced its third generation commercial AI mobile processors, designed specifically to transform business productivity with Copilot+ features including live captioning and language translation in conference calls and advanced AI image generators. The new Ryzen AI PRO 300 Series processors deliver industry-leading AI compute, with up to three times the AI performance than the previous generation, and offer uncompromising performance for everyday workloads.

#### Product Types Covered:

Volatile Memory

Non-Volatile Memory

#### End Users Covered:

Consumer Electronics

IT & Telecommunication

Automotive

Industrial

Aerospace & Defense

Healthcare

#### Regions Covered:

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 2022, 2023, 2024, 2026, and 2030
- 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**

### **2 PREFACE**

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
  - 2.4.1 Data Mining
  - 2.4.2 Data Analysis
  - 2.4.3 Data Validation
  - 2.4.4 Research Approach
- 2.5 Research Sources
  - 2.5.1 Primary Research Sources
  - 2.5.2 Secondary Research Sources
  - 2.5.3 Assumptions

### **3 MARKET TREND ANALYSIS**

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Product Analysis
- 3.7 End User Analysis
- 3.8 Emerging Markets
- 3.9 Impact of Covid-19

### **4 PORTERS FIVE FORCE ANALYSIS**

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

## **5 GLOBAL MEMORY INTEGRATED CIRCUITS MARKET, BY PRODUCT TYPE**

### 5.1 Introduction

### 5.2 Volatile Memory

#### 5.2.1 Dynamic Random-Access Memory (DRAM)

#### 5.2.2 Static Random-Access Memory (SRAM)

### 5.3 Non-Volatile Memory

#### 5.3.1 Flash Memory

##### 5.3.1.1 NAND Flash

###### 5.3.1.1.1 Single-Level Cell (SLC)

###### 5.3.1.1.2 Multi-Level Cell (MLC)

###### 5.3.1.1.3 Triple-Level Cell (TLC)

###### 5.3.1.1.4 Quad-Level Cell (QLC)

##### 5.3.1.2 NOR Flash

#### 5.3.2 Read-Only Memory (ROM)

##### 5.3.2.1 Mask ROM

##### 5.3.2.2 Programmable ROM (PROM)

##### 5.3.2.3 Erasable Programmable ROM (EPROM)

##### 5.3.2.4 Electrically Erasable Programmable ROM (EEPROM)

#### 5.3.3 Next-Generation Memory

##### 5.3.3.1 Magnetoresistive RAM (MRAM)

##### 5.3.3.2 Ferroelectric RAM (FRAM)

##### 5.3.3.3 Resistive RAM (ReRAM)

##### 5.3.3.4 Phase-Change Memory (PCRAM)

## **6 GLOBAL MEMORY INTEGRATED CIRCUITS MARKET, BY END USER**

### 6.1 Introduction

### 6.2 Consumer Electronics

#### 6.2.1 Smartphones & Tablets

#### 6.2.2 Computers & Laptops

#### 6.2.3 Gaming Consoles

#### 6.2.4 Wearable Devices

### 6.3 IT & Telecommunication

#### 6.3.1 Data Centers

#### 6.3.2 Servers

#### 6.3.3 Network Infrastructure

#### 6.3.4 Storage Systems

### 6.4 Automotive

- 6.4.1 Advanced Driver Assistance Systems (ADAS)
- 6.4.2 Infotainment Systems
- 6.4.3 Vehicle Control Units
- 6.5 Industrial
  - 6.5.1 Industrial Automation
  - 6.5.2 Smart Manufacturing
  - 6.5.3 Process Control Systems
- 6.6 Aerospace & Defense
  - 6.6.1 Avionics
  - 6.6.2 Defense Electronics
  - 6.6.3 Satellite Systems
- 6.7 Healthcare
  - 6.7.1 Medical Imaging Equipment
  - 6.7.2 Diagnostic Devices
  - 6.7.3 Patient Monitoring Systems

## **7 GLOBAL MEMORY INTEGRATED CIRCUITS MARKET, BY GEOGRAPHY**

- 7.1 Introduction
- 7.2 North America
  - 7.2.1 US
  - 7.2.2 Canada
  - 7.2.3 Mexico
- 7.3 Europe
  - 7.3.1 Germany
  - 7.3.2 UK
  - 7.3.3 Italy
  - 7.3.4 France
  - 7.3.5 Spain
  - 7.3.6 Rest of Europe
- 7.4 Asia Pacific
  - 7.4.1 Japan
  - 7.4.2 China
  - 7.4.3 India
  - 7.4.4 Australia
  - 7.4.5 New Zealand
  - 7.4.6 South Korea
  - 7.4.7 Rest of Asia Pacific
- 7.5 South America

- 7.5.1 Argentina
- 7.5.2 Brazil
- 7.5.3 Chile
- 7.5.4 Rest of South America
- 7.6 Middle East & Africa
  - 7.6.1 Saudi Arabia
  - 7.6.2 UAE
  - 7.6.3 Qatar
  - 7.6.4 South Africa
  - 7.6.5 Rest of Middle East & Africa

## **8 KEY DEVELOPMENTS**

- 8.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 8.2 Acquisitions & Mergers
- 8.3 New Product Launch
- 8.4 Expansions
- 8.5 Other Key Strategies

## **9 COMPANY PROFILING**

- 9.1 Advanced Micro Devices (AMD)
- 9.2 Analog Devices, Inc.
- 9.3 Broadcom Inc.
- 9.4 Cypress Semiconductor Corporation
- 9.5 Fujitsu Limited
- 9.6 Infineon Technologies AG
- 9.7 Intel Corporation
- 9.8 Integrated Silicon Solution Inc.
- 9.9 Macronix International Co., Ltd.
- 9.10 Maxim Integrated Products, Inc.
- 9.11 Micron Technology, Inc.
- 9.12 NVIDIA Corporation
- 9.13 NXP Semiconductors N.V.
- 9.14 Renesas Electronics Corporation
- 9.15 Samsung Electronics Co., Ltd.
- 9.16 SK Hynix Inc.
- 9.17 STMicroelectronics N.V.
- 9.18 Taiwan Semiconductor Manufacturing Company (TSMC)

## List Of Tables

### LIST OF TABLES

Table 1 Global Memory Integrated Circuits Market Outlook, By Region (2022-2030) (\$MN)

Table 2 Global Memory Integrated Circuits Market Outlook, By Product Type (2022-2030) (\$MN)

Table 3 Global Memory Integrated Circuits Market Outlook, By Volatile Memory (2022-2030) (\$MN)

Table 4 Global Memory Integrated Circuits Market Outlook, By Dynamic Random-Access Memory (DRAM) (2022-2030) (\$MN)

Table 5 Global Memory Integrated Circuits Market Outlook, By Static Random-Access Memory (SRAM) (2022-2030) (\$MN)

Table 6 Global Memory Integrated Circuits Market Outlook, By Non-Volatile Memory (2022-2030) (\$MN)

Table 7 Global Memory Integrated Circuits Market Outlook, By Flash Memory (2022-2030) (\$MN)

Table 8 Global Memory Integrated Circuits Market Outlook, By Read-Only Memory (ROM) (2022-2030) (\$MN)

Table 9 Global Memory Integrated Circuits Market Outlook, By Next-Generation Memory (2022-2030) (\$MN)

Table 10 Global Memory Integrated Circuits Market Outlook, By End User (2022-2030) (\$MN)

Table 11 Global Memory Integrated Circuits Market Outlook, By Consumer Electronics (2022-2030) (\$MN)

Table 12 Global Memory Integrated Circuits Market Outlook, By Smartphones & Tablets (2022-2030) (\$MN)

Table 13 Global Memory Integrated Circuits Market Outlook, By Data Centers (2022-2030) (\$MN)

Table 14 Global Memory Integrated Circuits Market Outlook, By Servers (2022-2030) (\$MN)

Table 15 Global Memory Integrated Circuits Market Outlook, By Network Infrastructure (2022-2030) (\$MN)

Table 16 Global Memory Integrated Circuits Market Outlook, By Storage Systems (2022-2030) (\$MN)

Table 17 Global Memory Integrated Circuits Market Outlook, By Automotive (2022-2030) (\$MN)

Table 18 Global Memory Integrated Circuits Market Outlook, By Advanced Driver

Assistance Systems (ADAS) (2022-2030) (\$MN)

Table 19 Global Memory Integrated Circuits Market Outlook, By Infotainment Systems (2022-2030) (\$MN)

Table 20 Global Memory Integrated Circuits Market Outlook, By Vehicle Control Units (2022-2030) (\$MN)

Table 21 Global Memory Integrated Circuits Market Outlook, By Industrial (2022-2030) (\$MN)

Table 22 Global Memory Integrated Circuits Market Outlook, By Industrial Automation (2022-2030) (\$MN)

Table 23 Global Memory Integrated Circuits Market Outlook, By Smart Manufacturing (2022-2030) (\$MN)

Table 24 Global Memory Integrated Circuits Market Outlook, By Process Control Systems (2022-2030) (\$MN)

Table 25 Global Memory Integrated Circuits Market Outlook, By Aerospace & Defense (2022-2030) (\$MN)

Table 26 Global Memory Integrated Circuits Market Outlook, By Avionics (2022-2030) (\$MN)

Table 27 Global Memory Integrated Circuits Market Outlook, By Defense Electronics (2022-2030) (\$MN)

Table 28 Global Memory Integrated Circuits Market Outlook, By Satellite Systems (2022-2030) (\$MN)

Table 29 Global Memory Integrated Circuits Market Outlook, By Healthcare (2022-2030) (\$MN)

Table 30 Global Memory Integrated Circuits Market Outlook, By Medical Imaging Equipment (2022-2030) (\$MN)

Table 31 Global Memory Integrated Circuits Market Outlook, By Diagnostic Devices (2022-2030) (\$MN)

Table 32 Global Memory Integrated Circuits Market Outlook, By Patient Monitoring Systems (2022-2030) (\$MN)

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

## I would like to order

Product name: Memory Integrated Circuits Market Forecasts to 2030 – Global Analysis By Product Type (Volatile Memory and Non-Volatile Memory), End User (Consumer Electronics, IT & Telecommunication, Automotive, Industrial, Aerospace & Defense and Healthcare) and By Geography

Product link: <https://marketpublishers.com/r/MD6CD8FDB34FEN.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/MD6CD8FDB34FEN.html>