Motherboard Market Study

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About Us

Straits Research Pvt Ltd is a leading market research firm offering comprehensive insights on market demand, trends, growth prospects and regional analysis. With over 35 years of combined experience, we provide premium qualitative insights on consumer preferences, regulatory landscape, and technological advancements along with quantitative insights on industry market size, global economic scenario and revenue opportunities. These reports are backed by high-quality data sourced from primary sources and large secondary databases. With analyst perspectives and insights included in every report, Straits Research delivers comprehensive market intelligence and detailed analysis to help clients make informed decisions.

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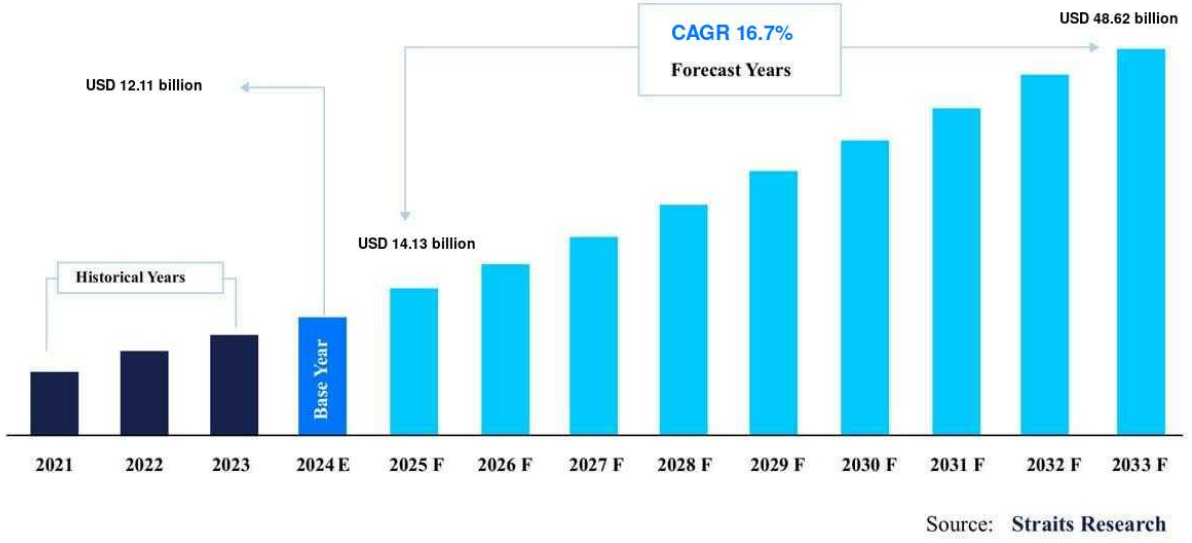
Regional Overview



Source: Straits Research

Emerging Countries

United States | Germany | China

Emerging Companies

ASUS | Gigabyte | OpenGov

Company Profiles

ASUS | MSI | Gigabyte | Intel | Biostar | Colorful | SOYO | Maxsun | Yeston

Note: More company profiles available on full reports.

Top 5 Company Market Share

Total

45%

Top 5 company market share

Market Trends

Growth Trends

- Increase in demand of high performance motherboards for gaming and professional industries
- Technological advancements leading to the development of more compact and efficient motherboards
- Growth in the production of custom motherboards to meet specific consumer requirements
- Increase in research and development activities by leading manufacturers
- Rise in popularity of IoT devices ensuring higher demand for innovative motherboard designs

Factors to Consider While Calculating Market Size and Share

- Global demand for motherboards including corporate, consumer, and institutional sectors
- The pricing strategy of different motherboards in the market
- The total sales volume of motherboards from different brands
- The potential market reach including domestic and international markets
- Technological advancements and innovations in the motherboard market
- Changes in consumer behaviour and emerging market trends

Key Market Indicators

- Total market capitalisation of the motherboard industry
- Percentage of market share held by leading manufacturers
- Growth rate of the motherboard industry
- GDP growth and economic conditions affecting the motherboard market
- Market penetration rate or the percentage of the target market that consumes motherboards
- Industry growth rate, which measures the increment of market size

Supply chain disruptions and material shortages

Ongoing global supply chain disruptions have significantly impacted the market, leading to shortages of essential raw materials such as semiconductors, copper, and rare earth elements. These bottlenecks have increased lead times for motherboard production, driving up manufacturing costs and limiting market growth.

The COVID-19 pandemic, geopolitical tensions, and disruptions in semiconductor fabrication have exacerbated supply constraints, forcing motherboard manufacturers to adapt by diversifying their supplier networks and increasing investments in localized production. However, rising inflation and fluctuating raw material prices continue to pose challenges for motherboard makers, impacting profit margins and slowing production capacity.

- The global chip shortage that began in 2020 has had lasting effects on motherboard availability, with manufacturers such as ASUS and MSI reporting extended production delays.

Market Trends

Growing demand for high-performance computing

The increasing adoption of high-performance computing (HPC) systems across various industries, including gaming, artificial intelligence, data centers, and scientific research, is a key factor driving the global market. Organizations and enterprises require higher processing power, enhanced data-handling capacity, and improved system reliability to meet the growing demand for real-time processing and computational efficiency. This need pushes the development of next-generation motherboards equipped with advanced features such as multiple GPU support, high-speed data transfer capabilities, and improved cooling solutions.

The rise of eSports and AAA gaming titles contributes to motherboard demand, as gamers and professional players require systems that support overclocking, high-refresh-rate displays, and ultra-fast storage. Additionally, AI-driven workloads and machine learning applications rely on motherboards that can accommodate powerful multi-core processors and specialized hardware accelerators such as GPUs and TPUs.

- For instance, both Intel and AMD have introduced high-performance chipsets that require advanced motherboards with increased PCIe lanes, DDR5 support, and enhanced power delivery systems. The launch of AMD's Ryzen 7000 series and Intel’s 14th Gen processors has fueled motherboard sales as consumers seek to upgrade their systems for better performance and efficiency.

Growth of data centers and cloud computing

The expansion of cloud computing and data centers creates significant opportunities for motherboard manufacturers as enterprises increasingly invest in infrastructure to support large-scale computing workloads. Cloud service providers, including AWS, Microsoft Azure, and Google Cloud, require high-performance server motherboards designed for scalability, reliability, and efficiency.

With the rise of artificial intelligence, big data analytics, and 5G technology, data centers must handle unprecedented volumes of data, requiring motherboards that support multiple processors, large memory capacities, and advanced connectivity options. The demand for motherboards that can support high-speed networking, low-latency computing, and AI-driven optimizations is expected to grow exponentially.

- For instance, the demand for data centers in the U.S. is accelerating, driven by AI and emerging technologies. With over 5,000 existing facilities, the data center market is projected to grow at a 9% annual rate through 2030. This rapid growth boosts the demand for advanced computing and storage infrastructure, leading to increased investment in high-performance motherboards tailored to enterprise and hyperscale computing environments.

Additionally, government initiatives to strengthen cloud infrastructure and AI capabilities fuel market expansion. Countries like China, India, and Germany invest heavily in AI research and data center development, creating a lucrative market for motherboard manufacturers specializing in enterprise solutions.

Market Segments

By Segment

ATX leads the motherboard market with a 47-50% share, favored for its scalability in gaming and industrial use.

47-50%

ATX

By End User

Industrial users dominate the market, leveraging motherboards for automation and data centers.

XX%

Industrial

Regional Overview

North America

North America holds a 32-35% market share, led by the U.S. (78-80% of region), driven by advanced tech adoption, gaming culture, and robust data center growth.

78-80%

United States Market Share

Europe

Europe commands a significant portion of the market, with Germany leading the region due to industrial automation, strong PC gaming demand, and technological innovation.

XX%

Germany Market Share

APAC

APAC captures 27-30% of the market, with China (46-50% of region) at the forefront, fueled by massive manufacturing, gaming growth, and consumer electronics demand.

46-50%

China Market Share

Regional Overview

Middle East and Africa

MEA holds a modest share, with South Africa leading the region, driven by emerging tech adoption and industrial applications despite slower overall growth.

XX%

South Africa Market Share

LATAM

LATAM accounts for a small portion of the market, with Brazil dominating the region, supported by growing gaming communities and commercial computing needs.

XX%

Brazil Market Share

Company Profiles

Companies	Websites	Headquaters	Establisheds	Key Executives	Revenues
ASUS	https://www.asus.com/	Taipei, Taiwan	1989	Jonney Shih (Chairman)	~$18 billion
MSI	https://in.msi.com/	New Taipei City, Taiwan	1986	Joseph Hsu (President)	~$5 billion
Gigabyte	https://www.gigabyte.com/	New Taipei City, Taiwan	1986	Yeh Pei-Cheng (CEO)	~$4.5 billion
Intel	https://www.intel.com/content/www/us/en/homepage.html	Santa Clara, California, USA	1968	Pat Gelsinger (CEO)	~$55 billion
Biostar	https://www.biostar.com.tw/app/en/	New Taipei City, Taiwan	1986	Mingyi Wang, CEO and Chairman	~$100 million

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