

NOR Flash Memory - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The NOR Flash Memory Market size is estimated at USD 2.69 billion in 2024, and is expected to reach USD 3.60 billion by 2029, growing at a CAGR of 6.01% during the forecast period (2024-2029). In terms of shipment volume, the market is expected to grow from 4.48 billion units in 2024 to 7.76 billion units by 2029, at a CAGR of 11.63% during the forecast period (2024-2029).

The NOR flash memory sectors are witnessing a rapid growth rate due to their demand growth in various applications from automotive to consumer electronics. NOR flash is a memory and one of the types of non-volatile storage technologies.

Key Highlights

Consumer electronics devices have long been an integral part of modern lifestyles. Driven by the increasing demand for smartphones, smart TVs, and smart home appliances, the global consumer electronics market has regained its momentum over the past two years.

However, the worldwide smartphone demand observed a noteworthy decline in 2023 compared to 2022 due to ongoing inflation, decreased consumer spending, and a weaker consumer outlook, which is expected to hamper the NOR flash memory market. The ASP of NOR flash declined significantly owing to growing stockpiles and demand. Due to weak demand in the end-user consumer electronics market as a result of sluggish economic growth, rising geopolitical tensions, and seasonal fluctuations in the industry, downstream inventory issues trickled to upstream memory chip suppliers, impacting both product demand and prices.

On the contrary, the market is expected to recover slightly in FY 2024 owing to increased demand for 5G smartphones and growing 5G network connectivity across the nations. The increased proliferation of 5G smartphones and an increasing number of data centers worldwide drive the market's growth. Given the capabilities and attractiveness of flash memory to the consumer market, it is clear why demand for it has rapidly grown.

Research and development costs are anticipated to increase with the growing end-user requirements for NOR flash memory. Vendors such as Micron announced an investment of USD 15 billion to build a new fabrication facility for memory manufacturing in Boise, Idaho.

Moreover, the company plans to co-locate the new manufacturing fab with Micron's R&D center at its headquarters to enhance technology deployment and improve time to market with operational efficiency. This will cater to industries like automotive, data centers, and memory applications in artificial intelligence and 5G. This indicates the costly setup for the research and development and fabrication process and drives the challenges.

Looking forward to the future, the global economic environment is still highly uncertain, and the memory industry is waiting to bounce back after bottoming out in the business cycle. Thus, major suppliers of NOR flash memory are working toward strengthening their R&D and increasing their revenue share for automotive products, especially EVs, as the direction of these trends is not expected to change due to geopolitical tensions or market downturns.

NOR Flash Memory Market Trends

Consumer Electronics End-user Industry Segment is Expected to Hold Significant Market Share

Currently, the consumer electronics segment is one of the most prominent segments in the market. NOR flash is often deployed as an embedded device for code execution in many portable consumer products, such as cameras, wearables, or mobile phones. As such, the significant growth in the usage of these products in recent years is driving the demand for the market studied.

For instance, according to the 2023 US Consumer Technology Ownership and Market Potential Study, despite complex economic times, about 84% of US households make

plans to purchase tech products in the next 12 months, with mobile and wireless tech products leading the categories of tech products that consumers want to buy.

Moreover, smartphones are omnipresent in US households, and 37% of households plan to buy a new smartphone in the next 12 months, out of which 99% will be repeat buyers, indicating a saturated but loyal technology market. As a result, in 2023, there were almost 8.9 billion mobile phone subscriptions worldwide, up from around 8.6 billion the previous year. The number of subscriptions exceeded 8 billion for the first time in 2019, according to the International Telecommunication Union (ITU).

The commercialization of 5G proliferates global trends in the market studied. For instance, the significant transition toward 5G accelerates the demand for advanced mobile devices. According to the Ericsson Mobility Report released, 5G mobile subscriptions are anticipated to reach 5.3 billion by the end of 2029.

Further, during the third quarter of 2023, 163 million 5G subscriptions were added to make up a total of 1.4 billion. Such events are also expected to drive the demand for consumer electronics, thereby boosting the growth of the market studied.

China is Expected to Hold a Major Market Share

The rising trend of portable electronic devices and the penetration of advanced technologies, such as IoT, in China are among the factors driving the growth of the NOR flash memory market. The increase in consumer electronics sales in China is escalating the development of the NOR flash market.

According to the State Council, China's consumer electronics industry has grown steadily over the past few years. In the first seven months of 2023, computer, communications, and electronic device manufacturers saw their profits rise to CNY 276.32 billion (about USD 38.39 billion). In 2023, mobile phone production reached 810 million units, including 593 million smartphones.

The Ministry of Industry and Information Technology and the Ministry of Finance stated that China plans to surge the supply of high-end electronic devices to increase consumption and strengthen the economy. China will strive to ensure that 5G mobile phone shipments account for over 85% of the domestic mobile phone market by 2024. These initiatives will encourage NOR Flash memory manufacturers to develop in-house

and support the country's economy.

The concentration of electronics manufacturing in China has laid a foundation for the substantial development of IoT products in the country, further stimulated by high domestic consumer demand. Heavy state-led spending on enabling infrastructure has a great advantage on IoT development in China. For instance, China announced a three-year plan for new IoT infrastructure development (2021-2023), aiming to complete new IoT infrastructure in major cities by 2023. These initiatives are expected to fuel the growth of IoT-enabled smart devices and facilitate the market's growth.

China has been recognized as one of the leaders in the automobile and transport industry due to the consistent performance of the national market and its immense potential. In addition to strengthening its position as the world's largest car manufacturer, the Chinese Ministry of Industry and Information Technology projects that domestic vehicle production will reach 35 million by 2025. Furthermore, it is projected that by 2025, the market share of BEVs in a new energy passenger car category will be 84% and lead to significant technical developments, such as integrating ADAS into BEVs based on projections from the Chinese automotive logistics market.

According to CAAM, China's new energy vehicle sales amounted to 846,000 units, 808,000 of which were passenger EVs, and 39,000 were commercial electric vehicles during August 2023. Sales of BEVs and PHEVs were 559,000 and 248,000 vehicles, respectively. China is expected to have reached a threshold for adopting smart driving systems by 2024. Increased adoption of AD levels could shorten the vehicle replacement cycle, which is scheduled to be shorter. Intensive consumer education and media exposure, which will accelerate the shift of Chinese consumers toward intelligent driving, is likely to accompany a rise in supply.

NOR Flash Memory Industry Overview

The NOR flash memory market is semi-consolidated, with major vendors such as Infineon, Micron Technology, GigaDevice Semiconductor (Beijing) Inc., and Winbond Electronics Corporation dominating it. High entry barriers make it tough for new players to enter the market, but existing vendors are investing in the research and development of new and innovative products.

April 2024: Micron Technology Inc. announced the launch of its latest innovation, the

Micron Serial NOR Flash Memory. It is designed to improve the performance and reliability of various applications, e.g., from automotive and industrial to consumer electronics. Micron Serial NOR Flash Memory offers substantial reading and writing speed improvements, more information storage capacity, and improved endurance. This advancement allows it to be used for demanding applications in which data is stored and retrieved quickly and reliably.

February 2024: GigaDevice Semiconductor signed an agreement with EKOM Elektronik to distribute its products. To meet the needs of Turkey's market and contribute to healthy growth in the electronics sector, this partnership would extend GigaDevice's product line into areas where it can make necessary breakthroughs.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

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