

NAND Flash Memory Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028F Segmented By Type (SLC (One Bit Per Cell), MLC (Two Bit Per Cell), TLC (Three Bit Per Cell), QLC (Quad Level Cell)), By Application (Smartphone, SSD, Memory Card, Tablet, Others), By Industry Vertical (Consumer Electronics, Communication & Technology, Automotive, Manufacturing), By Region, Competition

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Abstracts

Global NAND Flash Memory Market is predicted to proliferate during the upcoming years due to the increasing demand for IoT and 5G technologies and the increased mobile device adoption. The current macro trends of Artificial Intelligence (AI), machine learning, mobility, and connectivity are beneficial to the NAND flash memory market for the upcoming years, to expand the share in the semiconductor market. With the rise of Personal computers (PCs) and smartphones, the implementation of NAND flash for memory is skyrocketing, that can be attributed to the increase in the average capacity of the devices.

NAND Flash is a non-volatile storage machinery that does not need the power to obstruct the data. The chance of study fills various forms of NAND flash accessible in the market, like SLC, TLC, MLC, and QLC developed on different structures like 2D or 3D constructions. NAND Flash saves the information as it blocks and depends on the electric circuits to save the information. When the power is disconnected from NAND flash memory, a metal-oxide-semiconductor will supply an additional charge to the memory cell, making the data. The metal-oxide-semiconductor utilized is an FGT. The

FGT is similar to the NAND logic gates.

According to the data reported by the company Micron Technology, Inc., the NAND flash storage of the average smartphone is 43 GB, which is expected to grow significantly in the upcoming years. In 2021, the NAND flash storage of the average phone had reached to a value of 142 GB with flagship devices having one terabyte storage. Various consumer products, such as tablets & cameras, industrial equipment & sensors, automotive systems, and medical devices, depends on flash memory, which is integrated alongside their processors that stores both data and code.

The trend towards flash-based storage is going to be evolved as demand for massive data processing for artificial intelligence and machine learning applications grows. The outbreak of novel COVID-19 had no significant impact on the production of China-based NAND flash vendors. This is because the plants are highly automated, have low labour demands, and operators stock up on raw materials before the Chinese Lunar New Year. Because semiconductor fabrication plants hold national special licences, foundry output was delivered to customers in China. These enable them to ship their products throughout China, even to quarantined cities.

Increased Demand for Data Centers is Fueling the Market Growth

The rising need for memory appliances buoyed by the requirement of data centers for memory is anticipated to fuel the growth of the NAND FLASH MEMORY market. Moreover, the need for data centers is being driven by the rising demand for huge performance for computing and edge computing, cloud applications, and big data.

Expansion in the Usage of 5G and IoT is Driving the Market Growth

The increasing adoption of machine learning and Artificial Intelligence (AI) bolsters the vendors to choose for quicker and more rapid substantial data capabilities. The rise of further completed by the swift adoption of remote work and educational classes, and also the online medical help at the time of the pandemic.

Growing Consumption in Electronic Industry is Driving the Market Growth

The COVID-19 outbreak is expected to have a significant impact on the electronics device sector, as China is a major supplier of raw materials and finished products. Production was reduced, the supply chain was disrupted, and prices were volatile. During this time, the sales of major electronic companies were impacted. Travel

restrictions on both people and goods hampered market growth in the short term. Furthermore, as the NAND flash memory devices consume less power, they are in high demand among electronic manufacturers. Decoding in NAND flash drives is faster than in NOR flash drives. Growing demand for relatively high areal density has prompted electronic industry manufacturers to incorporate 3D technology into NAND memory chips.

Market Segmentation

Based on Type, the market is segmented as SLC (One Bit Per Cell), MLC (Two Bit Per Cell), TLC (Three Bit Per Cell), and QLC (Quad Level Cell)). Based on Application, the market is divided into Smartphone, SSD, Memory Card, Tablet, and Others. Based on Industry Vertical, the market is segmented into Consumer Electronics, Communication & Technology, Automotive, and Manufacturing. The market analysis also studies the regional segmentation to devise regional market segmentation, divided among North America, Europe, Asia-Pacific, South America, and Middle East & Africa.

Company Profiles

Samsung Electronics Co. Ltd, KIOXIA Corporation, Micron Technology Inc., SK Hynix Inc., Intel Corporation, SanDisk Corp. (Western Digital Technologies Inc.), Cypress Semiconductor Corporation (Infineon Technologies), Yangtze Memory Technologies, Power chip Technology Corporation, Fujitsu Limited, are among the major market players in the global platform that lead the market growth of the Global NAND Flash Memory Market.

Report Scope:

In this report, the global NAND Flash Memory market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

NAND Flash Memory Market, By Type:

SLC (One Bit Per Cell)

MLC (Two Bit Per Cell)

TLC (Three Bit Per Cell)

QLC (Quad Level Cell)

NAND Flash Memory Market, By Application:

Smartphone

SSD

Memory Card

Tablet

Others

NAND Flash Memory Market, By Industry Vertical:

Consumer Electronics

Communication & Technology

Automotive

Manufacturing

NAND Flash Memory Market, By Region:

Asia-Pacific

China

Japan

India

Australia

South Korea

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Spain

Italy

Middle East & Africa

Israel

Turkey

Saudi Arabia

UAE

South America

Brazil

Argentina

Colombia

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the global NAND Flash Memory market.

Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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