

Next-Generation Memory Market by Technology (Non-Volatile Memory (MRAM (STT-MRAM, SOT-MRAM, Toggle Mode MRAM), FRAM, RERAM/CBRAM, 3D XPoint, NRAM), and Volatile Memory (HBM, and HMC)), Wafer Size (200 mm, and 300 mm) - Global Forecast to 2028

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Abstracts

The next-generation memory market is projected to grow from USD 6.2 billion in 2023 and is projected to reach USD 17.7 billion by 2028; it is expected to grow at a CAGR of 23.2% from 2023 to 2028.

Surging adoption of next-generation memories in smartphones and smart wearables, and rising adoption of next-generation memory technologies for enterprise storage applications are the factors expected to fuel the growth of the next-generation memory market.

“High-Bandwidth Memory (HBM) segment of the next-generation memory market to witness high growth during the forecast period.”

High-Bandwidth Memory (HBM) segment of the next-generation memory market to grow at high CAGR during the forecast period.

HBM is a form of 3D memory created by stacking multiple DRAM memory dies using the TSV technology. HBM technologies stack the memory chips on top of each other, which leads to the use of extremely wide data buses and considerably slower clock speeds to achieve the required levels of performance. This memory is mainly targeted for graphic cards and high-processing computing applications, including consumer

accelerated processing units (APUs), servers, and supercomputers. Companies are coming up with newer and advanced HBM memories with enhanced functionalities. For example, in July 2023, SAMSUNG (South Korea) announced that it would invest KRW 1 trillion (approx. USD 766 million) to expand its high bandwidth memory (HBM) production capacity.

“Consumer electronics application segment to witness significant growth for next-generation memory market during the forecast period.”

Consumer electronics segment to grow at high CAGR during the forecast period. The adoption of consumer devices is growing rapidly, alongside their target applications' memory storage consumption. Emerging non-volatile memories (NVMs), which can be used to supplement or swap out DRAM to improve the memory capacity of consumer devices, have been released onto the market by manufacturers as a potential solution. Recent works propose employing NVM as a swap space for DRAM since completely replacing DRAM with NVM in consumer devices imposes significant system integration and design constraints. Next-generation memory technologies are widely used in consumer electronic devices such as wearable devices, set-top boxes, digital cameras, tablets, handheld personal communication systems, desktop PCs, and laptops owing to the advancements in consumer electronic devices that require high-performance capability. This would increase the adoption of next-generation memory market across consumer electronics sector.

“Asia Pacific to hold a major market share of the next-generation memory market during the forecast period” Asia Pacific is expected to hold a major market share for next-generation memory market during the forecast period. The Asia Pacific region comprises some of the leading countries in the field of electronics, such as China, Japan, South Korea, and India. Asia Pacific holds the largest market for semiconductor memory technologies as it is a hub for the sectors having major semiconductor and electronics applications. Furthermore, Asia Pacific is also one of the largest bases for the companies offering consumer electronics, advanced ICT technologies, and other high-end machinery which makes it the largest adopter of the emerging technologies. Samsung (South Korea), SK Hynix (South Korea), and Toshiba (Japan) are the key players in the memory market in Asia Pacific, which are also the major stakeholders in the next-generation memory market in this region.

Extensive primary interviews were conducted with key industry experts in the next-generation memory market space to determine and verify the market size for various segments and subsegments gathered through secondary research. The break-up of

primary participants for the report has been shown below:

The break-up of the profile of primary participants in the Next-Generation Memory market:

By Company Type: Tier 1 – 55%, Tier 2 – 25%, and Tier 3 – 20%

By Designation: C Level – 10%, Director Level – 30%, Others-60%

By Region: North America – 40%, Europe – 35%, Asia Pacific – 15%, ROW-10%

The report profiles key players in the next-generation memory market with their respective market ranking analysis. Prominent players profiled in this report are SAMSUNG (South Korea), KIOXIA Holdings Corporation (Japan), Micron Technology, Inc. (US), Fujitsu (Japan), SK Hynix Inc (South Korea), Honeywell International, Inc. (US), Winbond (Taiwan), Microchip Technology Inc. (US), Nanya Technology (Taiwan), and Everspin Technologies (US).

Apart from this, Macronix International Co., Ltd. (Macronix), Kingston Technology (US), Infineon Technologies AG (Germany), ROHM CO., LTD. (Japan), Nantero, Inc. (US), Crossbar Inc. (US), Viking Technology (US), and Avalanche Technology (US) are among a few emerging companies in the next-generation memory market.

Research Coverage: This research report categorizes the next-generation memory market on the basis of technology, wafer size, application, and region. The report describes the major drivers, restraints, challenges, and opportunities pertaining to the next-generation memory market and forecasts the same till 2028. Apart from these, the report also consists of leadership mapping and analysis of all the companies included in the next-generation memory ecosystem.

Key Benefits of Buying the Report The report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall next-generation memory market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and to plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

Analysis of key drivers (Increasing demand for memory devices that provide fast access and consume minimal power; Rising adoption of next-generation memory technologies for enterprise storage applications; Rising adoption of next-generation memories in smartphones and smart wearables; Growing adoption of next-generation memory solutions in automotive sector to handle evolving data and computational needs), restraints (High manufacturing cost of next-generation memories; Compatibility and interoperability issues associated with next-generation memories), opportunities (Increasing adoption of next-generation memory technologies in embedded systems and IoT devices; Rising adoption of high-bandwidth memory (HBM) in data centers for memory-intensive applications) and challenges (Scalability issues associated with high-density non-volatile memories; Higher design costs due to lack of standardized manufacturing processes; Achieving high-speed write performance and energy efficiency) influencing the growth of the next-generation memory market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the next-generation memory market.

Market Development: Comprehensive information about lucrative markets – the report analysis the next-generation memory market across varied regions

Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the next-generation memory market

Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like SAMSUNG (South Korea), KIOXIA Holdings Corporation (Japan), Micron Technology, Inc. (US), Fujitsu (Japan), SK Hynix Inc (South Korea), among others in the next-generation memory market.

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*Details on Business Overview, Products Offered, Recent Developments, MnM View, Right to win, Strategic choices made, Weaknesses and competitive threats might not be captured in case of unlisted companies.

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