

Magneto Resistive RAM (MRAM) Market Report by Type (Toggle MRAM, Spin-Transfer Torque MRAM (STT-MRAM)), Offering (Stand-alone, Embedded), Application (Consumer Electronics, Robotics, Enterprise Storage, Automotive, Aerospace and Defense, and Others), and Region 2024-2032

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Abstracts

The global magneto resistive RAM (MRAM) market size reached US\$ 617.2 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 11,076.3 Million by 2032, exhibiting a growth rate (CAGR) of 37.1% during 2024-2032.

Magneto resistive random access memory (MRAM), or magnetic RAM, is a non-volatile memory that uses magnetic charges to store information. Spin-transfer torque and toggle MRAM are some of the commonly available variants. They utilize magnetic tunnel junction (MTJ) that comprises two magnetic layers separated through a dielectric or insulation layer. It is a high-density RAM and it includes a capacitor and a transistor. In comparison to the traditionally used dynamic random-access memory (DRAM), MRAM can retain the information stored in the memory without a power source, is more cost-effective and does not require a large energy-consuming pulse. As a result, it is widely used in robotics, automobiles, consumer electronics and enterprise storage systems.

Magneto Resistive RAM (MRAM) Market Trends:

Significant growth in the consumer electronics industry is one of the key factors creating a positive outlook for the market. MRAM is widely used in various electronic gadgets, such as workstations, smart wearables, smartphones and digital cameras. Additionally, the increasing product demand in the aerospace and defense industries for high-



temperature data storage is favoring the market growth. Moreover, various product innovations, such as the development of low-power MRAM variants for radiation-hardened microchips, are providing thrust to the market growth. They are power-efficient, resistant to radiations and can operate under temperature fluctuations. In line with this, the increasing demand for Internet of Things (IoT)-enabled devices and the widespread utilization of advanced sensors and smart robots are positively impacting the market growth. Other factors, including the increasing product utilization in miniaturized and customized integrated circuits (ICs), along with the widespread adoption of MRAM-embedded medical sensors for non-invasive diagnostic testing of medical various disorder, are anticipated to drive the market toward growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global magneto resistive RAM (MRAM) market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on type, offering and application.

Breakup by Type:

Toggle MRAM
Spin-Transfer Torque MRAM (STT-MRAM)

Breakup by Offering:

Stand-alone Embedded

Breakup by Application:

Consumer Electronics
Robotics
Enterprise Storage
Automotive
Aerospace and Defense
Others

Breakup by Region:

North America



United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Avalanche Technology Inc., Crocus Nano Electronics LLC, Everspin Technologies Inc., Honeywell International Inc., Infineon Technologies AG, Intel Corporation, NVE Corporation, Qualcomm Incorporated, Samsung Electronics Co. Ltd., Spin Memory Inc., Toshiba Corporation and Tower Semiconductor Ltd.

Key Questions Answered in This Report

- 1. What was the size of the global magneto resistive RAM (MRAM) market in 2023?
- 2. What is the expected growth rate of the global magneto resistive RAM (MRAM) market during 2024-2032?
- 3. What are the key factors driving the global magneto resistive RAM (MRAM) market?
- 4. What has been the impact of COVID-19 on the global magneto resistive RAM (MRAM) market?



- 5. What is the breakup of the global magneto resistive RAM (MRAM) market based on the type?
- 6. What is the breakup of the global magneto resistive RAM (MRAM) market based on the offering?
- 7. What is the breakup of the global magneto resistive RAM (MRAM) market based on the application?
- 8. What are the key regions in the global magneto resistive RAM (MRAM) market?
- 9. Who are the key players/companies in the global magneto resistive RAM (MRAM) market?



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