

Hardware Encryption Market Booming Worldwide: Forecast to Reach \$1.8 Trillion by 2032

Growth is driven by stricter regulations on data privacy and protection, along with falling prices of hardware encryption equipment.

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EINPresswire.com/ -- According to a new report published by Allied Market Research, titled, "[Hardware Encryption Market](#)," The hardware encryption market was valued at \$293.31 billion in 2022, and is estimated to reach \$1.8 trillion by 2032, growing at a CAGR of 19.5% from 2023 to 2032.



Hardware encryption is a method of securing digital data using a dedicated device with a processor designed for user authentication and data encryption. Security parameters and safeguard keys improve encryption performance, protecting against cold boot and brute-force attacks. A key advantage of hardware encryption is its independence from the host computer's operating system, ensuring data security even if the OS is compromised.

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Today, everyone, from businesses and governments to individuals, shares a common need and desire to safeguard important personal and private information. Whether it is stored or transported, data protection is essential. To protect against malicious hackers and organizational data breaches, it is necessary to encrypt in-flight data as well as data at rest. Hardware encryption provides a fortified layer of protection just in case unauthorized access is somehow granted to a computer network or storage device.

Moreover, in the BFSI sector, hardware encryption is essential for protecting the privacy and security of sensitive data. This sector deals with vast amounts of sensitive data, which in turn

provides lucrative opportunities for the growth of hardware encryption. Meanwhile, there is an increase in demand for hardware encryption in the government sector, which can improve privacy and data protection capabilities of crucial assets. Multiple applications offered by hardware encryption in several industries are expected to propel the global market demand.

The key players that operate in the hardware encryption market analysis are Broadcom Inc., International Business Machines Corporation, McAfee, LLC, Micron Technology, Inc., NetApp, Inc., Samsung Electronics Co., Ltd., Toshiba Corporation, Kingston Technology Company, Inc., Seagate Technology, LLC. And Western Digital Technologies, Inc. These players have adopted various strategies to increase their market penetration and strengthen their position in the hardware encryption industry.

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The report provides a detailed analysis of these key players in the hardware encryption market. These players have adopted different strategies such as new product launches, collaborations, expansion, joint ventures, agreements, and others to increase their market share and maintain dominant shares in different countries. The report is valuable in highlighting business performance, operating segments, product portfolio, and strategic moves of market players to showcase the competitive scenario.

By Architecture, the ASIC segment held the highest market share in 2022, accounting of more than three-fifthss of the hardware encryption market revenue, and is estimated to maintain its leadership status throughout the forecast period. The rise in demand for ASIC in the consumer electronics industry due to its energy efficiency and low cost of implementation fuels the growth of the market. However, the FPGA segment is projected to manifest the highest CAGR of 21.0% from 2023 to 2032. FPGA algorithm has been witnessing increasing popularity, owing to its low cost, flexibility, long-term maintenance, and fast time to market.

Based on the product, the hard disk drive (HDD) segment dominated the hardware encryption market share in 2022 and is expected to continue this trend during the forecast period. The growth of the segment is attributed to stabilization of the laptop market and surge in adoption of hard disk drives in cloud & other enterprise applications. In addition, the rise in popularity of social media, increase in number of mobile users, surge in penetration of next-generation connected devices, and increase in need for high-capacity storage devices drive the growth of the hard disk drive (HDD) segment. However, the solid-state drives (SSD) segment is expected to witness highest growth in the upcoming years, owing to the growing demand for encrypted solid-state drive as it provides faster encryption as compared to the hard disk drive (HDD) devices.

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By algorithm standard, the RSA segment held the highest market share in 2022, accounting of more than two-fifths of the hardware encryption market revenue, and is estimated to maintain its leadership status throughout the forecast period. Increase in use of RSA algorithm to secure the communication between e-commerce sites and web browsers boosts the growth of the market, as these online businesses deal with sensitive data of their customers. However, the others segment is projected to manifest the highest CAGR of 21.7% from 2023 to 2032. The hardware encryption industry encompasses various encryption algorithms beyond AES, each catering to specific security requirements. These diverse encryption segments offer a comprehensive suite of tools for the hardware encryption industry, allowing for tailored solutions that meet specific security needs across various applications and industries.

By region, Asia-Pacific dominated the market growth in 2022 and is expected to exhibit highest growth during the forecast period, owing to the heavy investments made by private and public sectors for securing sensitive data, which is resulting into increased demand for encryption software used to secure and ensure privacy of data. Moreover, the hardware encryption market in Asia-Pacific for encrypted storage devices is expected to grow at a notable rate, owing to surge in cases of data breaches and rise in need for data security.

The COVID-19 pandemic has significantly reshaped the businesses environment, imparting specific opportunities for the hardware encryption industry. With the considerable adoption of remote work policy, there may be a heightened demand for stable information transmission and storage solutions. Companies are increasingly spotting the importance of safeguarding sensitive information in a decentralized work environment, creating a massive market for hardware encryption industry. Moreover, the surge in cybersecurity issues throughout the pandemic has underscored the need for strong security measures. Hardware encryption, with its capability to offer hardware-based security, is poised to cope with these challenges efficiently. As regulatory requirements for information safety grow to be extra stringent, hardware encryption technology can function itself as a key player by means of offering solutions that not most effective enhance statistics protection however also ensure compliance. The growing incidence of online transactions, mainly in e-commerce, similarly amplifies the significance of hardware encryption in securing monetary transactions and patron facts. Additionally, the expansion of the Internet of Things (IoT) has unfolded new avenues for the industry to offer tailored encryption answers for interconnected devices. Hence, the hardware encryption industry has the possibility to thrive by way of aligning with the evolving needs of businesses in the post-COVID era, contributing to a more stable and resilient digital landscape.

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Key Findings of the Study

1. By product, the hard disk drive (HDD) segment accounted for the largest hardware encryption market share in 2022.

2. By algorithm standard, the RSA segment accounted for the largest hardware encryption market share in 2022.
3. By architecture, the ASIC segment accounted for the largest hardware encryption market share in 2022.
4. Based on application, the consumer electronics segment accounted for the largest hardware encryption market share in 2022.
5. Depending on end use, the commercial segment accounted for the largest hardware encryption market share in 2022.
6. Region wise, North America generated the highest revenue in 2022.

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