

Hardware Encryption Market: A Look into Its Key Investment Opportunities, 2022 - 2032

Growing regulatory focus on data privacy and falling hardware encryption costs are key drivers of market growth.

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Today, individuals, businesses, and governments all share a common need to safeguard personal and sensitive information. Whether data is stored or transmitted, protecting it is essential.

Encryption of both in-transit and stored data is critical to defending against cyberattacks and data breaches. Hardware encryption adds an extra layer of security, protecting networks and storage devices even if unauthorized access occurs.

In the BFSI sector, hardware encryption plays a vital role in securing vast amounts of sensitive data, creating significant growth opportunities for the market. Similarly, rising demand for hardware encryption in the government sector enhances the privacy and protection of critical information. The wide range of hardware encryption applications across industries is expected to fuel global market growth.

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According to the report, the [hardware encryption market](#) generated \$293.3 billion in 2022, and is projected to reach at \$1.8 trillion by 2032, witnessing a CAGR of 19.5% from 2023 to 2032.

Increase in regulatory compliances regarding protection of privacy & sensitive data and reduction in prices of hardware encryption equipment's majorly drive the growth of the market. Moreover, growth in concern related to data security and privacy, rise in penetration of consumer electronics, are anticipated to drive the growth of the hardware encryption industry during the forecast period. Furthermore, the rise in adoption of Internet of Things (IoT) technology and cloud services as well as technological advancements in encryption chips are



anticipated to provide lucrative opportunities for market expansion during the forecast period. However, high capital investment and limited use of encrypted devices across some of the countries may hinder the growth of the hardware encryption market.

By product, the hard disk drive (HDD) segment held the highest market share in 2022, accounting for two-fifths of the hardware encryption market revenue, and is estimated to maintain its leadership status throughout 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. However, the solid state drives (SSD) segment is expected to portray the largest CAGR of 21.4% from 2023 to 2032 and is projected to maintain its lead position during the forecast period, 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 Architecture, the ASIC segment held the highest market share in 2022, accounting of more than three-fifths 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.

By application, the consumer electronics segment held the highest market share in 2022, accounting for one-fourth of the hardware encryption market revenue, and is estimated to maintain its leadership status throughout the forecast period. In the consumer electronics sector, hardware encryption plays a vital role in ensuring the security and protection of sensitive data. However, the IT and telecom is projected to manifest the highest CAGR of 22.8% from 2023 to 2032. As hardware encryption is employed in several ways within IT and telecom infrastructure, including encrypting data stored on servers, securing communications between

devices and networks, and protecting sensitive information during transmission.

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By end use, the commercial segment held the highest market share in 2022, accounting of nearly one-third of the hardware encryption market revenue, and is estimated to maintain its leadership status throughout the forecast period. As these sectors deals with sensitive financial transactions, vast data networks, and consumer information, hardware encryption provides a robust solution to protect against cyber threats and ensure data integrity. However, the government segment is projected to manifest the highest CAGR of 21.9% from 2023 to 2032. The adoption of hardware encryption in the government sector contributes to national security efforts, protects against cyber threats, and ensures the confidentiality of data vital for effective governance.

By region, the Asia-Pacific segment held the highest market share in terms of revenue in 2022, and witnessed the fastest CAGR of 17.8% from 2023 to 2032 of the hardware encryption market. This is due 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.

COVID-19 Scenario

1. The COVID-19 pandemic has significantly influenced the hardware encryption industry. The surge in remote work or WFH policy and increased reliance on digital platforms have increased the demand for secure data transmission. Furthermore, organizations prioritizing the protection of sensitive data has driven the adoption of hardware encryption technology.

2. Moreover, the increase cybersecurity concerns stemming from the pandemic have positioned hardware encryption as a crucial element in fortifying data integrity. As remote work practices persist, the hardware encryption market is expected to provide lucrative growth opportunities in today's evolving business landscape.

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.

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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.

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Contact:

David Correa

1209 Orange Street,

Corporation Trust Center,

Wilmington, New Castle,

Delaware 19801 USA.

Int'l: +1-503-894-6022

Toll Free: + 1-800-792-5285

UK: +44-845-528-1300

India (Pune): +91-20-66346060

Fax: +1-800-792-5285

help@alliedmarketresearch.com

David Correa

Allied Market Research

+ 1800-792-5285

[email us here](#)

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