

# Iris Recognition Market Report by Component (Hardware, Software), Product Integration (Smartphone, Tablet and Notebook, Scanner, PC/Laptop, Smartwatches, and Others), End-User (Government, Transportation, Healthcare, and Others), and Region 2024-2032

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# **Abstracts**

The global iris recognition market size reached US\$ 4.2 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 18.2 Billion by 2032, exhibiting a growth rate (CAGR) of 17.3% during 2024-2032. The establishment of international standards and interoperability of iris recognition systems, the rising demand for these systems in educational institutions, and the growing adoption in defense and law enforcement sectors are some of the factors propelling the market.

Iris recognition is a biometric technology that utilizes the unique patterns and characteristics of the human iris for identification and authentication purposes. The iris, a colored ring-shaped part of the eye, contains intricate and highly distinctive patterns that remain stable throughout a person's lifetime. Iris recognition systems capture high-resolution images of the iris and use advanced algorithms to extract and analyze the unique features, such as furrows, crypts, and collarettes, for identity verification. The key advantage is its high accuracy and reliability. The complexity and stability of iris patterns result in low false acceptance and false rejection rates, making it a highly secure biometric authentication method. It is widely used in various applications, including access control systems, border control, time and attendance tracking, and financial transactions. Its non-intrusive nature, where individuals look into a camera, enhances user convenience and acceptance. Furthermore, it provides numerous advantages over other biometric modalities. It is less susceptible to environmental



factors such as lighting conditions and age-related changes, making it more robust and dependable.

The global market is primarily driven by the increasing concerns about identity theft and the need for robust security measures. In line with this, rapid technological advancements, such as improved image capture and algorithms, are enhancing the accuracy and performance of these systems. Furthermore, governments worldwide are adopting iris recognition technology for border control, national identification programs, and law enforcement applications, positively influencing the market. Moreover, the rising demand for secure access control systems in various sectors, including airports, corporate buildings, and healthcare facilities, is fueling the market. Besides, the financial industry is adopting iris recognition as a highly secure biometric authentication method for transactions, account access, and identity verification, propelling the market. Additionally, the escalating utilization of these systems in the healthcare sector for patient identification, secure access to medical records, and drug dispensing are providing a boost to the market.

Iris Recognition Market Trends/Drivers:
Increasing demand in the travel and transportation industry

The travel and transportation industry is experiencing an increasing demand for iris recognition technology. The rising need for enhanced security measures in airports, train stations, and other travel checkpoints is catalyzing the market. It provides a highly secure and efficient method for passenger verification, ensuring a seamless and reliable travel experience. These systems are used for fast and accurate identity verification, allowing passengers to go through security checks and boarding processes quickly and efficiently. This improves the overall passenger experience and enhances the security and safety of travel operations. Moreover, the global increase in travel volume, driven by business travel, tourism, and international migration, is contributing to the demand for more efficient and reliable identification systems. The scalability and accuracy of this technology makes it well-suited for managing large crowds and high passenger volumes. Additionally, it offers contactless and non-intrusive authentication, aligning with the growing demand for touchless solutions in response to health and hygiene considerations, particularly in the post-pandemic era.

Rising smartphone integration

Rising smartphone integration is propelling the market. As smartphones have become an integral part of daily life for a vast number of people worldwide, the demand for



secure and convenient biometric authentication methods has increased. The accuracy and uniqueness of iris patterns make iris recognition a robust biometric authentication method. It is highly resistant to spoofing or forgery attempts, ensuring a higher level of security for users' personal information and digital transactions. Furthermore, it provides a contactless and hygienic authentication experience, which aligns with the increasing demand for touchless solutions in the wake of health and hygiene concerns, particularly during the COVID-19 pandemic. The integration of these systems in smartphones not only enhances security but also offers user convenience and ease of use. Users can unlock their devices simply by looking at the screen, eliminating the need for remembering complex passwords or relying on physical fingerprint sensors. As smartphone manufacturers prioritize security and user experience, the integration of iris recognition technology is expected to witness further growth.

Growth of the Internet of Things (IoT) and smart home applications

The growth of the Internet of Things (IoT) and smart home applications is offering numerous opportunities for the market. As the number of connected devices increases and homes become smarter, there is a growing need for secure and personalized access control systems. Iris recognition offers a highly secure and reliable biometric authentication method for smart home applications. By integrating the technology into smart home systems, users can securely access their homes, control devices, and personalize settings with a simple glance. Furthermore, iris recognition provides several advantages for smart home security. It offers high accuracy and uniqueness, making it difficult to counterfeit or spoof. Its incorporation in IoT devices and smart home applications also enables personalized user interactions. Each individual's iris pattern is unique, allowing for customized settings and tailored experiences based on individual preferences. Moreover, it enhances the overall security of smart home ecosystems. Unauthorized access to smart devices and systems is mitigated, ensuring the privacy and safety of residents and their data.

Iris Recognition Industry Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global iris recognition market report, along with forecasts at the global and regional levels from 2024-2032. Our report has categorized the market based on component, product integration and end-user.

Breakup by Component:

#### Hardware



#### Software

Software dominates the market

The report has provided a detailed breakup and analysis of the market based on the component. This includes hardware and software. According to the report, software represented the largest segment.

Software solutions encompass iris recognition algorithms, biometric data management, and integration with different platforms and systems. Advances in software algorithms have improved the accuracy and speed of iris recognition, making it a reliable biometric identification method. The development of user-friendly and intuitive software interfaces enhances the adoption and usability of these systems. The increasing demand for secure and efficient authentication solutions across industries is strengthening the market.

Hardware, on the other hand, also plays a crucial role in bolstering the market. Advancements in hardware technology have led to the development of more accurate and efficient systems. These hardware components are becoming more compact, affordable, and accessible, making them suitable for integrating various applications and devices. The increasing demand for these systems in travel, healthcare, and finance sectors is propelling the market.

Breakup by Product Integration:

Smartphone
Tablet and Notebook
Scanner
PC/Laptop
Smartwatches
Others

Scanners holds the largest share of the market

A detailed breakup and analysis of the market based on product integration have also been provided in the report. This includes smartphone, tablet and notebook, scanner, PC/laptop, smartwatches, and others. According to the report, scanners accounted for the largest market share.



Stand-alone iris scanners are used in various industries for access control and identity verification purposes. The demand for iris scanners is driven by healthcare, government, and law enforcement sectors, where secure and accurate identification is essential.

On the contrary, the integration of iris recognition technology into smartphones has significantly impacted the market. Iris recognition provides a secure and convenient method for unlocking smartphones and authenticating mobile transactions. With the increasing demand for secure mobile devices, iris recognition has become a key feature in high-end smartphones, driving the market in this segment.

Furthermore, the iris recognition integration in tablets and notebooks offers enhanced security and user authentication. These devices are commonly used in business and professional settings where data security is crucial. The integration of iris recognition provides a secure access control solution, catalyzing the market.

Breakup by End-User:

Government
Transportation
Healthcare
Others

Government holds the largest share of the market

A detailed breakup and analysis of the market based on the end-user have also been provided in the report. This includes government, transportation, healthcare, and others. According to the report, government accounted for the largest market share.

The government sector fuels the market due to its wide range of applications. These systems are extensively used in government initiatives such as national identification programs, e-passports, border control, and law enforcement. The need for secure and reliable identification systems to combat identity theft and enhance national security fuels the growth of this segment.

Furthermore, the transportation industry, including airports, train stations, and border checkpoints, heavily relies on iris recognition for secure and efficient passenger verification. These systems enable accurate identification, enhancing passenger experience and streamlining travel operations. The growing demand for enhanced



security and seamless passenger processing propels the market.

Additionally, the healthcare sector utilizes iris recognition for patient identification, secure access to medical records, and prescription management. Iris recognition ensures accurate and reliable identification, reducing medical errors and enhancing patient safety.

Breakup by Region:

Asia Pacific
Europe
North America
Middle East and Africa
Latin America

North America exhibits a clear dominance, accounting for the largest market share

The report has also provided a comprehensive analysis of all the major regional markets, which include Asia Pacific, Europe, North America, the Middle East and Africa, and Latin America. According to the report, North America accounted for the largest market share.

North America is a key contributor to the market growth of the market. The region's strong emphasis on data protection and privacy regulations has driven the adoption of secure biometric solutions. Several government bodies have implemented these systems for border control and national identification programs. The European healthcare sector has also embraced these systems for patient identification and secure access to medical records. The region's advanced infrastructure, focus on technological advancements, and the need for secure authentication solutions drive the market growth. Furthermore, increasing investments in smart cities and transportation systems also create a positive market outlook.

On the other hand, the rapidly growing population, increasing urbanization, and expanding industrial sectors in Asia Pacific is also expected to provide an impetus to the market. The region's focus on advanced technology and infrastructure development, coupled with the need for secure identification systems, drives the market. Additionally, the rising demand for smartphones and other mobile devices with iris recognition capabilities further propels the market in Asia Pacific.



#### Competitive Landscape:

Top companies in the market are playing a pivotal role in catalyzing the market growth. These companies invest in research and development to enhance the accuracy, speed, and reliability of the existing systems. They continuously innovate and improve their algorithms, hardware components, and software solutions. Furthermore, these companies actively engage with various industries and end-users to understand their specific needs and develop tailored solutions. They offer comprehensive and integrated products, ensuring seamless integration with existing systems and applications. Top companies also contribute to the market through strategic partnerships and collaborations. They work with governments, transportation authorities, healthcare providers, and other organizations to implement the technology in large-scale projects and deployments. They are crucial in building trust and confidence in iris recognition as a secure and reliable biometric authentication method.

The report has provided a comprehensive analysis of the competitive landscape in the iris recognition market. Detailed profiles of all major companies have also been provided.

BioEnable Technologies Pvt. Ltd.

EyeLock LLC

HID Global Corporation (Assa Abloy AB)

Iris ID Inc

IrisGuard UK Ltd

Iritech Inc.

M2SYS Technology

SRI International

Thales Group

#### Recent Developments:

In 2020, BioEnable Technologies collaborated with V-Curve Technologies to develop an advanced iris recognition solution for access control and attendance management systems. The collaboration is aimed to combine BioEnable's expertise in biometric solutions with V-Curve's innovative technology to offer secure and efficient iris recognition-based access control solutions.

In 2020, eyeLock LLC partnered with Integral Technology Solutions (ITS) to develop a biometric access control solution for the cannabis industry. The collaboration aimed to leverage eyeLock's iris recognition technology to enhance security and streamline access control in cannabis cultivation facilities, dispensaries, and other related establishments.



In 2019, HID Global, a subsidiary of Assa Abloy AB, announced the integration of its iris recognition technology with the Genetec Security Center platform. The collaboration allowed organizations to seamlessly incorporate HID's iCLASS SE RB25F biometric reader, featuring iris recognition, into their security systems, providing enhanced identity verification and access control capabilities.

# Key Questions Answered in This Report

- 1. What was the size of the global iris recognition market in 2023?
- 2. What is the expected growth rate of the global iris recognition market during 2024-2032?
- 3. What has been the impact of COVID-19 on the global iris recognition market?
- 4. What are the key factors driving the global iris recognition market?
- 5. What is the breakup of the global iris recognition market based on the component?
- 6. What is the breakup of the global iris recognition market based on the product integration?
- 7. What is the breakup of the global iris recognition market based on end-user?
- 8. What are the key regions in the global iris recognition market?
- 9. Who are the key players/companies in the global iris recognition market?



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