

Consumer Electronic Biometrics Market Assessment, By Component [Hardware, Software], By Type [Contact-Based, Contact-Less, Hybrid], By Authentication Type [Fingerprint Recognition, Facial Recognition, Voice Recognition, Others], By Device Type [Optical Sensor, Capacitive Scanner, Ultrasonic Sensor, Thermal Line Sensor], By Industry [Retail, Government, Education, Financial, Healthcare, Manufacturing, Others], By Region, Opportunities and Forecast, 2016-2030F

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Abstracts

Global consumer electronic biometrics market has experienced significant growth in recent years and is expected to maintain a strong pace of expansion in the coming years. With projected revenue of approximately USD 3.01 billion in 2022, the market is forecasted to reach a value of USD 7.9 billion by 2030, displaying a robust CAGR of 12.8% from 2023 to 2030.

Consumer electronic biometrics provide increased security and user convenience. It replaces traditional passwords & passcodes by leveraging unique biometric identifiers such as fingerprints or face recognition. The solution provides secure device access and mobile payments while protecting user privacy and expediting authentication procedures.

Consumer electronic biometrics rapidly expands as customers want more secure authentication methods due to rising data security and privacy concerns. Also,

incorporating biometric features into smartphones and wearables has increased accessibility. Consequently, the ease of use of biometrics for unlocking devices and approving payments propels acceptance and market growth.

The seamless integration of biometric capabilities into smartphones and wearables has propelled the consumer electronic biometrics market forward. These gadgets function as daily tools, exposing a large user base to biometric authentication. This increased familiarity has increased trust and confidence in biometric security, accelerating market development as more customers seek biometrics' convenience and greater security. According to Idemia, the global adoption rate of consumer electronic biometrics is increasing. 81% of global customers are eager to replace PINs with fingerprint verification for in-store purchases. Furthermore, customers are becoming more accepting of biometric technology, with 84% using biometric authentication techniques, indicating a rising acceptance of safe and convenient biometric solutions across diverse age groups and economies.

For instance, in February 2023, Only|You Face was released, a facial recognition system compatible with Accu-Time Systems' stride80 time clock. This touchless system improves safety and security while making workforce management easier.

Integration of IoT & Smart Homes is Acting as a Catalyst

Incorporating biometrics into the Internet of Things and smart home devices has emerged as a powerful consumer electronic biometrics market driver. Users benefit from a higher degree of customized and secure access control by easily incorporating fingerprint, face recognition, or voice authentication into a wide range of IoT devices such as smart locks, doorbells, thermostats, and more. This combination of simplicity and top-tier security instills a strong feeling of trust in these technologies. The fast spread of smart homes has increased the demand for biometric security systems, creating a significant and rising market potential. Biometric-enabled smart gadgets improve user experiences and accelerate biometrics' wider adoption and integration throughout several consumer electronics industries.

For example, in March 2023, IDEMIA launched the OneLook Gen2 and MorphoWave TP biometric technologies, which has improved the accuracy and security of identification verification. Both technologies provide contactless and efficient biometric capture for a variety of applications such as border control.

Revolutionizing Healthcare Propel the Market

Incorporating biometrics into healthcare has emerged as a crucial driver of the consumer electronic biometrics market's growth. Biometrics is critical in healthcare for patient identification, access control, and safe administration of medical data. The implementation enables accurate and secure patient identification verification, improving safety and optimizing administrative procedures. Furthermore, biometrics protects sensitive medical information, improves treatment accuracy, and reduces identity theft and fraud. As the healthcare industry continues to adopt biometric solutions, it strengthens the industry and drives the expansion & innovation of consumer electronic biometrics, promoting reliable and safe healthcare experiences for all stakeholders.

For example, in July 2023, Paulding County Hospital (PCH) implemented BIO-key's PortalGuard Identity-as-a-Service (IDaaS) platform with Epic Hyperdrive to enable safe and compliant access to healthcare applications, employing BIO-key's biometric authentication technologies .

Fingerprint Recognition Dominates the Market

Fingerprint recognition has a major share in the consumer electronic biometrics market as it has an attractive trinity of security, convenience, and adaptability. The built-in uniqueness of fingerprints ensures strong authentication, successfully blocking unwanted access. Its seamless integration with smartphones, computers, and a wide range of smart devices provide consumers with a frictionless experience, increasing its attractiveness. As customers prioritize both security and convenience of use, fingerprint recognition emerges as a clear choice, fueling its dominance and widespread acceptance across the consumer electronic biometrics market.

For instance, in May 2023, in collaboration with the Missouri Department of Revenue, IDEMIA Identity and Security (I&S) North America introduced the Missouri Mobile ID App, which enables secure identity management and remote driver's license renewal. Multi-factor authentication and privacy restrictions allow users to authenticate themselves .

Asia-Pacific Dominates Consumer Electronic Biometrics Market

Asia-Pacific is characterized by fast technical innovation, with China and South Korea at the forefront of biometric solution development. The growing middle-class population and urbanization trends stimulate consumer electronics demand for safe and convenient biometric applications. Furthermore, aggressive government policies and

regulations and a strong emphasis on digital transformation promotes widespread biometric use. These factors, taken together, position the Asia-Pacific region as a vital center, both as a large producer and user of biometric technology, influencing the industry's future on a global scale.

For instance, in January 2023, IDEMIA's Gen3 Kiosk biometric system effectively modernized Australian airports, allowing rapid traveler identification verification. Phase two includes improved eGates that improve border entrance experiences .

Government Initiatives to Act as Catalyst

Government efforts have a significant impact on the consumer electronic biometrics market. Many governments throughout the globe are actively encouraging the use of biometric technologies to improve security and efficiency. National ID programs and ePassports, for example, use biometrics, promoting the adoption and integration of biometric solutions into daily life. Furthermore, severe data protection and privacy requirements, such as the General Data Protection Regulation (GDPR) in Europe, promote the development of secure biometric solutions. Research and development funding and incentives encourage more biometrics innovation. These activities provide a favorable climate, encouraging public and commercial sectors to invest and use biometric technology, driving the growth of consumer electronic biometrics market.

For example, in August 2023, BIO-key International expanded its deployment of biometric authentication solutions with a respected government defense ministry. The \$340K purchase order will provide secure access for 22,000 users.

Impact of COVID-19

The COVID-19 pandemic impacted the consumer electronic biometrics market significantly. Before the pandemic, biometric systems were on the rise, with applications in cell phones, access control, and banking. However, habits such as mask-wearing, changed the scenario during the pandemic. Face recognition, has been hampered by concealed facial characteristics. To adapt to the changing circumstances, researchers investigated creative techniques such as partial face recognition and the inclusion of other biometric aspects. Biometric technologies, however, found traction in public health and contactless access control, assuring their continuing relevance and expansion in a post-pandemic society that prioritizes security and hygiene.

Impact of Russia-Ukraine War

The Russia-Ukraine war had a big influence on the consumer electronic biometrics market. As part of the 'Safe City' initiative, Russian officials increased biometric surveillance near Ukraine border. This sparked ethical issues about government spying methods. During Russia Day festivities, the Russian authorities used face recognition technology to make mass arrests, highlighting the dual nature of biometrics in preserving security and intruding on human rights. The fight exposed the geopolitical component of AI technology, with the EU attempting to strengthen its digital capabilities to oppose Russian influence. Meanwhile, Ukraine employed biometrics to identify captured or executed Russian servicemen.

Key Players Landscape and Outlook

Key global consumer electronic biometrics market participants include Apple Inc., Fujitsu Limited, NEC Corporation, 3M Company, and IDEMIA Group, S.A.S. These industrial leaders have continually launched cutting-edge biometric technologies, particularly in cell phones and access control systems. The market outlook is positive, owing to increased security and identity authentication concerns. With the growing need for contactless and secure authentication methods in a post COVID-19 world, biometrics demand is likely to rise across a variety of industries, including healthcare, banking, and smart home applications. Biometric technology advancements and increased R&D expenditures are set to define the market's positive trajectory further.

In September 2023, BIO-key International was approved into the Amazon Web Services (AWS) Independent Software Vendor (ISV) Accelerate Program, strengthening its capacity to deploy sophisticated biometric security solutions on AWS.

In September 2022, Suprema unveiled BioStation 3, a small, sophisticated access control terminal with face recognition and a variety of contactless credentials for post-pandemic security. It stresses data security and provides novel features.

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