

Biometrics -- Markets Reach \$44.2 Billion By 2021

Biometrics: Technology Markets That Grow and Change Rapidly

LEXINGTON, Massachusetts (October 3, 2015) – WinterGreen Research announces that it has published a new study *Biometrics: Market Shares, Strategy, and Forecasts, Worldwide, 2015 to 2021*. Next generation biometrics implements smart devices that leverage better technology, they support high quality data gathering in the specific milieu in which they are being used. Devices are targeted to specific situations. Hybrid devices increase identification accuracy by combining two or several technologies and approaches to the market. The study has 1,003 pages and 419 tables and figures.

Biometric identity units provide security protection from a variety of perspectives. Units are comprised of integrated biometric capture devices. Biometrics is used to identify anyone in an accurate, repeatable manner. Physiological characteristics used for biometrics commonly include the face, fingerprints, voice, and DNA. Modern biometrics hybrid fingerprint recognition use onboard fingerprint readers. Mobile devices use capacitive technology to implement security systems. Growth of biometrics security systems is being fueled by rising threats. Different portable device implementations have given rise to multiple technology breakthroughs in size, weights, and length of battery use..

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Biometrics is used to identify people in an accurate, repeatable manner. Physiological characteristics used for biometrics include the face, fingerprints, and DNA. Developments relate to the ability to unobtrusively collect face and voice biometrics, supplementing fingerprinting that has been dominant. Biometrics technology measures personal physiological characteristics for the purpose of unique identification and security.

Apple advanced the OS X "Quick Look" feature for iOS devices using an intense touch gesture. Apple extended fingerprint technology as Touch ID. iDevice displays are taking on fingerprinting capabilities and sensitivities beyond the home button. Apple introduces the possible use of virtual knobs, controlling video games via the home button.

Apple is working on assigning different bank accounts to different fingerprints. Apple next-gen touch panel technology introduces the next wave of biometric capabilities. Apple next-gen touch panel technology using nano silver wire materials brings sensitivity to iPad displays. The technology finds its way into the Apple watch and the iPhone. This technology gives Apple significant market advantage in the payment verification market.

TYPES OF BIOMETRIC DEVICES

- Automated fingerprint identification systems (AFIS)
- Palm and vein reading systems that supplement AFIS
- Non-automated fingerprint identification systems
- Facial recognition
- Iris scans
- Integrated AFIS, face, and iris systems
- DNA readers
- Biometric signatures
- Data encoders
- Bar coder
- Document scanner

Biometric identity units provide security protection. Units are comprised of integrated biometric capture devices and readers, systems to store and use the biometric identifiers. Biometrics units are comprised of fingerprint systems, facial recognition, iris scans, and biometric signatures.



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They include data encoders. Data encoders may be implemented as a bar coder or document scanner. Units are sometimes contained in ruggedized briefcases for military, public safety, and civil identification applications.

Advances in technology, miniaturization, and improved mobile device technology enable uses previously thought impossible, or never even imagined. Voter registration in low-literacy economies is now economical. Identifying persons of interest in a crowd can be done with biometrics.

Growth of biometric technologies has been in response to global security threats. Terrorist attacks, airport security initiatives, and attempts to lower crime rates have brought an increasing investment in biometric security systems. Government projects include ePassports, eDriving licenses, border management, and national IDs. These initiatives have been implemented in developed countries.

A rise in government projects has been seen as terrorists become an increasing threat. This has been accompanied by increasing data security concerns. There is a need for advanced security devices.

Biometrics use cases can be consumer- or citizen-facing. These use cases are typically high-volume, low price broadly implemented systems. Enterprise-facing use cases include government law enforcement, and defense applications where an organization is implementing smaller volumes of devices, or where the devices are more expensive. Use cases define the biometrics market. Biometrics is used to identify individuals with confidence. When used in law enforcement, cases are resolved quicker and with more convictions of guilty people.

Security systems implementations drive the market for biometric systems. Biometric data protection is being used to replace photographs, passwords and PIN codes.

India, Mexico and Russia are driving the extraordinary growth of biometric systems. China has a biometric national ID program that commenced in 2013. India is getting on board. Computer storage of important documents has created an increasing need for biometric security systems.



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Key industries in the biometrics market are finance, consumer devices, and healthcare. Key use cases include smart phone payment systems, consumer device authentication, mobile banking, automated teller machines (cashpoints), government IT systems, point-of-sale transactions, pharmacy dispensing, and wearable device authentication. Call center use cases apply across nearly all industries.

Biometric modalities include hybrid fingerprint / palm print, facial recognition, iris image, and voice recognition. The global biometrics market is \$7.0 billion in 2014, rising to \$44.2 billion by 2021. Biometrics revenue and device shipment forecasts are segmented by modality and market segment. There are four market segments, law enforcement, border control which includes government ID systems, workplace access, and consumer ID.

According to Susan Eustis, leader of the team that prepared the study, “Biometrics represent a multi-billion dollar industry because the devices provide personal identity protection. Biometrics is used by civil authorities to permit the organization of people into units of government that are a cohesive group of people, not intruded upon by outsiders. Biometrics provides a cornerstone of law enforcement agencies with fingerprint ID.”

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