

Fingerprint Sensors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 120 pages | Mordor Intelligence

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Report description:

The Fingerprint Sensors Market size is estimated at USD 10.68 billion in 2025, and is expected to reach USD 18.79 billion by 2030, at a CAGR of 11.96% during the forecast period (2025-2030).

The fingerprint sensors market has expanded rapidly over the past few years and is projected to increase even further during the forecast period. Increased adoption of smartphones, increasing security applications, and government initiatives to adopt biometrics tend to be the key factors driving the demand for fingerprint sensors globally.

Key Highlights

- The fingerprint is among the prominent types of biometrics used in various devices and application fields, leading to the rise in demand for fingerprint sensors. Moreover, according to the survey carried out by the Biometrics Institute, interest in artificial intelligence (AI) more than doubled from 8% in 2022 to 19% in 2023. In the short term, AI is also expected to surpass digital identity as the most significant development in biometrics.
- The growing penetration of smartphones equipped with fingerprint sensors is among the prominent drivers of the market studied. For instance, as reported by GSMA, the global smartphone penetration rate was estimated at 68% in 2022, up for the first time since 2018. This is based on an estimated 6.3 billion smartphone subscriptions globally and a worldwide population of around 7.4 billion.
- In line with that, the number of intelligent devices, such as tablets, laptops, smartphones, and smart wearables per person, is expected to increase over the coming years. These devices are increasingly being incorporated with fingerprint sensors.
- Smartphone penetration is increasing exponentially, owing to the increasing influence of fast internet access. With the advent of 5G, smartphone penetration is expected to increase even further. According to GSMA, the number of smartphone subscribers in North America is expected to reach 328 million by 2025.

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- Moreover, by 2025, the region may witness an increase in the penetration rates of mobile subscribers (86%) and the internet (80%). According to GSMA, by 2025, Europe is estimated to register the highest internet penetration rate (82%) and smartphones (88%).
- Facial recognition systems are becoming increasingly common in various devices. For instance, major smartphone vendors, such as Apple, Samsung, and OnePlus, have already incorporated this user authentication. However, this increase in the adoption of substitute technology can hamper the growth of the fingerprint sensors market.

Fingerprint Sensors Market Trends

Smartphones Under the Application Segment is Expected to Hold a Major Share

- Smartphones are the largest application to utilize fingerprint sensors for user authentication among all the other devices considered in the study. Toshiba's earliest application of fingerprint sensors in smartphones was in 2011, but Apple Touch ID revolutionized fingerprint sensors in mobile devices.
- Apple's Touch ID, based on capacitive technology, was accurate and easy to use, making user authentication fast and smooth. After Apple's success, Samsung and other major players also started using different fingerprint technologies for authentication.
- Regarding technology, the capacitive touchscreen sensors are being replaced by ultrasonic fingerprint sensors in premium phones and optical sensors in the rest of the devices. The shift from capacitive sensors has been due to the growing demand to integrate sensors in the display.
- On the other hand, tablets have been using capacitive sensors, and many small manufacturers have opted not to use fingerprint sensors on their tablets to keep the bezels. However, companies like Samsung, Lenovo, and Asus have used capacitive sensors in their tablets.
- The increasing penetration of smartphones is expected to create more opportunities in the market studied. For instance, Ericsson Mobility Report June 2023 showed more than 6.71 billion new smartphone subscriptions in 2023.

Asia-Pacific to Witness Highest Growth

- Increasing mobile transactions in China, coupled with the government's initiatives, are expected to be the major drivers for the fingerprint sensor market in the country. China is witnessing a high volume of mobile transactions, which is expected to create a potential for the market studied.
- According to the China Internet Network Information Center (CNNIC), as of June 2023, around 943.19 million people used mobile payments in China. This upsurge in mobile payment transactions increases the need for various fingerprint sensors.
- Japanese automotive companies are actively looking forward to integrating fingerprint sensors in their upcoming models. For instance, Nissan introduced its concept car, Nissan Xmotion, which features fingerprint biometric authentication for enhanced vehicle security.
- Fingerprint sensors are witnessing significant demand in South Korea due to the increasing demand for biometric payment cards, which have a robust market. Various market vendors are currently working to integrate biometric technology. They will have a genuinely disruptive offering that will significantly expand the country's banking customer base, various end-users, and beyond.

Fingerprint Sensors Industry Overview

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The fingerprint sensor market is fragmented, with individual international companies such as Qualcomm, Fingerprint Card AB, and Synaptics occupying a significant market share by deploying their solutions in various smartphones. Fingerprint sensor firms are unlocking new markets beyond smartphones, exploring the IoT field, and integrating fingerprint sensors into smart cards. They are constantly incorporating different technologies to enhance the end-user experiences.

- In April 2023, UIDAI partnered with IIT Bombay to develop contactless fingerprint capture software for phones. The partners plan to develop touchless fingerprint capture technology with built-in liveness detection to support biometric authentication with a modality other than face. The system will capture multiple fingers simultaneously to maximize accuracy and is planned for integration with the larger Aadhaar ecosystem.
- In February 2023, IDloop, a Germany-based company, developed a contactless 3D fingerprint scanner with microscopic resolution. The company pitched its new biometric technology as a way to quickly compare fingerprints against existing databases collected with contact-based scanners, such as the three billion people already registered in government databases.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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