
Fingerprint Cards AB (publ) communicates view on long-term development of markets for biometrics and the company's competitive position

Over 80 percent of all smartphones sold currently have some form of biometric sensor. The technology is generally accepted and appreciated by users throughout the world, who use their biometric data to unlock devices, make payments and gain access to apps. There is still growth potential in the mobile industry, in part by increasing the attach rate of biometric sensors for smartphones and in part through new product innovations. However, Fingerprints expects the growth in biometrics to primarily occur in new areas.

While the adoption of biometrics in areas outside of smartphones has been sporadic over the past few years, there are now clear indications that biometrics is on the verge of entering into several new consumer mass markets. Fingerprints would therefore like to communicate the company's view on the long-term potential in key market segments, as well as our aspirations.

Market potential in 2026 and beyond

Mobile and PC

For **capacitive fingerprint sensors for smartphones**, we see a potential annual total addressable market (TAM) amounting to ~800 million units by 2026. Capacitive sensors are a long-proven technology in the mobile industry, due in large part to their reliability, performance, and cost effectiveness. Some of Fingerprints' customers are in fact again favoring capacitive sensors over under-display sensors. Slim, side-mounted sensors and rear-mounted sensors are particularly popular. Fingerprints is currently the market leader in capacitive fingerprint sensors for smartphones, with a share of more than a third of the global market. Our aspiration is to, over time, increase our market share to ~40 percent. Our recently launched FPC1540 sensor is doing very well in the market, as it enables a range of the latest smartphone designs, including borderless and foldable phones. The FPC1540 can also enhance the user experience beyond offering a convenient and secure authentication method, doubling as the power button, volume control, operating the camera shutter and scrolling.

In parallel, we expect to see the market for **under-display fingerprint sensors for smartphones** to continue growing and then flatten out at an annual TAM amounting to ~600 million units in 2026. Our aspiration is to be a significant player in this segment with a market share up to 20 percent.

In the years ahead, we expect to see solid growth in the market for **fingerprint touch sensors for PCs, including Chromebooks**. We estimate the number of PCs shipped every year to remain at ~260 million units, and that approximately two-thirds of these devices, i.e. ~170 million units, will have a fingerprint touch sensor by 2026. Fingerprints' aspiration is to lead this market with a share of up to ~40 percent. Products from Acer, Asus, Google, HP, Huawei, Microsoft, and Samsung have already been launched with our fingerprint sensors. Fingerprints' partners among the traditional smartphone module houses are now also significant players in the PC market, and several of our smartphone customers are gaining market share in PCs. In August 2020, Fingerprints launched a new solution aimed at the PC market, comprising customized software and a range of Fingerprints' touch sensors. We expect the first PCs integrating this new offering to be launched during 2020.

Payments

Fingerprint sensors for payment devices, including smartcards, wearables and USB tokens, represent a very large potential market for biometrics. By 2026 and beyond, we believe that around 6 billion payment devices will be shipped every year. Almost all these devices are expected to be contactless. We see a potential TAM amounting to ~3 billion units per year for biometric sensor modules and software in the payments area. Our aspiration is to lead this market with a share of around 50 percent. Fingerprints' position in this emerging market is very strong. Our technology is included in the only biometric payment card, delivered by Thales, that has thus far been certified by both Mastercard and Visa. Furthermore, our sensors and software platform are

used in the world's first commercial launch, by Cornècard in Switzerland, and will also be used in BNP Paribas' announced commercial launch in France this autumn. The fact that the world's top three suppliers of secure elements for payment cards – Infineon, NXP, and STMicroelectronics – have selected Fingerprints for their reference designs is also testimony to the strength of our solution.

The announcement of the latest generation of our T-Shape® sensor module (part of the FPC1300-series), on September 4, 2020, represents a significant step forward, both in terms of performance and cost efficiency. While delivering improved image quality and speed, as well as better power efficiency, the design of this new module will also significantly reduce the total cost of producing a biometric payment card. The competitiveness of the new T-Shape® in terms of performance and total biometric card cost is already world-leading, and our aim is that our technology will make it possible to reach a total biometric card cost below USD 3 by 2026, at high volumes.

The new T-Shape®, launched on September 4, 2020, will reach a price below USD 3 in volume production. Furthermore, Fingerprints' close partnerships with key ecosystem partners such as leading secure element and inlay producers as well as card producers, enable the optimization of various components in relation to each other. This makes it possible to reduce the complexity of the inlay while also simplifying the production process. Fingerprint Cards' products are known for their power efficiency. Neither the second nor the first generation of the T-Shape® module require a separate Power Management Unit (PMU), as the power harvesting functionality in the card's secure element is sufficient. In addition, the updated T-Shape® is even simpler to integrate into the standard automated card manufacturing process, using our proven and industry-accepted packaging on reel in dual rows. This will increase throughput, reduce waste and lower the embedding costs for card producers. In addition, a significant breakthrough with the new T-Shape® and its associated software is that it enables both fingerprint extraction and matching to occur in the secure element, removing the need for including an MCU and further simplifying the card architecture. The new T-Shape® supports secure transmission such as integrity protection and encryption.

Access

By combining security, flexibility and convenience, biometric solutions can facilitate secure access to devices and data. **Biometric solutions for the Access area** is a fragmented, but growing market including products such as door locks, cars, remote and gaming console controls, smart home devices, authentication tokens, and access cards. The use of biometrics will vary by segment, but we estimate that the TAM for our solutions in the Access area will amount to over 100 million units by 2026 and beyond. Today, Fingerprints is the global fingerprint sensor market leader in the Access segment, and we aspire to defend this position as the market expands. To meet the evolving design needs of the diverse and growing market for biometric access control, we recently expanded our fingerprint authentication touch sensor portfolio for physical and logical access devices and applications. In addition, Fingerprints' touchless solution, based on iris and face recognition, is beneficial for multiple use cases in the Access segment, e.g. in the automotive and healthcare industries.

Forward-looking statements

This press release contains forward-looking statements, including terms such as “anticipates”, “aspires”, “believes”, “estimates”, and “expects”, about the estimated market size and aspirations for the company's market share, as well as for estimated production costs and prices for biometric smartcards. The forward-looking statements are based on information previously made public by the company, other public sources, and the company's current assumptions and assessments, which may be subject to change. The forward-looking statements shall not be viewed or understood as projections, forecasts or similar. The forward-looking statements involve a number of unknown risks, uncertainties and other factors that could cause actual outcomes to differ materially. Unknown risks, uncertainties and other factors are discussed in the “Risks and risk management” section of [Fingerprint Cards' 2019 annual report](#). The forward-looking statements are made only as of the date hereof, and the company undertakes no responsibility to revise or update the forward-looking statements.

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About Fingerprints

Fingerprint Cards AB (Fingerprints) – the world’s leading biometrics company, with its roots in Sweden. We believe in a secure and seamless universe, where you are the key to everything. Our solutions are found in hundreds of millions of devices and applications, and are used billions of times every day, providing safe and convenient identification and authentication with a human touch. For more information visit our [website](#), read our [blog](#), and follow us on [Twitter](#). Fingerprints is listed on Nasdaq Stockholm (FING B).