

# **Fingerprint Sensor Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Type (Area & Touch Sensor, Swipe Sensor), By Technology (Capacitive, Optical, Thermal, Others), By Application (Consumer Electronics, Government & Law Enforcement, Military & Defense, BFSI, Smart Homes, Healthcare, Aerospace, Commercial), By Region & Competition, 2021-2031F**

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## **Abstracts**

The Global Fingerprint Sensor Market is projected to expand from USD 7.55 Billion in 2025 to USD 14.02 Billion by 2031, registering a CAGR of 10.87%. These biometric devices authenticate identity by capturing and analyzing unique finger ridge patterns. Market growth is primarily fueled by the widespread adoption of biometric security in consumer electronics and the increasing need for secure identity verification within government and banking sectors. Highlighting this demand, the FIDO Alliance reported in 2024 that 48% of consumers expressed willingness to use biometric technology for sensitive financial identity verification.

However, the industry faces significant hurdles regarding security flaws and the expense of sophisticated anti-spoofing measures. The threat of presentation attacks requires complex liveness detection capabilities, which raise component costs and technical intricacy. Consequently, these factors may hinder market adoption in regions and applications where cost is a limiting factor.

## **Market Driver**

The widespread inclusion of fingerprint sensors in consumer electronics, especially smartphones, acts as the primary revenue driver for the global market. As mobile devices become central to digital identity and financial management, manufacturers are standardizing biometric components across all price points to supersede vulnerable password systems. This extensive adoption is highlighted by Fingerprint Cards AB's 'Annual Report 2024' in April 2025, which notes that their biometric solutions have been integrated into nearly two billion devices globally, confirming that capacitive and optical sensors have shifted from premium features to essential commodities.

Simultaneously, the rising need for robust biometric security in the digital and financial sectors is propelling value growth and technological innovation. Amidst increasingly complex cyber threats, financial institutions are adopting biometric verification to ensure transaction integrity and reduce fraud. According to Mastercard's '10 top payments trends for 2025' from December 2024, combining biometrics with generative AI in decision intelligence enhances fraud protection rates by up to 300%. This trend is supported by increased consumer vigilance; the Visa 'Stay Secure Study' from February 2025 reveals that 97% of consumers in the CEMEA region actively secure their online transactions, fostering a conducive environment for next-generation sensor adoption.

## **Market Challenge**

A major impediment to the Global Fingerprint Sensor Market is the difficulty of implementing sufficient security against presentation attacks. As bad actors refine techniques to bypass sensors using high-resolution images or synthetic materials, manufacturers must adopt sophisticated liveness detection systems. These essential upgrades substantially increase the bill of materials, rendering sensor modules less economically feasible for budget-restricted government initiatives and entry-level consumer electronics. This cost barrier limits the technology's scalability in price-sensitive areas, thereby constraining shipment volumes and overall market penetration.

The severity of this security challenge and its cost implications are supported by recent industry findings. In 2024, the Biometrics Institute reported that 51% of industry professionals flagged spoofing and deepfake threats as major concerns, a notable rise from the prior year. This escalating alarm necessitates expensive hardware solutions to counter fraud risks. As a result, the high cost of implementing intricate anti-spoofing measures impedes market growth, preventing widespread deployment in sectors where low cost is a key purchasing factor.

## Market Trends

The transition of biometric payment cards from early pilot stages to mass-market production marks a significant shift in financial hardware. This trend involves embedding fingerprint sensors directly into card laminates, facilitating seamless contactless authentication that removes the need for PINs while ensuring high security. As production yields improve and manufacturing costs fall, issuers are increasingly rolling out these cards to enhance user convenience and combat point-of-sale fraud. This momentum is evidenced by Fingerprint Cards AB's 'Interim Report Q3 2025' from October 2025, which reported a 47% revenue rise in constant currency, fueled by growing adoption in the access and payment sectors.

Concurrently, the market is expanding into automotive security and personalization, where biometrics are advancing from basic access controls to comprehensive driver identification systems. Modern vehicles now use sensors to secure ignition systems against theft and adjust cabin settings, such as infotainment preferences and seating. This integration brings sophisticated identity management similar to mobile technology into automotive interfaces. Highlighting this strategic convergence, Gentex Corporation announced in a November 2025 press release, 'Gentex Expands Biometric Portfolio With Acquisition of BioConnect', that it has integrated a multi-modal authentication platform serving over 1,500 enterprises, aiming to align automotive hardware with enterprise-grade security standards.

## Key Market Players

Apple Inc.

Shenzhen Goodix Technology Co., Ltd.

Fingerprint Cards AB

Synaptics Incorporated

Qualcomm Technologies, Inc.

IDEMIA Group SAS

IDEX Biometrics ASA

Egis Technology Inc.

NEXT Biometrics Group ASA

CrucialTec Co., Ltd.

## Report Scope

In this report, the Global Fingerprint Sensor Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

### Fingerprint Sensor Market, By Type

Area & Touch Sensor

Swipe Sensor

### Fingerprint Sensor Market, By Technology

Capacitive

Optical

Thermal

Others

### Fingerprint Sensor Market, By Application

Consumer Electronics

Government & Law Enforcement

Military & Defense

BFSI

Smart Homes

Healthcare

Aerospace

Commercial

## Fingerprint Sensor Market, By Region

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

## **Competitive Landscape**

Company Profiles: Detailed analysis of the major companies present in the Global Fingerprint Sensor Market.

## **Available Customizations:**

Global Fingerprint Sensor Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## **Company Information**

Detailed analysis and profiling of additional market players (up to five).

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