# Biometric in the Automotive - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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**Report description:**

The Biometric in the Automotive Market is expected to register a CAGR of 18.2% during the forecast period.

Key Highlights
- In the automotive industry, the application of biometrics lies in various areas, including access control for starting a vehicle using various biometric scanners, enabling personalized vehicles for the users to allow drivers and passengers to call up playlists, contacts, and preferred apps. The application of these biometrics in automotive vehicles is expected to increase during the forecast period.
- Iris recognition is considered a reliable and accurate biometric technique for authentication of the driver in automobiles, and players are approaching with more features, such as securing the multiple services offered through the gateway. In April 2022, Hyundai filed a patent for a system that uses iris scanning technology to verify the driver's identity when they get into the vehicle. This system also prevents someone from starting the vehicle unless there is a biometric match.
- Recently, EyeLock announced a collaboration to apply its iris biometric authentication technology to the SiriusXM e-Wallet in a highly secure, touchless gateway prototype. Drivers and passengers will be able to find, pay, or pre-pay for coffee, gas, movie tickets, or parking while on the go. It helps to eliminate driver distractions during transaction processes, capturing driver or passenger iris biometrics with EyeLock's custom-designed, visor-mounted prototype. Such new technology caters to a new future trend in the biometric application in the iris recognition segment.
- Facial recognition has been gaining importance in the automotive sector. Automaker Subaru introduced facial recognition into its latest Forrester model. The system combines an infrared LED and a camera to monitor the driver for signs of inattention or sleepiness, warning them if needed. The system recognizes up to five individual drivers, so settings and preferences can be automatically adjusted for each person.
- Furthermore, various automobile players have also implemented fingerprint technology to unlock their cars. Fingerprint

identification is majorly accepted in biometric identification as the probability of finding two same fingerprints is one in 64 billion, even with twins, increasing its credibility.
- Automobile players, such as Hyundai Motor, use fingerprints where multiple drivers can register theirs. Depending on the fingerprint, the car will automatically adjust seat positions and the angle of the rearview mirrors. Hyundai says its method to add fingerprint technology uses the human's capacitance where the reader differentiates and prevents hacking or any forged fingerprints. It has been said that the reader has an error rate of 1 in 50,000.
- Due to the COVID-19 pandemic, the production unit of automotive has fallen steeply at the global level. According to the European Automobile Manufacturers Association, EU-wide production losses due to factory shutdowns amount to at least 2,446,344 motor vehicles so far. In particular, biometric systems have been brought into the spotlight as a key technology for early detection, patient screening, and public safety monitoring in an effort to contain the spread of COVID-19; however, in the automobile sector, the demand reduced drastically due to low production of automotive and disruptions in the supply chain.

Biometric in the Automotive Market Trends

Facial Recognition is Expected to Grow at a Significant Rate

- The emphasis on the adoption of facial recognition in the automotive industry is expected to increase over the forecast period. The application of the technology helps access control of the vehicle and its safety. Enterprises in the market are looking to incorporate the solution to track driver and passenger behavior by monitoring their emotions.
- Furthermore, facial recognition solutions are also used for various automotive industry applications, such as car ignition and cutting down car thefts. These can also automatically adjust the vehicle settings and handle personal preferences, such as heat adjustment and selection of favorite music to play once the vehicle's owner is authorized.
- With autonomous cars becoming more and more relevant with the technology, using facial recognition to assimilate safety with access is expected to become more prominent. For instance, if the driver seems to be sleepy/dizzy, the vehicle can take control to ensure safety. These factors further enhance the potential of these solutions in the market.
- Jaguar Land Rover is testing a system for monitoring the mood of the occupant. A camera attached to the steering wheel and biometric sensors monitor the driver's facial expressions. The system continuously analyzes it and changes the cabin features automatically. For instance, if the system detects the driver is under stress, it can change the ambient lighting to calming colors. Then signs of weariness will lead to selecting a more stimulating playlist or reducing the temperature in the vehicle. The AI-based system is capable of learning and adapting accordingly to individual behavior.
- The British automaker is also researching similar technology for the passengers in the back of the vehicle. Two cameras incorporated in the headrests of the vehicle monitor the facial expressions of the rear passengers. If they get drowsy, the system can dim the lights, tint the windows, or turn up the seat heating.
- In May 2021, Tesla's advanced driver assistance systems in the Model 3 and Model Y vehicles used face recognition to ensure that the driver was seated and paying attention. Within the car, the camera data is stored and analyzed locally. According to a Tesla patent application for an AI automobile system, the business is working on leveraging face biometrics to track passenger whereabouts or personalize settings.
- Furthermore, Hyundai Motors announced in September 2021 that it would include a facial recognition system named Face Connect in its forthcoming GV60, the first all-electric sports utility vehicle from the Genisis brand. The facial recognition system in the GV60 is used to open doors and start the engine.
- With the growing demand for motor vehicles, it is expected that the demand for facial recognition will also increase. According to the International Organization of Motor Vehicle Manufacturers, global motor vehicle sales increased by 5% in 2021, representing the signs of rebounding in sales after two consecutive years of declining demand due to COVID-19.

North America Holds Significant Market Share

- North America is one of the largest automotive manufacturing hubs in the world. The automotive industry has shown marginal growth in recent years. The automotive sector in this region is facing stiff competition from the used car market. According to an estimate by Cox Automotive, there were 40.9 million used car sales in 2021, up by 10% from 2020.
- Due to this, automotive manufacturers in the region rely on newer technologies, like biometrics, to create additional value and differentiation in the market. The automotive sector in the region is the newly emerging market for the application of biometrics. The companies are strategically positioning and segmenting their biometric offerings toward the market.
- For instance, in February 2022, Ford Global Technologies in Michigan was awarded a patent for facial recognition systems built into the vehicles that will recognize their drivers and unlock the doors on sight.
- Further, in January 2022, a patient was filed in the United States Patents and Trademarks office, suggesting that the rumored Apple Car would be integrated with onboard AI. This patent provides details on the onboard system's technical specifications that incorporate cameras that can detect the individual's biometrics sitting in the car and override control to that individual if a command is given to break away from exterior control.
- The automotive companies in the region, including BMW, Mercedes-Benz, Volkswagen, and Ford, have already mentioned integrating biometric technology in their high-end luxury segmented cars with high-security features. The companies have mentioned exploring biometric technology in various areas, including vehicular access, ignition switch, vehicle immobilizer, rationalization, and health monitoring.

Biometric in the Automotive Industry Overview

Biometrics in the automotive market is moderately competitive and consists of a few major players. However, with the advancement in security platform services, new players are increasing their market presence, thereby expanding their business footprint across emerging economies. Some of the recent developments in the market are:

- May 2022 - Dermalog and Rheinmetall partnered together to form Rheinmetall Dermalog SensorTec GmbH, aiming to bring enhanced safety to road traffic. The new company will supply innovative biometric technologies to vehicle manufacturers.
- Nov 2021 - The automaker's Daimler Mobility unit announced its partnership with Visa to use the fingerprint scan to verify secure digital payments from the vehicle, allowing the driver to make purchases without the need for voice commands or PINs. The technology will be rolled out in 2022 in the United Kingdom and globally later.

Additional Benefits:

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

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