

# **Biometric Identification Market for ICE, EV, & Autonomous Vehicles, by Authentication Process (Fingerprint, Voice, Iris, Facial, Gesture, Multimodal), Sensor (CMOS, Optical, Retinal), Processing Component, Application, Wearable, and Region - Forecast to 2022**

<https://marketpublishers.com/r/B5FC6F1F6ECEN.html>

Date: August 2017

Pages: 202

Price: US\$ 5,650.00 (Single User License)

ID: B5FC6F1F6ECEN

## **Abstracts**

“Increase in demand for vehicle safety, security, and comfort to upsurge the demand for biometric identification systems in the automotive industry”

The biometric identification market for automotive is projected to grow at a CAGR of 25.61% from 2017 to 2022, to reach USD 21.72 billion by 2022. Increasing demand for vehicle security and comfort is projected to fuel the demand for advanced technologies such as iris or facial recognition system.

On the other hand, the major factors hindering the growth of the biometric identification market in vehicles are the high cost of system or module and the possibility of potential failure of electronic components used for biometric systems.

“Optical sensors is estimated to showcase the fastest growth and is expected to dominate the biometric identification market, by components”

The market for optical sensors is projected to grow at the highest CAGR during the forecast period from 2017 to 2022. The optical sensors are lightweight and consume less power. As these components are used in the authentication system/modules such as fingerprint recognition, signature/keystroke recognition, and iris recognition, the increase in demand for biometric systems would directly influence the demand for

components.

“Biometric vehicle access system to have the largest market in automotive biometric identification market”

The biometric vehicle access system is projected to be the largest segment of the biometric identification market for automotive, by application. The growth of this segment can be attributed to increasing focus on comfort, safety, and vehicle security in premium cars in North America and Europe. The manufacturers are now offering advanced features such as fingerprint authentication in high-end vehicles. With the increase in demand for luxury vehicles in Asia-Oceania, the market for biometric identification is expected to grow in the region in the near future.

“Asia-Oceania and North America to dominate the market growth”

Asia-Oceania and North America are estimated to dominate the global biometric identification market for automotive. While Asia-Oceania is estimated to be the fastest growing market, North America is estimated to be the largest market during the forecast period. In Asia-Oceania, the growth of automotive biometric solutions has been observed owing to rapid technological changes and increasing demand for luxury vehicles, which have boosted the application of biometric and the overall biometric identification market. On the other hand, the market growth in North America can be attributed to advanced state-of-the-art technology and increasing demand for premium cars, which ultimately increases the application of biometric in the automotive industry.

The study contains insights provided by various industry experts. The break-up of the primaries is as follows:

By Company Type – Tier-1 - 55%, Tier 2 - 20%, and OEM - 25%

By Designation — C level - 75%, Manager level - 25%

By Region — Europe - 20%, Asia-Oceania – 40%, North America - 10%, and RoW – 30%

The key companies profiled in the study are Hitachi, Ltd. (Japan), FUJITSU (Japan), Safran (France), Synaptics Incorporated (U.S.), Nuance Communications, Inc. (U.S.), Methode Electronics (U.S), HID Global Corporation/ASSA ABLOY AB (U.S.), VOXX

International Corp. (U.S.), Fingerprint Cards AB (Sweden), Voicebox Technologies Corporation (U.S.), Robert Bosch GmbH (Germany), Continental AG (Germany), and Valeo (France).

## Research Coverage

The global biometric identification market for automotive is segmented by the identification process (fingerprint, voice, iris, facial, gesture, and multimodal recognition system), application (biometric vehicle access system, engine start-stop system, driver fatigue & drowsiness monitoring system, memory steering, memory seats, and infotainment system), and electric vehicle type (BEV, HEV, and PHEV). The market is also segmented by characteristics, components and sensor type, namely, metal oxide semiconductor (CMOS)/image sensors, optical/fingerprint & palm sensors, iris/retinal recognition sensors, microphone/voice sensors, signature/keystrokes sensors, Processing units, embedded microcomputers, micro chipsets, optical flexible electronic (vein detection). The biometric market for automotive is also segmented by biometric wearables (watches, eyeglasses, and headsets), fleet management services (electronic logging devices and driver monitoring system) and autonomous & semi-autonomous vehicle (vehicle access and in-vehicle features).

## Reasons to Buy the Report:

The report provides insights with reference to the following points:

**Market Size:** The report gives in-depth market sizing and forecast up to five years with third level segmentation.

**Market Development:** The report provides comprehensive information about lucrative emerging markets. The report analyzes the markets for automotive biometric identification across regions.

**Product Development/Innovation:** The report gives detailed insights into R&D activities, upcoming technologies, and new product launches in the global biometric identification market for automotive.

**Market Diversification:** The report offers detailed information about untapped markets, investments, new products, and recent developments in the global biometric identification market for automotive.

**Micro Quadrants:** The report provides detailed information and in depth analysis of key players based on their business strategy excellence and strength of product portfolio.

**Supplier analysis:** The report gives a brief analysis of Who Supplies Whom data for key automotive biometric manufacturers and their clients (OEM).

## Contents

### 1 INTRODUCTION

- 1.1 OBJECTIVES OF THE STUDY
- 1.2 MARKET DEFINITION
- 1.3 MARKET SCOPE
  - 1.3.1 YEARS CONSIDERED FOR THE STUDY
- 1.4 CURRENCY
- 1.5 PACKAGE SIZE
- 1.6 LIMITATIONS
- 1.7 STAKEHOLDERS

### 2 RESEARCH METHODOLOGY

- 2.1 RESEARCH DATA
  - 2.1.1 SECONDARY DATA
    - 2.1.1.1 Key secondary sources
    - 2.1.1.2 key data from secondary sources
  - 2.1.2 PRIMARY DATA
    - 2.1.2.1 Sampling techniques & data collection methods
    - 2.1.2.2 Primary participants
- 2.2 FACTOR ANALYSIS
  - 2.2.1 DEMAND-SIDE ANALYSIS
    - 2.2.1.1 Growth in luxury vehicle sales
    - 2.2.1.2 Rising demand for hybrid and electric vehicles
  - 2.2.2 SUPPLY-SIDE ANALYSIS
    - 2.2.2.1 Technological advancements in biometric identification industry owing to the increased focus on safety & comfort
- 2.3 MARKET SIZE ESTIMATION
  - 2.3.1 BOTTOM-UP APPROACH
- 2.4 DATA TRIANGULATION
- 2.5 ASSUMPTIONS & LIMITATIONS
  - 2.5.1 PARAMETERS & ASSUMPTIONS FOLLOWED FOR BIOMETRIC IDENTIFICATION MARKET ANALYSIS
  - 2.5.2 PARAMETERS & LIMITATIONS FOR BIOMETRIC IDENTIFICATION MARKET ANALYSIS

### 3 EXECUTIVE SUMMARY

### 3.1 INTRODUCTION

#### 3.2 BIOMETRIC IDENTIFICATION MARKET, BY COUNTRY

#### 3.3 BIOMETRIC IDENTIFICATION MARKET, BY COMPONENT

#### 3.4 BIOMETRIC IDENTIFICATION MARKET, BY APPLICATION

#### 3.5 BIOMETRIC IDENTIFICATION MARKET, BY WEARABLE TECHNOLOGY

#### 3.6 BIOMETRIC IDENTIFICATION MARKET FOR ELECTRIC VEHICLES, BY REGION

#### 3.7 BIOMETRIC IDENTIFICATION MARKET FOR AUTONOMOUS & SEMI-AUTONOMOUS VEHICLES

#### 3.8 BIOMETRIC IDENTIFICATION MARKET, BY FLEET MANAGEMENT SERVICE

## 4 PREMIUM INSIGHTS

#### 4.1 OPPORTUNITIES IN THE BIOMETRIC IDENTIFICATION MARKET

#### 4.2 BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION TYPE

#### 4.3 BIOMETRIC IDENTIFICATION MARKET, BY COMPONENT

#### 4.4 BIOMETRIC IDENTIFICATION MARKET, BY APPLICATION

#### 4.5 BIOMETRIC IDENTIFICATION MARKET, BY ELECTRIC VEHICLE & REGION

#### 4.6 BIOMETRIC IDENTIFICATION MARKET, BY WEARABLE TECHNOLOGY

#### 4.7 BIOMETRIC IDENTIFICATION MARKET, BY AUTONOMOUS & SEMI-AUTONOMOUS VEHICLE

#### 4.8 BIOMETRIC IDENTIFICATION MARKET, BY FLEET MANAGEMENT SERVICE

## 5 MARKET OVERVIEW

### 5.1 INTRODUCTION

### 5.2 MARKET SEGMENTATION

### 5.3 MARKET DYNAMICS

#### 5.3.1 DRIVERS

5.3.1.1 Rising concerns for vehicle security & increased use of multifactor authentication

5.3.1.2 Increased demand for premium segment vehicles to boost the market for biometric identification

5.3.1.3 Increase in legislations regarding biometric identification systems

5.3.1.4 Increasing benefits from insurance companies for vehicles installed with biometric systems

#### 5.3.2 RESTRAINTS

5.3.2.1 High cost of Biometric identification systems/modules

5.3.2.2 Potential failure of electronic components used in biometric identification

### 5.3.3 OPPORTUNITIES

5.3.3.1 Major automobile OEMs partnering with biometric system manufacturers

5.3.3.2 Advent of concept cars and electric vehicles in the automotive industry

### 5.3.4 CHALLENGES

5.3.4.1 Increased connectivity would induce risk of cyber attacks

5.3.4.2 Weather conditions might hamper the functionality of Biometric systems

## 5.4 PORTER'S FIVE FORCES ANALYSIS

5.4.1 THREAT OF NEW ENTRANTS

5.4.2 THREAT OF SUBSTITUTES

5.4.3 BARGAINING POWER OF SUPPLIERS

5.4.4 BARGAINING POWER OF BUYERS

5.4.5 INTENSITY OF COMPETITIVE RIVALRY

## 5.5 TECHNICAL OVERVIEW

### 5.5.1 EVOLUTION

5.5.1.1 Fingerprint Recognition System

5.5.1.2 Facial Recognition System

5.5.1.3 Iris Recognition System

5.5.1.4 Voice Recognition System

5.5.2 TECHNOLOGY ROADMAP: BIOMETRIC IDENTIFICATION SYSTEMS

5.5.3 BIOMETRIC IDENTIFICATION : TECHNOLOGICAL CHARACTERISTICS

## 6 BIOMETRIC IDENTIFICATION MARKET ANALYSIS, BY IDENTIFICATION PROCESS

### 6.1 INTRODUCTION

6.1.1 FINGERPRINT RECOGNITION SYSTEM

6.1.2 VOICE RECOGNITION SYSTEM

6.1.3 IRIS RECOGNITION SYSTEM

6.1.4 FACIAL RECOGNITION SYSTEM

6.1.5 MULTIMODAL IDENTIFICATION

### 6.2 BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS

### 6.3 BIOMETRIC IDENTIFICATION MARKET, BY REGION

### 6.4 ASIA-OCEANIA BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS & COUNTRY

#### 6.4.1 ASIA-OCEANIA BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS

6.4.2 ASIA-OCEANIA BIOMETRIC IDENTIFICATION MARKET, BY COUNTRY

6.4.2.1 India: Biometric identification market, by identification process

6.4.2.2 China: Biometric identification market, by identification process

6.4.2.3 Japan: Biometric identification market, by identification process

6.4.2.4 South Korea: Biometric identification market, by identification process

6.4.2.5 Asia-Oceania others: Biometric identification market, by identification process

## 6.5 EUROPE BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS & COUNTRY

### 6.5.1 EUROPE: BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS

#### 6.5.2 EUROPE: BIOMETRIC IDENTIFICATION MARKET, BY COUNTRY

6.5.2.1 Germany: Biometric identification market, by identification process

6.5.2.2 U.K.: Biometric identification market, by identification process

6.5.2.3 France: Biometric identification market, by identification process

6.5.2.4 Spain: Biometric identification market, by identification process

6.5.2.5 Europe others: Biometric identification market, by identification process

6.5.2.6 Europe others: Biometric identification market, by identification process

## 6.6 NORTH AMERICA BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS & COUNTRY

### 6.6.1 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS

#### 6.6.2 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY

6.6.2.1 U.S.: Biometric identification market, by identification process

6.6.2.2 Canada: Biometric identification market, by identification process

6.6.2.3 Mexico: Biometric identification market, by identification process

## 6.7 ROW BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS & COUNTRY

### 6.7.1 ROW: BIOMETRIC IDENTIFICATION MARKET, BY IDENTIFICATION PROCESS

#### 6.7.2 ROW: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY

6.7.2.1 Russia: Biometric identification market, by identification process

6.7.2.2 Brazil: Biometric identification market, by identification process

6.7.2.3 RoW others: Biometric identification market, by identification process

## 7 BIOMETRIC IDENTIFICATION MARKET ANALYSIS, BY COMPONENTS

### 7.1 INTRODUCTION

### 7.2 BIOMETRIC IDENTIFICATION COMPONENTS BASED ON PHYSIOLOGICAL CHARACTERISTICS

#### 7.2.1 COMPLEMENTARY METAL OXIDE SEMICONDUCTOR (CMOS)/IMAGE SENSORS



#### 7.2.2 OPTICAL/FINGERPRINT & PALM SENSORS

#### 7.2.3 IRIS/RETINAL RECOGNITION SENSORS

### 7.3 BIOMETRIC IDENTIFICATION COMPONENTS BASED ON BEHAVIORAL CHARACTERISTICS

#### 7.3.1 MICROPHONE/VOICE SENSORS

#### 7.3.2 SIGNATURE/ KEYSTROKES SENSORS

### 7.4 BIOMETRIC IDENTIFICATION SUB-COMPONENTS

#### 7.4.1 PROCESSING UNITS

#### 7.4.2 EMBEDDED MICROCOMPUTERS

#### 7.4.3 MICROCHIP SETS

### 7.5 BIOMETRIC IDENTIFICATION MARKET, BY COMPONENTS

### 7.6 BIOMETRIC IDENTIFICATION COMPONENTS MARKET, BY REGION

#### 7.6.1 IMAGE SENSORS MARKET, BY REGION

#### 7.6.2 PALM SENSORS MARKET, BY REGION

#### 7.6.3 IRIS SENSORS MARKET, BY REGION

#### 7.6.4 VOICE SENSORS MARKET, BY REGION

#### 7.6.5 KEYSTROKES SENSORS MARKET, BY REGION

#### 7.6.6 PROCESSING UNITS MARKET, BY REGION

#### 7.6.7 EMBEDDED MICROCOMPUTERS MARKET, BY REGION

#### 7.6.8 MICROCHIP SET MARKET, BY REGION

## 8 BIOMETRIC IDENTIFICATION MARKET ANALYSIS, BY APPLICATION

### 8.1 INTRODUCTION

### 8.2 BIOMETRIC IDENTIFICATION: VEHICLE SECURITY SYSTEMS

#### 8.2.1 BIOMETRIC VEHICLE ACCESS SYSTEM

#### 8.2.2 BIOMETRIC ENGINE START-STOP SYSTEM

### 8.3 BIOMETRIC IDENTIFICATION: DRIVER SAFETY SYSTEMS

#### 8.3.1 DRIVER FATIGUE & DROWSINESS MONITORING SYSTEM

##### 8.3.1.1 Eye tracking/blink monitoring

##### 8.3.1.2 Facial expressions/head movements

##### 8.3.1.3 Heart rate monitoring

### 8.4 BIOMETRIC IDENTIFICATION: COMFORT & LUXURY SYSTEMS

#### 8.4.1 ADVANCED STEERING

#### 8.4.2 MEMORY SEATS

#### 8.4.3 INFOTAINMENT

### 8.5 BIOMETRIC IDENTIFICATION MARKET, BY APPLICATION

#### 8.5.1 BIOMETRIC VEHICLE ACCESS SYSTEM MARKET, BY REGION

#### 8.5.2 BIOMETRIC ENGINE START-STOP SYSTEM MARKET, BY REGION

## **9 BIOMETRIC IDENTIFICATION MARKET FOR ELECTRIC VEHICLE, BY REGION**

### 9.1 INTRODUCTION

### 9.2 BIOMETRIC IDENTIFICATION MARKET FOR ELECTRIC VEHICLE, BY REGION

### 9.3 ELECTRIC VEHICLE BIOMETRIC IDENTIFICATION MARKET, BY VEHICLE TYPE

#### 9.3.1 BEV: BIOMETRIC IDENTIFICATION MARKET, BY REGION

#### 9.3.2 HEV: BIOMETRIC IDENTIFICATION MARKET, BY REGION

#### 9.3.3 PHEV: BIOMETRIC IDENTIFICATION MARKET, BY REGION

## **10 BIOMETRIC IDENTIFICATION MARKET, BY WEARABLE TECHNOLOGY**

### 10.1 INTRODUCTION

#### 10.1.1 WATCHES

#### 10.1.2 EYEGLASSES

#### 10.1.3 HEADSETS

### 10.2 BIOMETRIC IDENTIFICATION MARKET, BY WEARABLE TECHNOLOGY

### 10.3 BIOMETRIC IDENTIFICATION MARKET FOR WEARABLE TECHNOLOGY, BY REGION

## **11 BIOMETRIC IDENTIFICATION MARKET, BY AUTONOMOUS & SEMI-AUTONOMOUS CARS**

### 11.1 INTRODUCTION

### 11.2 BIOMETRIC IDENTIFICATION MARKET FOR SEMI-AUTONOMOUS CARS, BY IDENTIFICATION PROCESS

### 11.3 BIOMETRIC IDENTIFICATION MARKET FOR AUTONOMOUS CARS, BY IDENTIFICATION PROCESS

## **12 BIOMETRIC IDENTIFICATION MARKET FOR COMMERCIAL VEHICLES, BY FLEET MANAGEMENT SERVICES**

### 12.1 INTRODUCTION

### 12.2 BIOMETRIC IDENTIFICATION MARKET SIZE FOR COMMERCIAL VEHICLES, BY FLEET MANAGEMENT SERVICE

### 12.3 BIOMETRIC IDENTIFICATION MARKET SIZE FOR COMMERCIAL VEHICLES, BY DRIVER MONITORING SYSTEM

## **13 COMPETITIVE LANDSCAPE**

### **13.1 BIOMETRIC IDENTIFICATION MARKET—COMPETITIVE LEADERSHIP MAPPING**

#### **13.1.1 VISIONARY LEADERS**

#### **13.1.2 INNOVATORS**

#### **13.1.3 DYNAMIC DIFFERENTIATORS**

#### **13.1.4 EMERGING COMPANIES**

### **13.2 STRENGTH OF PRODUCT PORTFOLIO**

### **13.3 BUSINESS STRATEGY EXCELLENCE**

Top 25 Companies analyzed for this study are - Robert Bosch GmbH, FUJITSU, Mitsubishi Electric Corporation, Continental AG, Hitachi, Ltd., DENSO CORPORATION, Valeo, Synaptics Incorporated, Gentex Corporation, HID Global Corporation/ASSA ABLOY AB, Fingerprint Cards AB, Methode Electronics, Nuance Communications, Inc., VOXX International Corp., Visteon Corporation, ams AG, Safran, Voicebox Technologies Corporation, Sonavation, Inc., Sensory Inc., Techshino Technology, IRITECH, INC., BioEnable Technologies Pvt. Ltd., BIODIT Ltd.

### **13.4 BIOMETRIC IDENTIFICATION MARKET: RANKING ANALYSIS, 2016**

## **14 COMPANY PROFILES**

(Overview, Product Offering, Strength of Product Portfolio, Business Strategy Excellence, Recent Developments)\*

#### **14.1 HITACHI, LTD.**

#### **14.2 FUJITSU**

#### **14.3 SAFRAN**

#### **14.4 SYNAPTICS INCORPORATED**

#### **14.5 NUANCE COMMUNICATIONS, INC.**

#### **14.6 METHODE ELECTRONICS**

#### **14.7 HID GLOBAL CORPORATION/ASSA ABLOY AB**

#### **14.8 VOXX INTERNATIONAL CORP.**

#### **14.9 FINGERPRINT CARDS AB**

#### **14.10 VOICEBOX TECHNOLOGIES CORPORATION**

#### **14.11 ROBERT BOSCH GMBH**

#### **14.12 CONTINENTAL AG**

#### **14.13 VALEO**

\*Details on Overview, Product Offering, Strength of Product Portfolio, Business Strategy

Excellence, Recent Developments might not be captured in case of unlisted companies.

## **15 APPENDIX**

### **15.1 PRIMARY INSIGHTS**

### **15.2 DISCUSSION GUIDE**

### **15.3 KNOWLEDGE STORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL**

### **15.4 AVAILABLE CUSTOMIZATIONS**

#### **15.4.1 BIOMETRIC IDENTIFICATION MARKET FOR RIDE HAILING, BY REGION**

#### **15.4.2 BIOMETRIC IDENTIFICATION MARKET FOR INTEGRATED MOBILITY SOLUTIONS, BY REGION**

#### **15.4.3 BIOMETRIC IDENTIFICATION MARKET FOR FUTURE GOODS TRANSPORT SERVICES, BY REGION**

#### **15.4.4 BIOMETRIC IDENTIFICATION MARKET, BY COMPONENT & COUNTRY**

##### **15.4.4.1 Asia-Oceania**

###### **15.4.4.1.1 India**

###### **15.4.4.1.2 China**

###### **15.4.4.1.3 Japan**

###### **15.4.4.1.4 South Korea**

##### **15.4.4.2 Europe**

###### **15.4.4.2.1 Germany**

###### **15.4.4.2.2 U.K.**

###### **15.4.4.2.3 France**

###### **15.4.4.2.4 Spain**

##### **15.4.4.3 North America**

###### **15.4.4.3.1 U.S.**

###### **15.4.4.3.2 Canada**

###### **15.4.4.3.3 Mexico**

##### **15.4.4.4 RoW**

###### **15.4.4.4.1 Brazil**

###### **15.4.4.4.2 Russia**

### **15.5 RELATED REPORTS**

### **15.6 AUTHOR DETAILS**

## List Of Tables

### LIST OF TABLES

Table 1 CURRENCY EXCHANGE RATES (PER USD)

Table 2 LUXURY VEHICLE SALES OF KEY MANUFACTURERS, INDIA, 2013–2015

Table 3 LUXURY VEHICLE SALES OF KEY MANUFACTURERS, CHINA, 2013–2015

Table 4 GOVERNMENT INCENTIVES FOR ELECTRIC VEHICLES

Table 5 CHANGE IN THE DEMAND FOR PREMIUM VEHICLES, 2015 VS 2016, BY COUNTRY

Table 6 LUXURY PASSENGER CAR PRODUCTION OF KEY MANUFACTURERS IN CHINA, U.S., GERMANY, & U.K., 2015–2016

Table 7 PARTNERSHIPS & AGREEMENTS BETWEEN BIOMETRIC IDENTIFICATION SYSTEM/MODULE MANUFACTURERS AND OEMS

Table 8 TECHNOLOGICAL CHARACTERISTIC OF BIOMETRIC AUTHENTICATION SYSTEM

Table 9 BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 10 BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 11 BIOMETRIC IDENTIFICATION MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 12 BIOMETRIC IDENTIFICATION MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 13 ASIA-OCEANIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 14 ASIA-OCEANIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 15 ASIA-OCEANIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 ('000 UNITS)

Table 16 ASIA-OCEANIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 (USD MILLION)

Table 17 INDIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 18 INDIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 19 CHINA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 20 CHINA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION

PROCESS, 2015-2022 (USD MILLION)

Table 21 JAPAN: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 22 JAPAN: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 23 SOUTH KOREA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 24 SOUTH KOREA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 25 ASIA-OCEANIA OTHERS: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 26 ASIA-OCEANIA OTHERS: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 27 EUROPE: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 28 EUROPE: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 29 EUROPE: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 ('000 UNITS)

Table 30 EUROPE: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 (USD MILLION)

Table 31 GERMANY: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 32 GERMANY: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 33 U.K.: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 34 U.K.: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 35 FRANCE: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 36 FRANCE: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 37 SPAIN: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 38 SPAIN: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 39 EUROPE OTHERS: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 40 EUROPE OTHERS: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 41 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 42 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 43 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 ('000 UNITS)

Table 44 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 (USD MILLION)

Table 45 U.S.: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 46 U.S.: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 47 CANADA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 48 CANADA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 49 MEXICO: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 50 MEXICO: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 51 ROW: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 52 ROW: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 53 ROW: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 ('000 UNITS)

Table 54 ROW: BIOMETRIC IDENTIFICATION MARKET SIZE, BY COUNTRY, 2015-2022 (USD MILLION)

Table 55 RUSSIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 56 RUSSIA: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 57 BRAZIL: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 58 BRAZIL: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 59 ROW OTHERS: BIOMETRIC IDENTIFICATION MARKET SIZE, BY



IDENTIFICATION PROCESS, 2015-2022 ('000 UNITS)

Table 60 ROW OTHERS: BIOMETRIC IDENTIFICATION MARKET SIZE, BY IDENTIFICATION PROCESS, 2015-2022 (USD MILLION)

Table 61 KEY COMPONENTS, BY IDENTIFICATION PROCESS

Table 62 BIOMETRIC IDENTIFICATION MARKET SIZE, BY COMPONENTS, 2015-2022 ('000 UNITS)

Table 63 BIOMETRIC IDENTIFICATION MARKET SIZE, BY COMPONENTS, 2015-2022 (USD MILLION)

Table 64 BIOMETRIC IDENTIFICATION COMPONENTS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 65 BIOMETRIC IDENTIFICATION COMPONENTS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 66 CMOS/ IMAGE SENSORS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 67 CMOS/ IMAGE SENSORS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 68 OPTICAL/ FINGERPRINT & PALM SENSORS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 69 OPTICAL/ FINGERPRINT & PALM SENSORS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 70 IRIS/RETINAL RECOGNITION SENSORS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 71 IRIS/RETINAL RECOGNITION SENSORS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 72 MICROPHONE/VOICE SENSORS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 73 MICROPHONE/VOICE SENSORS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 74 SIGNATURE/ KEYSTROKES SENSORS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 75 SIGNATURE/ KEYSTROKES SENSORS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 76 PROCESSING UNITS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 77 PROCESSING UNITS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 78 EMBEDDED MICROCOMPUTERS MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 79 EMBEDDED MICROCOMPUTERS MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)



Table 80 MICROCHIP SET MARKET SIZE, BY REGION, 2015-2022 ('000 UNITS)

Table 81 MICROCHIP SET MARKET SIZE, BY REGION, 2015-2022 (USD MILLION)

Table 82 BIOMETRIC IDENTIFICATION MARKET SIZE, BY APPLICATION, 2015–2022 ('000 UNITS)

Table 83 GLOBAL BIOMETRIC IDENTIFICATION MARKET SIZE, BY APPLICATION & REGION, 2015–2022 ('000 UNITS)

Table 84 BIOMETRIC VEHICLE ACCESS SYSTEM MARKET SIZE, BY REGION, 2015–2022 ('000 UNITS)

Table 85 BIOMETRIC ENGINE START-STOP SYSTEM MARKET SIZE, BY REGION, 2015–2022 ('000 UNITS)

Table 86 BIOMETRIC DRIVER FATIGUE & DROWSINESS MONITORING SYSTEM MARKET SIZE, BY REGION, 2015–2022 ('000 UNITS)

Table 87 BIOMETRIC MEMORY STEERING SYSTEM MARKET SIZE, BY REGION, 2015–2022 ('000 UNITS)

Table 88 BIOMETRIC MEMORY SEAT MARKET SIZE, BY REGION, 2015–2022 ('000 UNITS)

Table 89 BIOMETRIC INFOTAINMENT SYSTEM MARKET SIZE, BY REGION, 2015–2022 ('000 UNITS)

Table 90 BIOMETRIC IDENTIFICATION MARKET SIZE FOR ELECTRIC VEHICLES, BY REGION, 2015–2022, ('000 CARS)

Table 91 BIOMETRIC IDENTIFICATION MARKET SIZE FOR ELECTRIC VEHICLES, BY VEHICLE TYPE, 2015–2022, ('000 CARS)

Table 92 BEV: BIOMETRIC IDENTIFICATION MARKET SIZE, BY REGION, 2015–2022, ('000 CARS)

Table 93 HEV: BIOMETRIC IDENTIFICATION MARKET SIZE, BY REGION, 2015–2022, ('000 CARS)

Table 94 PHEV: BIOMETRIC IDENTIFICATION MARKET SIZE, BY REGION, 2015–2022, ('000 CARS)

Table 95 BIOMETRIC IDENTIFICATION MARKET, BY WEARABLE TECHNOLOGY, 2018–2027 ('000 UNITS)

Table 96 BIOMETRIC IDENTIFICATION MARKET FOR WEARABLE TECHNOLOGY, BY REGION, 2018–2027 ('000 UNITS)

Table 97 BIOMETRIC IDENTIFICATION MARKET SIZE FOR SEMI-AUTONOMOUS CARS, BY IDENTIFICATION PROCESS, 2015–2022 ('000 UNITS)

Table 98 BIOMETRIC IDENTIFICATION MARKET SIZE FOR AUTONOMOUS CARS, BY IDENTIFICATION PROCESS, 2022–2030, ('000 UNITS)

Table 99 BIOMETRIC IDENTIFICATION MARKET SIZE FOR COMMERCIAL VEHICLES, BY FLEET MANAGEMENT SERVICE, 2018–2027 ('000 UNITS)

Table 100 BIOMETRIC IDENTIFICATION MARKET SIZE FOR COMMERCIAL

VEHICLES, BY DRIVER MONITORING SYSTEM, 2018–2027 ('000 UNITS)

Table 101 RANKING OF KEY PLAYERS IN THE BIOMETRIC IDENTIFICATION  
MARKET, 2016

Table 102 HITACHI, LTD.: MANUFACTURING PLANTS

Table 103 FUJITSU: MANUFACTURING PLANT FOR BIOMETRIC PRODUCTS

Table 104 SAFRAN: R&D/DESIGN CENTERS

Table 105 SYNAPTICS INCORPORATED: DESIGN CENTERS

## List Of Figures

### LIST OF FIGURES

Figure 1 MARKET SEGMENTATION: AUTOMOTIVE BIOMETRIC IDENTIFICATION MARKET

Figure 2 BIOMETRIC IDENTIFICATION MARKET: RESEARCH DESIGN

Figure 3 RESEARCH METHODOLOGY MODEL

Figure 4 BREAKDOWN OF PRIMARY INTERVIEWS: BY COMPANY TYPE, DESIGNATION, & REGION

Figure 5 MARKET SIZE ESTIMATION METHODOLOGY FOR THE GLOBAL BIOMETRIC IDENTIFICATION MARKET: BOTTOM-UP APPROACH

Figure 6 THE MARKET IN THE U.S. IS ESTIMATED TO BE THE LARGEST DUE TO THE INCREASE IN DEMAND FOR BIOMETRIC IDENTIFICATION MODULES/SYSTEMS, 2017 VS 2022 (VALUE)

Figure 7 THE PROCESSING UNITS SEGMENT IS EXPECTED TO BE THE LARGEST MARKET, 2017 VS 2022 (VALUE)

Figure 8 GOVERNMENT REGULATIONS TO DRIVE THE USE OF IN-VEHICLE DRIVER MONITORING SYSTEMS, 2017 VS 2022 (VOLUME)

Figure 9 TECHNOLOGICAL ADVANCES ARE EXPECTED TO DRIVE THE BIOMETRIC IDENTIFICATION MARKET, BY WEARABLE TECHNOLOGY, 2018–2022 (VOLUME)

Figure 10 THE MARKET IN ASIA-OCEANIA IS ESTIMATED TO BE THE LARGEST ELECTRIC VEHICLE BIOMETRIC IDENTIFICATION SYSTEMS MARKET, 2017–2022 (VOLUME)

Figure 11 INCREASE IN DEMAND FOR SEMI-AUTONOMOUS & AUTONOMOUS VEHICLES IS EXPECTED TO DRIVE THE BIOMETRIC IDENTIFICATION MARKET, 2022 VS. 2025 ('000 CARS)

Figure 12 GOVERNMENT MANDATES TO INSTALL ELD WILL DRIVE THE BIOMETRIC IDENTIFICATION MARKET, BY FLEET MANAGEMENT SERVICE, 2022 (VOLUME)

Figure 13 INCREASING VEHICLE PRODUCTION & GROWING CONCERNS ABOUT SAFETY & SECURITY TO CREATE IMMENSE OPPORTUNITIES FOR BIOMETRIC IDENTIFICATION SYSTEMS MANUFACTURERS

Figure 14 THE VOICE RECOGNITION & FINGERPRINT RECOGNITION SEGMENTS ARE EXPECTED TO BE THE FASTEST GROWING MARKETS, 2015–2022 (USD MILLION)

Figure 15 THE OPTICAL SENSORS SEGMENT IS PROJECTED TO GROW AT THE HIGHEST CAGR DURING THE FORECAST PERIOD, 2017 VS 2022 (USD MILLION)

Figure 16 THE BIOMETRIC VEHICLE ACCESS & DRIVER MONITORING SYSTEMS SEGMENTS ARE EXPECTED TO HOLD MORE THAN 60% OF THE MARKET SHARE, BY APPLICATION, 2017–2022 ('000 UNITS)

Figure 17 THE MARKET IN ASIA-OCEANIA IS EXPECTED TO BE THE LARGEST ELECTRIC VEHICLE BIOMETRIC IDENTIFICATION MARKET, 2017 ('000 UNITS)

Figure 18 TECHNOLOGICAL ADVANCES & IN-VEHICLE HEALTH MONITORING ARE EXPECTED TO DRIVE THE BIOMETRIC IDENTIFICATION WEARABLE TECHNOLOGY MARKET, 2018–2027 ('000 UNITS)

Figure 19 INCREASE IN COMFORT FEATURES IS EXPECTED TO DRIVE THE SEMI-AUTONOMOUS & AUTONOMOUS VEHICLES MARKET (UNITS)

Figure 20 IN-VEHICLE HEALTH MONITORING FEATURES ARE EXPECTED TO DRIVE THE FLEET MANAGEMENT SERVICES MARKET, 2018–2027 (VALUE)

Figure 21 BIOMETRIC IDENTIFICATION MARKET SEGMENTATION

Figure 22 BIOMETRIC IDENTIFICATION MARKET DYNAMICS

Figure 23 TOTAL NUMBER MOTOR VEHICLES STOLEN ACROSS WORLD, 2010-2016

Figure 24 PORTER'S FIVE FORCES ANALYSIS (BIOMETRIC IDENTIFICATION MARKET)

Figure 25 THREAT OF NEW ENTRANTS: MEDIUM

Figure 26 THREAT OF SUBSTITUTES: MEDIUM

Figure 27 BARGAINING POWER OF SUPPLIERS: LOW

Figure 28 BARGAINING POWER OF BUYERS: MEDIUM

Figure 29 INTENSITY OF COMPETITIVE RIVALRY: MEDIUM

Figure 30 FLOW OF DATA IN FINGERPRINT SYSTEM

Figure 31 FLOW OF DATA IN FACIAL RECOGNITION SYSTEM

Figure 32 FLOW OF DATA IN IRIS RECOGNITION SYSTEM

Figure 33 FLOW OF DATA IN VOICE RECOGNITION SYSTEM (ENROLLMENT)

Figure 34 FLOW OF DATA IN VOICE RECOGNITION SYSTEM (VERIFICATION)

Figure 35 BIOMETRIC IDENTIFICATION TECHNOLOGY: LIFE CYCLE HYPOTHESIS

Figure 36 VOICE RECOGNITION SYSTEM IS PROJECTED TO HAVE THE LARGEST SHARE OF THE GLOBAL BIOMETRIC IDENTIFICATION MARKET

Figure 37 ASIA-OCEANIA: BIOMETRIC IDENTIFICATION MARKET, BY COUNTRY, 2017-2022

Figure 38 EUROPE: BIOMETRIC IDENTIFICATION MARKET SNAPSHOT

Figure 39 EUROPE: BIOMETRIC IDENTIFICATION MARKET, BY COUNTRY, 2017-2022

Figure 40 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET SNAPSHOT

Figure 41 NORTH AMERICA: BIOMETRIC IDENTIFICATION MARKET, BY COUNTRY, 2017-2022

Figure 42 BIOMETRIC IDENTIFICATION MARKET, BY COMPONENTS: MARKET SHARE 2017 (VALUE)

Figure 43 BIOMETRIC IDENTIFICATION COMPONENTS MARKET SHARE, BY REGION, 2017 VS. 2022 (VALUE)

Figure 44 REGIONAL SHARE OF THE BIOMETRIC IDENTIFICATION MARKET, BY REGION, 2017 (VOLUME)

Figure 45 ELECTRIC VEHICLE SALES, BY TYPE & REGION, 2022 ('000 UNITS)

Figure 46 BIOMETRIC IDENTIFICATION MARKET FOR ELECTRIC VEHICLES: MARKET SHARE COMPARISON, 2017 VS 2022

Figure 47 THE BIOMETRIC IDENTIFICATION MARKET, BY WEARABLE TECHNOLOGY, IS EXPECTED TO GROW RAPIDLY, 2022 VS. 2027 ('000 UNITS)

Figure 48 BIOMETRIC IDENTIFICATION MARKET SHARE FOR SEMI-AUTONOMOUS CARS, BY TYPE, 2015–2022

Figure 49 BIOMETRIC IDENTIFICATION MARKET SHARE FOR AUTONOMOUS CARS, BY TYPE, 2022–2030

Figure 50 BIOMETRIC IDENTIFICATION MARKET SIZE FOR COMMERCIAL VEHICLES, BY FLEET MANAGEMENT SERVICE, 2019–2027 ('000 UNITS)

Figure 51 COMPETITIVE LEADERSHIP MAPPING—BIOMETRIC IDENTIFICATION MARKET

Figure 52 HITACHI, LTD.: COMPANY SNAPSHOT

Figure 53 HITACHI, LTD.: MANUFACTURING PLANTS

Figure 54 FUJITSU: COMPANY SNAPSHOT

Figure 55 FUJITSU: MANUFACTURING PLANT FOR BIOMETRIC PRODUCTS

Figure 56 SAFRAN: COMPANY SNAPSHOT

Figure 57 SAFRAN: R&D/DESIGN CENTERS

Figure 58 SYNAPTICS INCORPORATED: COMPANY SNAPSHOT

Figure 59 SYNAPTICS INCORPORATED: DESIGN CENTERS

Figure 60 NUANCE COMMUNICATIONS, INC.: COMPANY SNAPSHOT

Figure 61 METHODE ELECTRONICS: COMPANY SNAPSHOT

Figure 62 HID GLOBAL CORPORATION/ASSA ABLOY AB: COMPANY SNAPSHOT

Figure 63 VOXX INTERNATIONAL CORP.: COMPANY SNAPSHOT

Figure 64 FINGERPRINT CARDS AB: COMPANY SNAPSHOT

Figure 65 ROBERT BOSCH GMBH: COMPANY SNAPSHOT

Figure 66 CONTINENTAL AG: COMPANY SNAPSHOT

Figure 67 VALEO: COMPANY SNAPSHOT

## I would like to order

Product name: Biometric Identification Market for ICE, EV, & Autonomous Vehicles, by Authentication Process (Fingerprint, Voice, Iris, Facial, Gesture, Multimodal), Sensor (CMOS, Optical, Retinal), Processing Component, Application, Wearable, and Region - Forecast to 2022

Product link: <https://marketpublishers.com/r/B5FC6F1F6ECEN.html>

Price: US\$ 5,650.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/B5FC6F1F6ECEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:

Last name:

Email:

Company:

Address:

City:

Zip code:

Country:

Tel:

Fax:

Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970