

Haptic Technology Market by Feedback Type (Tactile, Force), Component (Hardware (Actuators, Drivers & Microcontrollers) Software), Application (Consumer Devices, Automotive & Transportation, Commercial & Industrial) and Region - Global Forecast to 2028

<https://marketpublishers.com/r/HFA947D8E20EN.html>

Date: May 2023

Pages: 214

Price: US\$ 4,950.00 (Single User License)

ID: HFA947D8E20EN

Abstracts

The haptic technology market is projected to reach USD 5.0 billion by 2028 from USD 4.2 billion in 2023, at a CAGR of 3.7% from 2023 to 2028. The major factors driving the market growth of the haptic technology market include rising integration of haptic technology into consumer devices, growing use of haptic technology in automotive industry, increasing use of haptic technology in healthcare industry, and increasing adoption of haptic technology in industrial application. Moreover, rising application of haptic technology in aerospace & defense industry and technological advancements in haptic technology are expected to provide ample growth opportunities for market players in the haptic technology market.

Tactile Feedback Segment is expected to register the highest CAGR during the forecast period

Tactile feedback works on the principle of tactile sensing. It includes devices that interact with the nerve endings in the skin that feel heat, texture, and pressure. These devices are used to indicate whether the user is in contact with a virtual object. Tactile technology is being used mostly in consumer electronic devices such as smartphones and tablets that are integrated with a touchscreen. The growing usage of smartphones is a major factor driving the market growth for tactile feedback.

Actuators is expected to account for the largest market share of haptic technology hardware market during the forecast period

Actuators are embedded in the haptics-enabled devices. They are controlled by the embedded software and integrated into the device's user interface through the control software application programming interface (API). The actuators are used in different devices depending upon the requirement related to effects, design constraints, and size. The growing demand for haptics enabled devices for superior user interface is expected to drive the demand for actuators.

North America is expected to account for the second largest market share during the forecast period

The North American market is witnessing considerable growth due to the increasing haptic device deployment in consumer electronics and automobile applications. This growth is not only driven by haptic hardware but also by haptic software. Software companies such as Immersion are based in the North American region. The governments of countries in North America have taken several initiatives, such as funding and grant to universities and companies for research in haptic technology. Some of the key players in the haptic technology market in North America are Texas Instruments (US), Microchip Technology (US), ON Semiconductor (US), Cirrus Logic (US), and Immersion (US).

The break-up of profile of primary participants in the haptic technology market

By Company Type: Tier 1 – 45%, Tier 2 – 30%, Tier 3 – 25%

By Designation Type: C Level – 40%, Director Level – 35% , Others – 25%

By Region Type: North America – 35%, Europe – 25%, Asia Pacific – 30%, Rest of the World – 10%

The major players in the haptic technology market are Texas Instruments Incorporated (US), Johnson Electric Holdings Limited (China), AAC Technologies (China), TDK Corporation (Japan), and Microchip Technology Inc. (US) among others.

Research Coverage

The report segments the haptic technology market and forecasts its size based on component, application, feedback type, and region. The report also provides a

comprehensive review of drivers, restraints, opportunities, and challenges influencing the market growth. The report also covers qualitative aspects in addition to the quantitative aspects of the market.

Reasons to buy the report:

The report will help the market leaders/new entrants in this market with information on the closest approximate revenues for the overall haptic technology market and related segments. This report will help stakeholders understand the competitive landscape and gain more insights to strengthen their position in the market and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, opportunities, and challenges.

The report provides insights on the following pointers:

Analysis of key drivers (rising integration of haptic technology into consumer devices, growing use of haptic technology in automotive industry, increasing use of haptic technology in healthcare industry, increasing adoption of haptic technology in industrial application), restraints (high cost of force feedback technology), opportunities (rising application of haptic technology in aerospace & defense industry, technological advancements in haptic technology), and challenges (technical challenges related to product design, high power consumption in haptic feedback, leakage issues in pneumatic and hydraulic actuators) influencing the growth of the haptic technology market

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the haptic technology market

Market Development: Comprehensive information about lucrative markets – the report analyses the haptic technology market across varied regions

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the haptic technology market

Competitive Assessment: In-depth assessment of market shares, growth strategies and product offerings of leading players like Texas Instruments

Incorporated (US), Johnson Electric Holdings Limited (China), AAC Technologies (China), TDK Corporation (Japan), and Microchip Technology Inc. (US).

Contents

1 INTRODUCTION

1.1 STUDY OBJECTIVES

1.2 MARKET DEFINITION

1.3 STUDY SCOPE

1.3.1 MARKETS COVERED

FIGURE 1 HAPTIC TECHNOLOGY MARKET SEGMENTATION

1.3.2 REGIONAL SCOPE

FIGURE 2 HAPTIC TECHNOLOGY MARKET: REGIONAL SCOPE

1.3.3 INCLUSIONS AND EXCLUSIONS

1.3.4 INCLUSIONS AND EXCLUSIONS: COMPANY LEVEL

1.3.5 INCLUSIONS AND EXCLUSIONS: COMPONENT LEVEL

1.3.6 INCLUSIONS AND EXCLUSIONS: FEEDBACK TYPE LEVEL

1.3.7 INCLUSIONS AND EXCLUSIONS: APPLICATION LEVEL

1.3.8 INCLUSIONS AND EXCLUSIONS: REGIONAL LEVEL

1.3.9 YEARS CONSIDERED

1.4 CURRENCY CONSIDERED

1.5 LIMITATIONS

1.6 UNITS CONSIDERED

1.7 STAKEHOLDERS

1.8 SUMMARY OF CHANGES

1.8.1 RECESSION IMPACT

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA

FIGURE 3 HAPTIC TECHNOLOGY MARKET: PROCESS FLOW FOR MARKET SIZE ESTIMATION

FIGURE 4 HAPTIC TECHNOLOGY MARKET: RESEARCH DESIGN

2.1.1 SECONDARY DATA

2.1.1.1 Key data from secondary sources

2.1.2 PRIMARY DATA

2.1.2.1 Key insights from industry experts

2.1.2.2 Breakdown of primaries

2.1.2.3 Key data from primary sources

2.2 MARKET SIZE ESTIMATION

FIGURE 5 MARKET SIZE ESTIMATION METHODOLOGY: SUPPLY-SIDE ANALYSIS

FIGURE 6 MARKET SIZE ESTIMATION METHODOLOGY (SUPPLY SIDE):
IDENTIFICATION OF REVENUE GENERATED BY COMPANIES FROM HAPTIC
TECHNOLOGY OFFERINGS

FIGURE 7 MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH
FOR ESTIMATING HAPTIC TECHNOLOGY MARKET SIZE

2.2.1 BOTTOM-UP APPROACH

FIGURE 8 BOTTOM-UP APPROACH

2.2.2 TOP-DOWN APPROACH

FIGURE 9 TOP-DOWN APPROACH

2.3 MARKET BREAKDOWN AND DATA TRIANGULATION

FIGURE 10 DATA TRIANGULATION

2.4 RESEARCH ASSUMPTIONS

3 EXECUTIVE SUMMARY

FIGURE 11 SOFTWARE SEGMENT TO REGISTER HIGHER CAGR DURING
FORECAST PERIOD

FIGURE 12 TACTILE FEEDBACK SEGMENT TO DOMINATE HAPTIC TECHNOLOGY
MARKET DURING FORECAST PERIOD

FIGURE 13 AUTOMOTIVE & TRANSPORTATION SEGMENT TO REGISTER
HIGHEST CAGR DURING FORECAST PERIOD

FIGURE 14 ASIA PACIFIC TO LEAD HAPTIC TECHNOLOGY MARKET DURING
FORECAST PERIOD

4 PREMIUM INSIGHTS

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN HAPTIC TECHNOLOGY
MARKET

FIGURE 15 INTEGRATION OF HAPTICS INTO CONSUMER DEVICES

4.2 HAPTIC TECHNOLOGY MARKET, BY COMPONENT

FIGURE 16 HARDWARE SEGMENT TO HOLD LARGER SHARE OF HAPTIC
TECHNOLOGY MARKET DURING FORECAST PERIOD

4.3 HAPTIC TECHNOLOGY MARKET, BY FEEDBACK TYPE

FIGURE 17 TACTILE FEEDBACK TO DOMINATE HAPTIC TECHNOLOGY MARKET
DURING FORECAST PERIOD

4.4 HAPTIC TECHNOLOGY MARKET, BY APPLICATION

FIGURE 18 CONSUMER DEVICES SEGMENT TO LEAD HAPTIC TECHNOLOGY
MARKET DURING FORECAST PERIOD

4.5 ASIA PACIFIC HAPTIC TECHNOLOGY MARKET, BY APPLICATION AND

COUNTRY

FIGURE 19 CONSUMER DEVICES SEGMENT AND CHINA HELD LARGEST SHARES OF ASIA PACIFIC HAPTIC TECHNOLOGY MARKET IN 2022

5 MARKET OVERVIEW

5.1 INTRODUCTION

5.2 MARKET DYNAMICS

FIGURE 20 HAPTIC TECHNOLOGY MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES

5.2.1 DRIVERS

5.2.1.1 Rising integration of haptic technology into consumer devices

FIGURE 21 SMARTPHONE SHIPMENTS, 2022–2028 (MILLION UNITS)

5.2.1.2 Growing use of haptic technology in automotive industry

FIGURE 22 GLOBAL CAR AND COMMERCIAL VEHICLE PRODUCTION, 2015–2021 (MILLION UNITS)

5.2.1.3 Increasing use of haptic technology in healthcare industry

5.2.1.4 Increasing adoption of haptic technology in industrial applications

FIGURE 23 HAPTIC TECHNOLOGY MARKET: IMPACT ANALYSIS OF DRIVERS

5.2.2 RESTRAINTS

5.2.2.1 High cost of force feedback technology

FIGURE 24 HAPTIC TECHNOLOGY MARKET: IMPACT ANALYSIS OF RESTRAINTS

5.2.3 OPPORTUNITIES

5.2.3.1 Rising applications of haptic technology in aerospace & defense industry

5.2.3.2 Technological advancements in haptic technology

FIGURE 25 HAPTIC TECHNOLOGY MARKET: IMPACT ANALYSIS OF OPPORTUNITIES

5.2.4 CHALLENGES

5.2.4.1 Technical challenges related to product design

5.2.4.2 High power consumption in haptic feedback

FIGURE 26 ENERGY CONSUMPTION OF DIFFERENT TYPES OF ACTUATORS IN MOBILE DEVICES

5.2.4.3 Leakage issues associated with pneumatic and hydraulic actuators

FIGURE 27 HAPTIC TECHNOLOGY MARKET: IMPACT ANALYSIS OF CHALLENGES

5.3 VALUE CHAIN ANALYSIS

FIGURE 28 HAPTIC TECHNOLOGY MARKET: VALUE CHAIN ANALYSIS

5.4 ECOSYSTEM ANALYSIS

FIGURE 29 HAPTIC TECHNOLOGY MARKET: ECOSYSTEM ANALYSIS

5.5 TECHNOLOGY ANALYSIS

5.5.1 VIBROTACTILE HAPTIC FEEDBACK

5.6 CASE STUDY ANALYSIS

5.7 PRICING ANALYSIS

TABLE 1 AVERAGE SELLING PRICE (ASP) OF ACTUATORS

FIGURE 30 AVERAGE SELLING PRICE (ASP) TREND FOR DRIVERS AND MICROCONTROLLERS

5.8 PATENT ANALYSIS

TABLE 2 PATENTS FILED FROM 2012 TO 2022

FIGURE 31 NUMBER OF PATENTS GRANTED, 2012–2022

FIGURE 32 TOP 20 COMPANIES WITH HIGHEST NUMBER OF PATENTS GRANTED

TABLE 3 KEY PATENTS RELATED TO HAPTIC TECHNOLOGY

5.9 PORTER'S FIVE FORCES ANALYSIS

FIGURE 33 HAPTIC TECHNOLOGY MARKET: PORTER'S FIVE FORCES ANALYSIS

FIGURE 34 IMPACT OF PORTER'S FIVE FORCES ON HAPTIC TECHNOLOGY MARKET, 2022

5.9.1 THREAT OF NEW ENTRANTS

5.9.2 THREAT OF SUBSTITUTES

5.9.3 BARGAINING POWER OF SUPPLIERS

5.9.4 BARGAINING POWER OF BUYERS

5.9.5 INTENSITY OF COMPETITIVE RIVALRY

5.10 TRADE ANALYSIS

TABLE 4 IMPORT DATA FOR ELECTRIC MOTORS AND GENERATORS, BY COUNTRY, 2017–2021 (USD MILLION)

FIGURE 35 IMPORT DATA FOR ELECTRIC MOTORS AND GENERATORS, BY COUNTRY, 2017–2021 (USD MILLION)

TABLE 5 EXPORT DATA FOR ELECTRIC MOTORS AND GENERATORS, BY COUNTRY, 2017–2021 (USD MILLION)

FIGURE 36 EXPORT DATA FOR ELECTRIC MOTORS AND GENERATORS, BY COUNTRY, 2017–2021 (USD MILLION)

TABLE 6 IMPORT DATA FOR PROCESSORS AND CONTROLLERS, BY COUNTRY, 2017–2021 (USD BILLION)

FIGURE 37 IMPORT DATA FOR PROCESSORS AND CONTROLLERS, BY COUNTRY, 2017–2021 (USD BILLION)

TABLE 7 EXPORT DATA FOR PROCESSORS AND CONTROLLERS, BY COUNTRY, 2017–2021 (USD BILLION)

FIGURE 38 EXPORT DATA FOR PROCESSORS AND CONTROLLERS, BY COUNTRY, 2017–2021 (USD BILLION)

5.11 REGULATORY LANDSCAPE PERTAINING TO HAPTIC TECHNOLOGY MARKET

5.11.1 GOVERNMENT REGULATIONS

5.11.1.1 Asia Pacific

5.11.1.2 North America

5.11.1.3 Europe

6 TYPES OF HAPTIC DEVICES

6.1 INTRODUCTION

6.2 ACTIVE HAPTIC DEVICE

6.3 PASSIVE HAPTIC DEVICE

7 HAPTIC TECHNOLOGY FOR DIFFERENT TOUCHSCREEN TYPES

7.1 INTRODUCTION

7.2 CAPACITIVE

7.3 RESISTIVE

7.4 OTHERS

8 HAPTIC TECHNOLOGY MARKET, BY FEEDBACK TYPE

8.1 INTRODUCTION

TABLE 8 HAPTIC TECHNOLOGY MARKET, BY FEEDBACK TYPE, 2019–2022 (USD MILLION)

FIGURE 39 TACTILE FEEDBACK SEGMENT TO LEAD HAPTIC TECHNOLOGY MARKET DURING FORECAST PERIOD

TABLE 9 HAPTIC TECHNOLOGY MARKET, BY FEEDBACK TYPE, 2023–2028 (USD MILLION)

8.2 TACTILE

8.2.1 GROWING USE OF HAPTIC TECHNOLOGY IN CONSUMER DEVICES TO DRIVE GROWTH OF TACTILE FEEDBACK SEGMENT

8.3 FORCE

8.3.1 ROBOTICS AND GAMING APPLICATIONS TO CREATE LUCRATIVE OPPORTUNITIES FOR FORCE FEEDBACK SEGMENT

9 HAPTIC TECHNOLOGY MARKET, BY COMPONENT

9.1 INTRODUCTION

Haptic Technology Market by Feedback Type (Tactile, Force), Component (Hardware (Actuators, Drivers & Microcon...

TABLE 10 HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

FIGURE 40 HARDWARE SEGMENT TO LEAD HAPTIC TECHNOLOGY MARKET DURING FORECAST PERIOD

TABLE 11 HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

9.2 HARDWARE

TABLE 12 HARDWARE: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

TABLE 13 HARDWARE: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

FIGURE 41 ASIA PACIFIC HAPTIC TECHNOLOGY MARKET FOR HARDWARE TO REGISTER HIGHEST CAGR DURING FORECAST PERIOD

TABLE 14 HARDWARE: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 15 HARDWARE: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

FIGURE 42 AUTOMOTIVE & TRANSPORTATION SEGMENT TO EXHIBIT HIGHEST CAGR IN HAPTIC TECHNOLOGY MARKET FOR HARDWARE DURING FORECAST PERIOD

9.2.1 ACTUATORS

TABLE 16 ACTUATORS: HAPTIC TECHNOLOGY MARKET, BY TYPE, 2019–2022 (MILLION UNITS)

TABLE 17 ACTUATORS: HAPTIC TECHNOLOGY MARKET, BY TYPE, 2023–2028 (MILLION UNITS)

TABLE 18 ACTUATORS: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 19 ACTUATORS: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

9.2.1.1 Eccentric rotating mass (ERM) and linear resonant actuators (LRAs)

9.2.1.1.1 Cost-effective actuator alternatives for mass-market devices

TABLE 20 ERM AND LRA ACTUATORS: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 21 ERM AND LRA ACTUATORS: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

9.2.1.2 Piezoelectric actuators

9.2.1.2.1 Offer excellent response time

TABLE 22 PIEZOELECTRIC ACTUATORS: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 23 PIEZOELECTRIC ACTUATORS: HAPTIC TECHNOLOGY MARKET FOR, BY APPLICATION, 2023–2028 (USD MILLION)

9.2.2 DRIVERS AND MICROCONTROLLERS

9.2.2.1 Act as bridge between controller and actuator

TABLE 24 DRIVERS & MICROCONTROLLERS: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 25 DRIVERS & MICROCONTROLLERS: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

TABLE 26 HARDWARE: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 27 HARDWARE: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

9.3 SOFTWARE

9.3.1 ENABLES USERS TO INTERACT WITH DEVICES

FIGURE 43 ASIA PACIFIC HAPTIC TECHNOLOGY MARKET FOR SOFTWARE TO REGISTER HIGHEST CAGR DURING FORECAST PERIOD

TABLE 28 SOFTWARE: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 29 SOFTWARE: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 30 SOFTWARE: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 31 SOFTWARE: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

10 HAPTIC TECHNOLOGY MARKET, BY APPLICATION

10.1 INTRODUCTION

TABLE 32 HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

FIGURE 44 CONSUMER DEVICES SEGMENT TO ACCOUNT FOR LARGEST SHARE OF HAPTIC TECHNOLOGY MARKET FROM 2023 TO 2028

TABLE 33 HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

10.2 CONSUMER DEVICES

FIGURE 45 ASIA PACIFIC HAPTIC TECHNOLOGY MARKET FOR CONSUMER DEVICES TO REGISTER HIGHEST CAGR DURING FORECAST PERIOD

TABLE 34 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 35 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 36 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

TABLE 37 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

TABLE 38 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 39 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

TABLE 40 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 41 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2023–2028 (USD MILLION)

FIGURE 46 ASIA PACIFIC HAPTIC TECHNOLOGY MARKET FOR ACTUATOR IN CONSUMER DEVICES TO EXHIBIT HIGHEST CAGR DURING FORECAST PERIOD

TABLE 42 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2019–2022 (USD MILLION)

TABLE 43 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2023–2028 (USD MILLION)

TABLE 44 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 45 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 46 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, (2019–2022) (USD MILLION)

TABLE 47 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2023–2028 (USD MILLION)

TABLE 48 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 49 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 50 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2019–2022 (USD MILLION)

TABLE 51 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2023–2028 (USD MILLION)

TABLE 52 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 53 CONSUMER DEVICES: HAPTIC TECHNOLOGY MARKET FOR

SOFTWARE, BY REGION, 2023–2028 (USD MILLION)

10.2.1 SMARTPHONES, TABLETS, AND SMARTWATCHES

10.2.1.1 Haptic components find major applications in smartphones, tablets, and smartwatches

10.2.2 AUGMENTED REALITY (AR) & VIRTUAL REALITY (VR) AND GAMING DEVICES

10.2.2.1 Haptic technology in AR and VR has evolved significantly in past few years

10.2.3 OTHER CONSUMER DEVICES

10.3 AUTOMOTIVE & TRANSPORTATION

10.3.1 GROWING DEMAND FOR HAPTIC TECHNOLOGY-BASED TOUCHSCREENS

FIGURE 47 ASIA PACIFIC HAPTIC TECHNOLOGY MARKET FOR AUTOMOTIVE & TRANSPORTATION SEGMENT TO REGISTER HIGHEST CAGR DURING FORECAST PERIOD

TABLE 54 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 55 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 56 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

TABLE 57 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

TABLE 58 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 59 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

TABLE 60 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 61 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2023–2028 (USD MILLION)

TABLE 62 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2019–2022 (USD MILLION)

TABLE 63 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2023–2028 (USD MILLION)

TABLE 64 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 65 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 66 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET

FOR ERM & LRA, BY REGION, 2019–2022 (USD MILLION)

TABLE 67 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2023–2028 (USD MILLION)

TABLE 68 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 69 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 70 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2019–2022 (USD MILLION)

TABLE 71 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2023–2028 (USD MILLION)

TABLE 72 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 73 AUTOMOTIVE & TRANSPORTATION: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2023–2028 (USD MILLION)

10.4 EDUCATION & RESEARCH

10.4.1 DEVELOPMENTS IN HAPTIC EDUCATIONAL DEVICES FOR NEW TEACHING TECHNIQUES USING TACTILE AND FORCE FEEDBACK

TABLE 74 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 75 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 76 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

TABLE 77 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

TABLE 78 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 79 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

TABLE 80 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 81 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2023–2028 (USD MILLION)

TABLE 82 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2019–2022 (USD MILLION)

TABLE 83 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2023–2028 (USD MILLION)

TABLE 84 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR

ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 85 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 86 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2019–2022 (USD MILLION)

TABLE 87 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2023–2028 (USD MILLION)

TABLE 88 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 89 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 90 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2019–2022 (USD MILLION)

TABLE 91 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2023–2028 (USD MILLION)

TABLE 92 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 93 EDUCATION & RESEARCH: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2023–2028 (USD MILLION)

10.5 HEALTHCARE

10.5.1 GROWING USE OF HAPTIC TECHNOLOGY IN MEDICAL TRAINING, REHABILITATION, AND ROBOTIC SURGERIES

TABLE 94 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 95 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 96 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

TABLE 97 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

TABLE 98 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 99 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

TABLE 100 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 101 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2023–2028 (USD MILLION)

TABLE 102 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE,

2019–2022 (USD MILLION)

TABLE 103 HEALTHCARE: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2023–2028 (USD MILLION)

TABLE 104 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 105 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 106 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2019–2022 (USD MILLION)

TABLE 107 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2023–2028 (USD MILLION)

TABLE 108 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 109 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 110 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2019–2022 (USD MILLION)

TABLE 111 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2023–2028 (USD MILLION)

TABLE 112 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 113 HEALTHCARE: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2023–2028 (USD MILLION)

10.6 COMMERCIAL & INDUSTRIAL

10.6.1 RISING USE OF HAPTIC TECHNOLOGY IN COMMERCIAL APPLICATIONS

TABLE 114 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 115 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 116 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

TABLE 117 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

TABLE 118 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 119 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

TABLE 120 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 121 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2023–2028 (USD MILLION)

TABLE 122 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2019–2022 (USD MILLION)

TABLE 123 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2023–2028 (USD MILLION)

TABLE 124 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 125 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 126 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2019–2022 (USD MILLION)

TABLE 127 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2023–2028 (USD MILLION)

TABLE 128 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATORS, BY REGION, 2019–2022 (USD MILLION)

TABLE 129 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATORS, BY REGION, 2023–2028 (USD MILLION)

TABLE 130 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2019–2022 (USD MILLION)

TABLE 131 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2023–2028 (USD MILLION)

TABLE 132 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 133 COMMERCIAL & INDUSTRIAL: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2023–2028 (USD MILLION)

10.7 OTHERS

TABLE 134 OTHERS: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 135 OTHERS: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 136 OTHERS: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2019–2022 (USD MILLION)

TABLE 137 OTHERS: HAPTIC TECHNOLOGY MARKET, BY COMPONENT, 2023–2028 (USD MILLION)

TABLE 138 OTHERS: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 139 OTHERS: HAPTIC TECHNOLOGY MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

TABLE 140 OTHERS: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 141 OTHERS: HAPTIC TECHNOLOGY MARKET FOR HARDWARE, BY REGION, 2023–2028 (USD MILLION)

TABLE 142 OTHERS: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2019–2022 (USD MILLION)

TABLE 143 OTHERS: HAPTIC TECHNOLOGY MARKET, BY ACTUATOR TYPE, 2023–2028 (USD MILLION)

TABLE 144 OTHERS: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 145 OTHERS: HAPTIC TECHNOLOGY MARKET FOR ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 146 OTHERS: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2019–2022 (USD MILLION)

TABLE 147 OTHERS: HAPTIC TECHNOLOGY MARKET FOR ERM & LRA, BY REGION, 2023–2028 (USD MILLION)

TABLE 148 OTHERS: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2019–2022 (USD MILLION)

TABLE 149 OTHERS: HAPTIC TECHNOLOGY MARKET FOR PIEZOELECTRIC ACTUATOR, BY REGION, 2023–2028 (USD MILLION)

TABLE 150 OTHERS: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2019–2022 (USD MILLION)

TABLE 151 OTHERS: HAPTIC TECHNOLOGY MARKET FOR DRIVERS & MICROCONTROLLERS, BY REGION, 2023–2028 (USD MILLION)

TABLE 152 OTHERS: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2019–2022 (USD MILLION)

TABLE 153 OTHERS: HAPTIC TECHNOLOGY MARKET FOR SOFTWARE, BY REGION, 2023–2028 (USD MILLION)

11 HAPTIC TECHNOLOGY MARKET, BY REGION

11.1 INTRODUCTION

FIGURE 48 ASIA PACIFIC TO DOMINATE HAPTIC TECHNOLOGY MARKET DURING FORECAST PERIOD

TABLE 154 HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 155 HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

11.2 NORTH AMERICA

FIGURE 49 NORTH AMERICA: SNAPSHOT OF HAPTIC TECHNOLOGY MARKET
TABLE 156 NORTH AMERICA: HAPTIC TECHNOLOGY MARKET, BY COUNTRY,
2019–2022 (USD MILLION)

TABLE 157 NORTH AMERICA: HAPTIC TECHNOLOGY MARKET, BY COUNTRY,
2023–2028 (USD MILLION)

TABLE 158 NORTH AMERICA: HAPTIC TECHNOLOGY MARKET, BY APPLICATION,
2019–2022 (USD MILLION)

TABLE 159 NORTH AMERICA: HAPTIC TECHNOLOGY MARKET, BY APPLICATION,
2023–2028 (USD MILLION)

11.2.1 US

11.2.1.1 Increasing investments in enhancement of haptic technology and expanding automotive and smartphone markets

11.2.2 CANADA

11.2.2.1 Rising government-led initiatives related to haptic technology

11.2.3 MEXICO

11.2.3.1 Booming consumer electronics and automotive industries

11.3 EUROPE

FIGURE 50 EUROPE: SNAPSHOT OF HAPTIC TECHNOLOGY MARKET

TABLE 160 EUROPE: HAPTIC TECHNOLOGY MARKET, BY COUNTRY, 2019–2022
(USD MILLION)

TABLE 161 EUROPE: HAPTIC TECHNOLOGY MARKET, BY COUNTRY, 2023–2028
(USD MILLION)

TABLE 162 EUROPE: HAPTIC TECHNOLOGY MARKET, BY APPLICATION,
2019–2022 (USD MILLION)

TABLE 163 EUROPE: HAPTIC TECHNOLOGY MARKET, BY APPLICATION,
2023–2028 (USD MILLION)

11.3.1 UK

11.3.1.1 Government-led support to develop advanced technologies

11.3.2 GERMANY

11.3.2.1 Large presence of established automobile manufacturers

11.3.3 FRANCE

11.3.3.1 Growing demand for smartphones and wearables

11.3.4 REST OF EUROPE

11.4 ASIA PACIFIC

FIGURE 51 ASIA PACIFIC: SNAPSHOT OF HAPTIC TECHNOLOGY MARKET

TABLE 164 ASIA PACIFIC: HAPTIC TECHNOLOGY MARKET, BY COUNTRY,
2019–2022 (USD MILLION)

TABLE 165 ASIA PACIFIC: HAPTIC TECHNOLOGY MARKET, BY COUNTRY,
2023–2028 (USD MILLION)

TABLE 166 ASIA PACIFIC: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 167 ASIA PACIFIC: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

11.4.1 CHINA

11.4.1.1 Growing production of smartphones and vehicles

11.4.2 JAPAN

11.4.2.1 Increasing integration of haptic technology into automobiles

11.4.3 SOUTH KOREA

11.4.3.1 Introduction of latest smartphones by Samsung and LG integrated with haptic technology

11.4.4 REST OF ASIA PACIFIC

11.5 ROW

FIGURE 52 SOUTH AMERICA TO HOLD LARGER SHARE OF ROW MARKET DURING FORECAST PERIOD

TABLE 168 ROW: HAPTIC TECHNOLOGY MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 169 ROW: HAPTIC TECHNOLOGY MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 170 ROW: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2019–2022 (USD MILLION)

TABLE 171 ROW: HAPTIC TECHNOLOGY MARKET, BY APPLICATION, 2023–2028 (USD MILLION)

11.5.1 SOUTH AMERICA

11.5.1.1 Increased smartphone usage

11.5.2 MIDDLE EAST & AFRICA

11.5.2.1 Healthy growth of consumer electronics industry

12 COMPETITIVE LANDSCAPE

12.1 OVERVIEW

12.2 MARKET RANKING ANALYSIS, 2022

TABLE 172 HAPTIC TECHNOLOGY MARKET RANKING ANALYSIS, 2022

12.3 MARKET SHARE ANALYSIS, 2022

TABLE 173 MARKET SHARE OF TOP FIVE PLAYERS IN HAPTIC TECHNOLOGY MARKET, 2022

12.4 HISTORIC REVENUE ANALYSIS OF MAJOR MARKET PLAYERS

FIGURE 53 HISTORIC REVENUE ANALYSIS OF TOP FIVE PLAYERS

12.5 MARKET EVALUATION FRAMEWORK

TABLE 174 OVERVIEW OF STRATEGIES DEPLOYED BY KEY MARKET PLAYERS

12.5.1 PRODUCT PORTFOLIO

12.5.2 REGIONAL FOCUS

12.5.3 MANUFACTURING FOOTPRINT

12.5.4 ORGANIC/INORGANIC GROWTH STRATEGIES

12.6 COMPANY FOOTPRINT**TABLE 175 COMPANY FOOTPRINT****TABLE 176 COMPONENT: COMPANY FOOTPRINT****TABLE 177 APPLICATION: COMPANY FOOTPRINT****TABLE 178 REGION: COMPANY FOOTPRINT****12.7 COMPANY EVALUATION QUADRANT, 2022**

12.7.1 STARS

12.7.2 EMERGING LEADERS

12.7.3 PERVASIVE PLAYERS

12.7.4 PARTICIPANTS

FIGURE 54 HAPTIC TECHNOLOGY MARKET: COMPANY EVALUATION QUADRANT**12.8 STARTUP/SME EVALUATION QUADRANT, 2022**

12.8.1 PROGRESSIVE COMPANIES

12.8.2 RESPONSIVE COMPANIES

12.8.3 DYNAMIC COMPANIES

12.8.4 STARTING BLOCKS

FIGURE 55 HAPTIC TECHNOLOGY MARKET: STARTUP/SME EVALUATION QUADRANT**12.9 COMPETITIVE SCENARIO AND TRENDS**

12.9.1 PRODUCT LAUNCHES

TABLE 179 HAPTIC TECHNOLOGY MARKET: PRODUCT LAUNCHES, 2020–2023

12.9.2 DEALS

TABLE 180 HAPTIC TECHNOLOGY MARKET: DEALS, 2020–2023**13 COMPANY PROFILES**

(Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats)*

13.1 INTRODUCTION**13.2 KEY PLAYERS**

13.2.1 TEXAS INSTRUMENTS INCORPORATED

TABLE 181 TEXAS INSTRUMENTS INCORPORATED: COMPANY OVERVIEW**FIGURE 56 TEXAS INSTRUMENTS INCORPORATED: COMPANY SNAPSHOT**

TABLE 182 TEXAS INSTRUMENTS INCORPORATED: PRODUCT LAUNCHES

13.2.2 JOHNSON ELECTRIC HOLDINGS LIMITED

TABLE 183 JOHNSON ELECTRIC HOLDINGS LIMITED: COMPANY OVERVIEW

FIGURE 57 JOHNSON ELECTRIC HOLDINGS LIMITED: COMPANY SNAPSHOT

TABLE 184 JOHNSON ELECTRIC HOLDINGS LIMITED: PRODUCT LAUNCHES

13.2.3 AAC TECHNOLOGIES

TABLE 185 AAC TECHNOLOGIES: COMPANY OVERVIEW

FIGURE 58 AAC TECHNOLOGIES: COMPANY SNAPSHOT

TABLE 186 AAC TECHNOLOGIES: PRODUCT LAUNCHES

TABLE 187 AAC TECHNOLOGIES: DEALS

13.2.4 TDK CORPORATION

TABLE 188 TDK CORPORATION: COMPANY OVERVIEW

FIGURE 59 TDK CORPORATION: COMPANY SNAPSHOT

TABLE 189 TDK CORPORATION: DEALS

13.2.5 MICROCHIP TECHNOLOGY INC.

TABLE 190 MICROCHIP TECHNOLOGY INC.: COMPANY OVERVIEW

FIGURE 60 MICROCHIP TECHNOLOGY INC.: COMPANY SNAPSHOT

TABLE 191 MICROCHIP TECHNOLOGY INC.: PRODUCT LAUNCHES

13.2.6 IMMERSION

TABLE 192 IMMERSION: COMPANY OVERVIEW

FIGURE 61 IMMERSION: COMPANY SNAPSHOT

TABLE 193 IMMERSION: DEALS

13.2.7 SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC (ONSEMI)

TABLE 194 SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC (ONSEMI):
COMPANY OVERVIEW

FIGURE 62 SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC (ONSEMI):
COMPANY SNAPSHOT

13.2.8 PRECISION MICRODRIVES

TABLE 195 PRECISION MICRODRIVES: COMPANY OVERVIEW

13.2.9 SYNAPTICS INCORPORATED

TABLE 196 SYNAPTICS INCORPORATED: COMPANY OVERVIEW

FIGURE 63 SYNAPTICS INCORPORATED: COMPANY SNAPSHOT

13.2.10 ULTRALEAP

TABLE 197 ULTRALEAP: COMPANY OVERVIEW

TABLE 198 ULTRALEAP: PRODUCT LAUNCHES

TABLE 199 ULTRALEAP: DEALS

13.3 OTHER PLAYERS

13.3.1 AITO BV

13.3.2 ALPS ALPINE

- 13.3.3 CIRRUS LOGIC INC.
- 13.3.4 INFINEON TECHNOLOGIES AG
- 13.3.5 VYBRONICS
- 13.3.6 RENESAS ELECTRONICS CORPORATION
- 13.3.7 HAP2U
- 13.3.8 IMAGIS
- 13.3.9 NIDEC CORPORATION
- 13.3.10 MPLUS
- 13.3.11 BOR?AS TECHNOLOGIES
- 13.3.12 ANALOG DEVICES
- 13.3.13 ALLEGRO MICROSYSTEMS
- 13.3.14 NOVASENTIS, INC.
- 13.3.15 NEED-FOR-POWER MOTOR CO., LTD.

Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats) might not be captured in case of unlisted companies.

14 APPENDIX

- 14.1 DISCUSSION GUIDE
- 14.2 KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL
- 14.3 CUSTOMIZATION OPTIONS
- 14.4 RELATED REPORTS
- 14.5 AUTHOR DETAILS

I would like to order

Product name: Haptic Technology Market by Feedback Type (Tactile, Force), Component (Hardware (Actuators, Drivers & Microcontrollers) Software), Application (Consumer Devices, Automotive & Transportation, Commercial & Industrial) and Region - Global Forecast to 2028

Product link: <https://marketpublishers.com/r/HFA947D8E20EN.html>

Price: US\$ 4,950.00 (Single User License / Electronic Delivery)

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

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/HFA947D8E20EN.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