

The Global Markets for Wearable Electronics to 2027

<https://marketpublishers.com/r/G6EF773422ABEN.html>

Date: September 2020

Pages: 346

Price: US\$ 1,325.00 (Single User License)

ID: G6EF773422ABEN

Abstracts

In-depth market review including Smartwatches, sports and fitness trackers, sleep trackers and wearable monitors, Smart glasses and head-mounted displays (VR, AR, MR, vision loss and eye trackers), military, Industrial and workplace monitoring, flexible and stretchable electronics, e-textiles and smart clothing, artificial skin, skin patches, wearable health alert and monitoring devices, Continuous glucose monitoring (CGM), hydration and sweat sensors, wearable drug delivery, cosmetics patches, smart footwear, smart contact lenses, smart wound care, exoskeletons and hearables.

Wearables are body-borne computational and sensory devices which can sense the person who wears them and/or their environment. Wearables can communicate either directly through embedded wireless connectivity or through another device (e.g. a smartphone). The data collected by the wearable device about the user or its environment is processed in a processing unit located locally or in an external server, and the results are ultimately provided to the wearer. Smart wearables may have control, communication, storage and actuation capabilities. The number and variety of wearable electronic devices has increased significantly in the past few years, as they offer significant enhancements to human comfort, health and well-being.

There is increasing demand for wearable electronics from industries such as:

Medical and healthcare monitoring and diagnostics.

Sportswear and fitness monitoring (bands).

Consumer electronics such as smart watches, smart glasses and headsets.

Military GPS trackers, equipment (helmets) and wearable robots.

Smart apparel and footwear in fashion and sport.

Workplace safety and manufacturing.

Wearable and mobile health monitoring technologies are important due to the rapidly aging global populations and the drastically increasing demand for in-home healthcare. Commercially available and near commercial wearable devices facilitate the transmission of biomedical informatics and personal health recording. Body worn sensors, which can provide real-time continuous measurement of pertinent physiological parameters noninvasively and comfortably for extended periods of time, are of crucial importance for emerging applications of mobile medicine.

Advancements over the last few years in electronics have also led to the development of electronic (E-textiles) or smart textiles. Smart textiles and garments can sense environmental stimuli and react or adapt in a predetermined way. This involves either embedding or integrating sensors/actuators and electronic components into textiles for use in applications such as medical diagnostics and health monitoring, consumer electronics, safety instruments and automotive textiles.

Markets covered include:

Healthcare & Medical

Blood Pressure Monitors

Continuous Glucose Monitoring

Defibrillators

Drug Delivery

ECG Monitors

Hearing Aids

Insulin Pumps

Smart Glasses

Skin Patches

PERS

Pulse Oximetry

Fitness & Wellness

Activity Monitors

Fitness & Heart Rate Monitors

Heads-up Displays

Sleep Sensors

Smart Glasses

Smart Clothing

Smart Watches

Audio Earbuds

Infotainment

Head-up Displays

Imaging Products

Smart Glasses

Smart Watches

Industry and manufacturing

Hand-worn Terminals

Heads-up Displays

Exoskeleton

Smart Clothing

Smart Glasses

Military

Hand-worn Terminals

Heads-up Displays

Smart Clothing

Report contents include:

In-depth market review of current products and technology development in Smartwatches, sports and fitness trackers, sleep trackers and wearable monitors, Smart glasses and head-mounted displays (VR, AR, MR, vision loss and eye trackers), military, Industrial and workplace monitoring, flexible and stretchable electronics, e-textiles and smart clothing, artificial skin, skin patches, wearable health alert and monitoring devices, Continuous glucose monitoring (CGM), hydration and sweat sensors, wearable drug delivery, cosmetics patches, smart footwear, smart contact lenses, smart wound care, exoskeletons and hearables.

In depth product assessment including products, producers, functionalities and prices.

Global market revenues, historical and forecast to 2027 for wearable electronics, medical wearables, electronic textiles and smart clothing.

Over 250 company profiles. Companies profiled include BeBop Sensors,

dorsaVi Ltd, Enhanlabo Co., Ltd., Equivital Inc., FeelIT, HP1 Technologies Ltd., miomove s.r.o, Neosensory, Abbott Laboratories, Add Care Ltd., AerBetic, Inc., Avanix srl, Biobeat Technologies Ltd., biolinq Inc, CareWear, Cosinuss GmbH, Seventh Sense Biosystems, Sorrel Medical, Spirit of Wonder Co., Ltd., Far Eastern New Century and many more.

Contents

1 EXECUTIVE SUMMARY

- 1.1 The evolution of electronics
 - 1.1.1 The wearables revolution
 - 1.1.2 Wearable market leaders
 - 1.1.3 Flexible, stretchable, thin, and large-area form factors
- 1.2 What are flexible and stretchable electronics?
 - 1.2.1 From rigid to flexible and stretchable
 - 1.2.2 Organic and printed electronics
 - 1.2.3 New conductive materials
 - 1.2.4 Foldable smartphones and tablets
- 1.3 Growth in flexible and stretchable electronics market
 - 1.3.1 Recent growth in Printed, flexible and stretchable products
 - 1.3.2 Future growth
 - 1.3.3 Nanotechnology as a market driver
 - 1.3.4 Growth in remote health monitoring and diagnostics

2 RESEARCH METHODOLOGY

3 WEARABLE ELECTRONICS

3.1 MARKET DRIVERS AND TRENDS

3.2 APPLICATIONS

- 3.2.1 Smartwatches
 - 3.2.1.1 Main smart watch producers and products
- 3.2.2 Sports and fitness trackers
 - 3.2.2.1 Products
- 3.2.3 Sleep trackers and wearable monitors
 - 3.2.3.1 Products
- 3.2.4 Smart glasses and head-mounted displays (VR, AR, MR, vision loss and eye trackers)
 - 3.2.4.1 Products
- 3.2.5 Military
- 3.2.6 Industrial and workplace monitoring
- 3.2.7 Flexible and stretchable electronics in wearables
- 3.2.8 Stretchable artificial skin

3.3 GLOBAL MARKET SIZE

3.4 MARKET CHALLENGES

3.5 COMPANY PROFILES 66 (60 company profiles)

4 MEDICAL AND HEALTHCARE WEARABLES

4.1 MARKET DRIVERS

4.2 CURRENT STATE OF THE ART

4.2.1 Monitoring solutions to track COVID-19 symptoms

4.2.1.1 Temperature and respiratory rate monitoring

4.3 APPLICATIONS

4.3.1 Companies and products

4.3.2 Electronic skin patches

4.3.3 Nanomaterials-based devices

4.3.4 Wearable health alert and monitoring devices

4.3.5 Continuous glucose monitoring (CGM)

4.3.5.1 Minimally-invasive CGM sensors

4.3.5.2 Non-invasive CGM sensors

4.3.5.3 Companies and products

4.3.6 Cardiovascular

4.3.6.1 ECG sensors

4.3.6.2 PPG sensors

4.3.7 Pregnancy and newborn monitoring

4.3.8 Wearable temperature monitoring

4.3.9 Hydration sensors

4.3.10 Wearable sweat sensors (medical and sports)

4.3.10.1 Products

4.3.11 Wearable drug delivery

4.3.12 Cosmetics patches

4.4 Smart footwear

4.5 Smart contact lenses

4.6 Smart wound care

4.7 Wearable exoskeletons

4.8 Medical hearables

4.9 GLOBAL MARKET SIZE

4.10 MARKET CHALLENGES

4.11 COMPANY PROFILES 157 (134 Company profiles)

5 ELECTRONIC TEXTILES (E-TEXTILES) AND SMART TEXTILES

5.1 MARKET DRIVERS

5.2 MATERIALS AND COMPONENTS

5.2.1 Conductive and stretchable yarns

5.2.2 Conductive polymers

5.2.2.1 PDMS

5.2.2.2 PEDOT: PSS

5.2.3 Conductive coatings

5.2.4 Conductive inks

5.2.5 Nanomaterials

5.2.5.1 Nanocoatings in smart textiles

5.2.5.2 Graphene

5.2.5.3 Nanofibers

5.2.5.4 Carbon nanotubes

5.2.6 Phase change materials

5.2.6.1 Temperature controlled fabrics

5.3 APPLICATIONS, MARKETS AND PRODUCTS

5.3.1 Smart clothing products

5.3.2 Temperature monitoring and regulation

5.3.3 Stretchable E-fabrics

5.3.4 Sport & fitness

5.3.5 Smart footwear

5.3.6 Military/Defence

5.3.7 Medical and healthcare

5.3.7.1 Biometric monitoring

5.3.7.2 ECG sensors

5.3.8 Industrial and workplace monitoring

5.3.9 Flexible and wearable display advertising

5.3.10 Powering E-textiles

5.3.10.1 Batteries

5.3.10.2 Supercapacitors

5.3.10.3 Energy harvesting

5.3.10.3.1 Photovoltaic solar textiles

5.3.10.3.2 Energy harvesting nanogenerators

5.3.10.3.2.1 TENGs

5.3.10.3.2.2 PENGs

5.3.10.3.3 Radio frequency (RF) energy harvesting

5.4 GLOBAL MARKET SIZE

5.5 MARKET CHALLENGES

5.6 COMPANY PROFILES 291 (65 company profiles)

6 REFERENCES

Tables

TABLES

- Table 1. Types of wearable devices and applications.
- Table 2. Wearable market leaders by market segment.
- Table 3. Advanced materials for Printed, flexible and stretchable sensors and Electronics-Advantages and disadvantages.
- Table 4. Sheet resistance (RS) and transparency (T) values for transparent conductive oxides and alternative materials for transparent conductive electrodes (TCE).
- Table 5. Foldable smartphones and tablets, on or near market.
- Table 6. Market drivers for printed, flexible and stretchable electronics for wearables and IoT.
- Table 7. Main smart watch producers and products.
- Table 8. Wearable sensors for sports performance.
- Table 9. Wearable sensor products for monitoring sport performance.
- Table 10. Wearable sleep tracker products.
- Table 11. Smart glasses companies and products.
- Table 12. Wearable electronics applications in the military.
- Table 13. Applications in printed, flexible and stretchable electronics, by advanced materials type and benefits thereof.
- Table 14. Global market for wearable electronics, 2015-2027, by product type, billions \$.
- Table 15. Market challenges in wearable electronics and IoT.
- Table 16. Market drivers for printed, flexible and stretchable medical and healthcare sensors and wearables.
- Table 17. Examples of wearable medical device products.
- Table 18. Medical wearable companies applying products to COVID-19 monitoring and analysis.
- Table 19. Applications in flexible and stretchable health monitors, by advanced materials type and benefits thereof.
- Table 20. Wearable bio-signal monitoring devices.
- Table 21. Technologies for minimally-invasive and non-invasive glucose detection-advantages and disadvantages.
- Table 22. Commercial devices for non-invasive glucose monitoring not released or withdrawn from market.
- Table 23. Minimally-invasive and non-invasive glucose monitoring products.
- Table 24. Companies developing wearable sweat sensors.
- Table 25. Wearable drug delivery companies and products.
- Table 26. Companies and products, cosmetics and drug delivery patches.

- Table 27. Companies and products in smart footwear.
- Table 28. Companies and products in smart contact lenses.
- Table 29. Companies and products in smart wound care.
- Table 30. Companies developing wearable exoskeletons.
- Table 31. Companies and products in hearables.
- Table 32. Global medical and healthcare wearables market, 2017-2027, billions \$, by product.
- Table 33. Market challenges in medical and healthcare sensors and wearables.
- Table 34. Market drivers for printed, flexible, stretchable and organic electronic textiles.
- Table 35. Types of smart textiles.
- Table 36. Examples of smart textile products.
- Table 37. Commercially available smart clothing products.
- Table 38. Electronic textiles products.
- Table 39. Applications in textiles, by advanced materials type and benefits thereof.
- Table 40. Nanocoatings applied in the textiles industry-type of coating, nanomaterials utilized, benefits and applications.
- Table 41. Applications and benefits of graphene in textiles and apparel.
- Table 42. Applications and markets for e-textiles.
- Table 43. Global electronic and smart textiles market 2017-2030, revenues (billions USD).
- Table 44. Market challenges in E-textiles.

Figures

FIGURES

Figure 1. Evolution of electronics.

Figure 2. Wove Band.

Figure 3. Wearable graphene medical sensor.

Figure 4. Applications timeline for organic and printed electronics.

Figure 5. Xiaomi MIX Flex.

Figure 6. Baby Monitor.

Figure 7. Wearable health monitor incorporating graphene photodetectors.

Figure 8. Applications of wearable flexible sensors worn on various body parts.

Figure 9. Wearable bio-fluid monitoring system for monitoring of hydration.

Figure 10. Beddr SleepTuner.

Figure 11. Vuzix Blade.

Figure 12. NReal Light MR smart glasses.

Figure 13. Wearable gas sensor.

Figure 14. Stretchable transistor.

Figure 15. Artificial skin prototype for gesture recognition.

Figure 16. Global market for wearables, 2015-2027, by product type, billions US\$.

Figure 17. Global market for hearables, 2017-2027, by product type, billions \$.

Figure 18. Global market for wearables, 2015-2027, by market share of product type

Figure 19. Connected human body and product examples.

Figure 20. Companies and products in wearable health monitoring and rehabilitation devices and products.

Figure 21. Smart e-skin system comprising health-monitoring sensors, displays, and ultra flexible PLEDs.

Figure 22. Graphene medical patch.

Figure 23. Graphene-based E-skin patch.

Figure 24. Technologies for minimally-invasive and non-invasive glucose detection.

Figure 25. Schematic of non-invasive CGM sensor.

Figure 26. Adhesive wearable CGM sensor.

Figure 27. VitalPatch.

Figure 28. Wearable ECG-textile.

Figure 29. Wearable ECG recorder.

Figure 30. Nexkin™.

Figure 31. Bloomlife.

Figure 32. Enfucell wearable temperature tag.

Figure 33. TempTraQ wearable wireless thermometer.

Figure 34. Nanowire skin hydration patch.

Figure 35. NIX sensors.

Figure 36. Wearable sweat sensor.

Figure 37. Wearable sweat sensor.

Figure 38. Gatorade's GX Sweat Patch.

Figure 39. Sweat sensor incorporated into face mask.

Figure 40. Lab-on-Skin™.

Figure 41. D-mine Pump.

Figure 42. My UV Patch.

Figure 43. Overview layers of L'Oreal skin patch.

Figure 44. Digitsole Smartshoe.

Figure 45. Schematic of smart wound dressing.

Figure 46. REPAIR electronic patch concept. Image courtesy of the University of Pittsburgh School of Medicine.

Figure 47. Honda Walking Assist.

Figure 48. Nuheara IQbuds? Max.

Figure 49. Global medical and healthcare wearables market, 2017-2027, billions \$, by product.

Figure 50. Global market for medical and healthcare sensors and wearables, 2015-2027, by market share of product type.

Figure 86. Basketball referee Royole fully flexible display.

Figure 51. Conductive yarns.

Figure 52. Conductive yarns.

Figure 53. SEM image of cotton fibers with PEDOT:PSS coating.

Figure 54. Myant sleeve tracks biochemical indicators in sweat.

Figure 55. Schematic illustration of the fabrication concept for textile-based dye-sensitized solar cells (DSSCs) made by sewing textile electrodes onto cloth or paper.

Figure 56. iStimUweaR .

Figure 57. Wearable medical technology.

Figure 58. Global electronic textiles and smart market 2017-2030, revenues (billions USD). Source: Future Markets.

Figure 59. Global market for electronics and smart textiles, 2017-2027, by market share of product type.

I would like to order

Product name: The Global Markets for Wearable Electronics to 2027

Product link: <https://marketpublishers.com/r/G6EF773422ABEN.html>

Price: US\$ 1,325.00 (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/G6EF773422ABEN.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