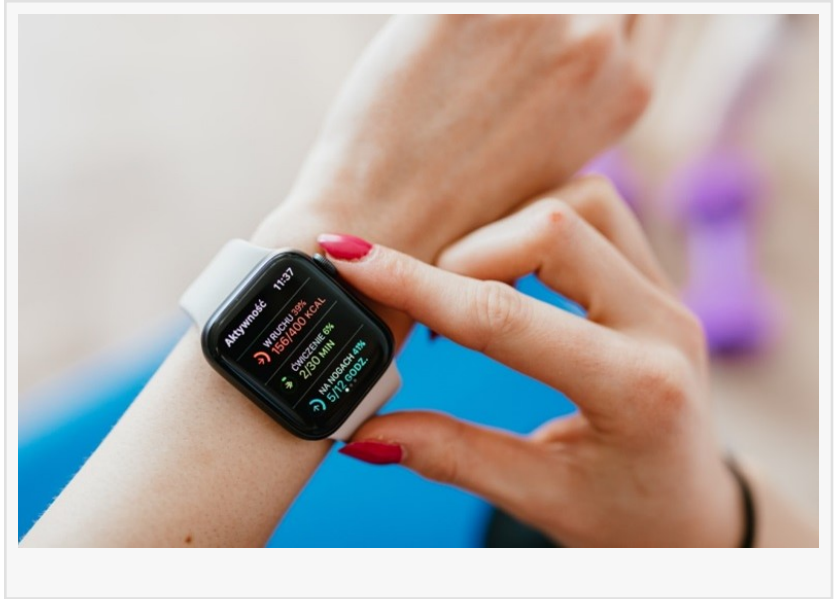


# Wearable devices: Transforming from Consumer Grade to Professional Medical Use

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EINPresswire.com/ -- According to data released by market research firm IDC, the global wearable device market shipped 114.2 million units in the second quarter of 2021. At the same time, IDC predicts that global shipments of wearable devices will grow from 450 million in 2020 to nearly 800m in 2025.



Among them, smartwatches and earwear devices / smart headphones account for nearly 80% of the total shipments of wearable devices. With the increasing enrichment of its application functions, in addition to realizing the basic functions such as payment, call / Wechat Synchronize, health monitoring has gradually become a new development direction of smartwatch and smart headphones.

## Blood Pressure and Blood Sugar Become new Vents

The core of wearable devices is miniaturization and integration, which is an important reason why smartwatches with multiple functions and strong life attributes can be popularized rapidly. Second, compared with more professional and accurate portable medical devices, the appearance of smartwatches is undoubtedly more suitable for daily long-term wear.

At present, blood pressure monitoring has not yet formed a large-scale and daily application on smartwatches/bracelets or other wearable terminals. The portable blood pressure monitoring devices on the market are mainly divided into four categories according to technology devices that only use mobile phone cameras, [pure optical sensors](#), optical and other sensor fusion devices, and indirect data devices. These methods do not measure blood pressure directly but measure blood pressure changes, and then measure the pressure waves generated by blood pressure in the artery through algorithm and data analysis, and there is no way to get the

absolute value of blood pressure like cuff measurement.

Whether data can be obtained non-invasively through wearable devices is the key. For example, such as blood sugar and blood lipids, current sensors are difficult to detect in non-invasive cases, which means that wearability cannot be achieved. Manufacturers such as Apple and Huawei are expected to embed non-invasive physiological signal detection in the next generation of wearable devices to monitor blood pressure and blood sugar, which are critical to the risk of cardiovascular disease.

### Challenges Remain in Wearable Medical Devices

Since Apple launched its first-generation Apple Watch in 2014, it has changed public perception and brought things that used to require professional medical equipment to consumer electronics. Now the wearable device market is divided into two parts: commercial consumption level and professional medical level, but it is still in the early stage of development, and the major manufacturers are mainly in the consumer level, staying in the stage of selling hardware. The prospect of medical equipment from professional level to consumer level is undoubtedly reverie, but it is not easy to achieve all this.

To realize the large-scale commercial use of wearable professional medical-grade equipment, we need to break through two barriers first-- the hardware has the equipment that can detect data, and the software side can interpret medical-grade data.

In addition to Apple and Huawei, companies including Garmin, Google, Sony, Xiaomi, Samsung Electronics, and Huawei Technologies are competing fiercely in the area of wearable health to give users personalized health advice. However, in terms of protecting user privacy, the big data era has changed biomedical research and health care practice and data privacy protection is also facing challenges.

### Wearable Device is the Key Node of IoT Closed Loop

For major smartphone manufacturers, the layout of wearable devices also has IoT strategic considerations. As the growth dividend of smartphones has peaked, the Internet of things has become the next battlefield for mobile phone companies. Wearable devices are important entrances and application terminals of the Internet of things.

Wearable devices are more likely to become extension products of mobile phones in the future, with richer functions such as voice calls, health monitoring, intelligent payment, scientific movement, and so on; secondly, wearable devices will become a better data portal. will provide more data and value for terminal manufacturers.

With the arrival of the era of the Internet of everything, wearable devices have become the key nodes of smart device interconnection. Future application scenarios will be expanded, interact

with each other, and form a variety of industrial ecology. For smartphone manufacturers marching into IoT, it is more important to do closed-loop, to achieve the linkage between various intelligent terminals, to improve user stickiness.

(by [Easybom](#))

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