

Reveal new Apple Watch patents, have 5G and WiFi?

It is possible that the next-generation Apple Watch will be equipped with support for 5G mobile network or high-speed WiFi variant called 802.11ad.

From the second half of 2018 until now, smartphone manufacturers worldwide have had to 'wrestle', 'headaches' to find ways to optimize components and stuff the 5G antenna millimeter wave into the device only owns a screen smaller than 6 inches and the body cannot be thicker than 8mm. Until now, many big manufacturers have successfully brought 5G to their products.

Ironically, while we still don't know if 5G will ever appear on the upcoming iPhone 11 in September, a series of leaked documents show new patent information. supposed to be Apple Watch, in which there is a special contribution of hardware components to take over the millimeter. This suggests that the next-generation Apple Watch will be equipped with 5G mobile network support or a high-speed WiFi variant called 802.11ad - making it one of the most popular watch models. The most comprehensive smart on the market.

1. IBM registered a patent for sliding screen technology, turning smartwatch into a smartphone with just a few simple steps



Will the Apple Watch series 5 be equipped with 5G and WiFi 802.11ad

Accordingly, the draft of a plan to develop millimeter transceiver hardware devices on Apple Watch of Cupertino giant was revealed in a patent application published on August 22 (via Patently Apple). According to the information obtained, this patent has been applied for by the Apple App at the beginning of last year, showing that the company has actually taken serious and effective strategies to address technical challenges for with the optimization of 5G transceiver components as well as Wifi to apply on compact devices such as smart wrist

watches, specifically here is the high-speed 5G standard version.

1. Leaking images of new patents by Google: Challenges of the folding screen market in the future?

Electronic Devices Having Millimeter Wave Ranging Capabilities	
Abstract	
An electronic device such as a wristwatch may be provided with a phased antenna array for conveying first signals at a first frequency between 10 GHz and 300 GHz and a non-millimeter wave antenna for conveying second signals at a second frequency below 10 GHz. The device may include conductive housing sidewalls and a display. Conductive structures in the display and the conductive housing sidewalls may define a slot element in the non-millimeter wave antenna. The phased antenna array may be mounted within the slot element, aligned with a spatial filter in the display, or aligned with a dielectric window in the conductive housing sidewalls. Control circuitry may process signals transmitted by the phased antenna array and a reflected version of the transmitted signals that has been received by the phased antenna array to detect a range between the device and an external object.	
Inventors:	Nath, Jayesh; (Menlo Park, CA); Paulotto, Simone; (Redwood City, CA); Martinis, Mario; (Cupertino, CA); De Costa Bras Lima; Eduardo Jorge; (Sunnyvale, CA); Ruzar, Andrea; (Campbell, CA); Di Nallo, Carlo; (Belmont, CA); Mos, Matthew A.; (Los Altos, CA); Pascolini, Mattia; (San Francisco, CA)
Applicant:	Name City State Country Type Apple Inc. Cupertino CA US
Family ID:	1000003219824
Appl. No.:	15/901564
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Current CPC Class:	G01S 13/08 20130101; H01Q 21/22 20130101; G01S 7/04 20130101; G01S 19/13 20130101; G01S 2013 0254 20130101
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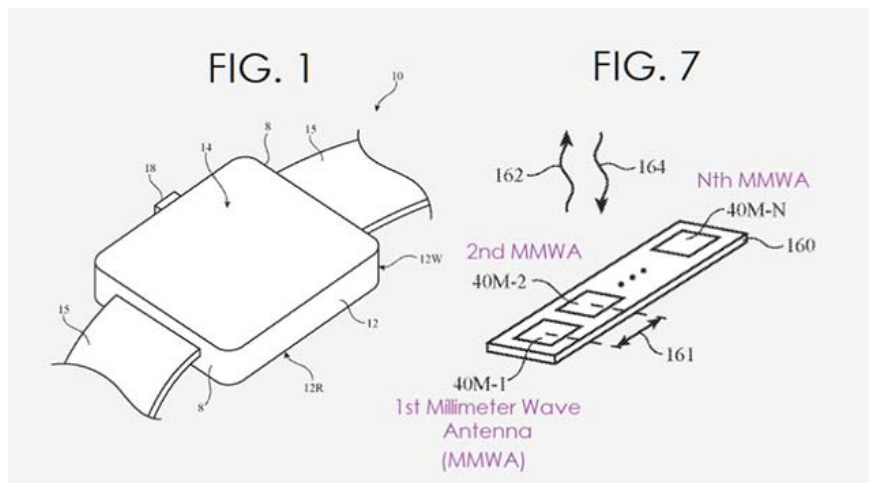
Information about Apple's new patent registration

In fact, Apple can easily support the ability to support 5G network compatibility by using non-millimeter antennas similar to 4G, but instead, Tim Cook and his colleagues choose the difficult direction more - but it could be more effective if successful - is finding ways to support both the millimeter wave and the radio frequencies in the Apple Watch, although the device is quite small.

Information from leaked patents suggests that separate millimeter and non-millimeter wave antennas can be mounted inside the cramped space of the Apple Watch, namely on the side and / or just below screen. By using a combination of directional and beam forming technologies, as well as multiple antennas as needed, the radio signal is directed upwards and the direction spreads outwards instead of toward the wrist. users, giving the clock the ability to transfer data much faster than before.

Interestingly, Apple does not limit the usability of the millimeter with 5G broadcast hardware. The invention is expected to provide exceptional support for the WiFi 802.11ad standard based on millimeter waves - currently used by many companies to provide more efficient high-bandwidth data for practical glass devices. Virtual VR, as well as some other communication protocols such as future Bluetooth versions.

1. New patent shows that Apple is ready for a foldable iPhone, sparking a new 'arms race'?



Location description of a millimeter transceiver on the Apple Watch

Although this is only a hypothesis about flexibility in the potential application of this new hardware creation. However, it has also reminded another initiative that Apple executives have repeatedly opened up in many recent product launches: The prospect of Apple Watch may one day play a role. Completely replace iPhone, and equipped with wireless pairing directly with AR glasses. A high-bandwidth connection between AR glasses and wearable devices will be essential to transmitting high resolution stereo images created by Apple Watch or iPhone, to ensure speed and smoothness. but'.

In addition, this millimeter wave transceiver hardware system can also be used in radar technology. Apple believes that Apple Watch can use signal reflexes to determine their range and distance for other objects, be it humans, animals, furniture, walls and obstacles. objects appear in a certain range.

1. Apple acquired an important patent from AI security camera manufacturer

In fact, before being scaled up and put on a smartphone, the millimeter wave transceiver antenna systems have been used on radars larger in size than mobile phones. Thus, equipped with radar technology on mobile phones - if successful - will provide very flexible application capabilities in many different situations and aspects.

As always, new patent leaks cannot help confirm whether the product will be released, or when it will be released. But this is a useful resource to help outline a part of manufacturers' new product development plans. In this case, the leak patent shows that Apple has actually worked aggressively to develop new technology, which can bring about its success and long-term dominance in the wearable device market. global intelligence.

1. Revealing Apple's latest invention: The keyboard is made of glass and can be bent



Apple Watch is a product with the ambition to dominate the market of Apple Smart wearable devices

You can get more details about this patent from Apple at the US Copyright and Trademark Office website at: <http://appft1.uspto.gov/netacgi/nph-Parser? Sect1 = PTO1 & Sect2 = HITOFF & d = PG01 & p = 1 & u =% 2Fnethtml% 2FPTO% 2Fsrchnum.html & r = 1 & f = G & l = 50 & s1 =% 2220190257933% 22.PG NR. & OS = DN / 20190257933 & RS = DN / 20190257933>

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