



5G millimeter wave "fire" again! What is the use of millimeter wave?



After the development of 5G in the "second half of the year", 5G millimeter wave has "caught fire" again.

Especially after Samsung Electronics recently announced the 5G 毫米波 wave in Australia 10 km long distance transmission record, many people inside and outside the industry feel that 5G millimeter wave applications will mature.

So, what exactly should 5G millimeter wave be and what is it good for?

In fact, 5G millimeter wave is an important basic technology in 5G application. Currently, the world's 5G communication frequency is below 6GHz wcn7851 and within the millimeter wave range. Frequency bands below 6 GHz are low-frequency, while millimeter waves use high-frequency ultra-high frequencies with wavelengths between 1 mm and 10 mm and frequencies between 24 GHz and 100 GHz. It has the ownership attribute of high transmission speed, but also has the advantages of large bandwidth, low port delay and flexible port configuration. Simply put, it is a millimeter wave band with a large bandwidth and low port delay, like a three-dimensional highway with many lanes and wide traffic lanes. As a result, 5G millimeter wave will not only bring higher network speeds, but also easily realize Gbps-level peak throughput, bringing better experiences for various applications.

In addition, 5G millimeter wave has the technical advantages of high positioning accuracy and high integration. These key technologies make 5G applications more sci-fi and convenient.

With the development of millimeter wave technology, 5G will be faster, with greater bandwidth and shorter delays.

More specifically, 5G millimeter wave has a higher communication rate and lower latency, will not only use the user quickly online upload and download, wcn7851 and has a higher fluency and reliability. It is understood that millimeter wave spectrum can theoretically provide up to 10GB / s speed, much faster than LTE connection.

In addition, 5G millimeter wave has a greater bandwidth, and therefore can also accommodate the number of users for more information access. This is needed to solve the difficult problem of enterprise network congestion caused by more users accessing the Internet. That is to say, even if a large number of users in the area manage to pass through the Internet at the same time, the network will not be stuck.

Then 5G millimeter wave life will bring what kind of new changes.

At present, in stations, airports, stadiums, exhibitions and other densely populated indoor scenes, there are often many people at the same time on the Internet. At this time, a large number of users in the area access at the same time, often network congestion. In this scenario, the connection frequency of using various apps will be a bit slow, and it will be more difficult to catch up with dramas and play games.

But with 5g millimeter wave users not only in the use of high-frequency network at the same time will not appear congestion control.

In some of the Internet-connected cars, automatic driving, industrial Internet, intelligent medical, remote surgery and other applications that require high network speed and latency, 5G millimeter wave plays a greater role. Millimeter-wave communication bands not only allow users to access and respond quickly, but also have a high degree of smoothness and reliability.

However, why we before 5G millimeter wave did not "fire" up? In fact, or enterprises because of the millimeter wave frequency band problem. In the previous conditions of technological development, the millimeter wave system inherent coverage capacity and signal with poor penetration shortcomings can not be well overcome. Therefore, they have become a limitation to the use of 5G millimeter wave.

Due to the wavelength and frequency characteristics of millimeter-wave beams, as well as the characteristics of high integration, can bring higher speed, larger bandwidth and lower delay, but also makes the millimeter-wave coverage and signal penetration ability is relatively weak. Previously, some real-world data showed that the coverage area of 5G millimeter-wave base stations was only about 190 meters. Not only buildings and dense vegetation, but also hands, bodies, raindrops and fog will affect the millimeter wave signal propagation. But once the signal transmission process due to blockage caused by high loss, 5G millimeter wave in the connection is very easy to drop. Therefore, there has been no fire.

Fortunately, the industry has been through continuous technological innovation, in overcoming the millimeter wave coverage and signal transmission distance bottleneck.

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