

What is WiFi 6? What is WiFi 6E? Things you need to know about WiFi 6 and WiFi 6E

Help you better understand WiFi 6 and WiFi 6E, the differences of WiFi 6E compared to WiFi 6 and other devices using WiFi 6E. Join us to find out in the article below.

With the higher demand for this internet nowadays, the connection speed must be faster and more stable. Therefore, Wi-Fi 6 was born to meet the increasing needs of people using the internet.

1. What is WiFi 6?

802.11ax is the 6th version of the 802.11 standard, so it is called Wi-Fi 6, used to transmit wireless networks or commonly known as Wi-Fi.

Wi-Fi 6 is not a new tool for connecting to the internet - instead, it's an upgraded standard that compatible devices, especially routers, can leverage for transmission. more efficient Wi-Fi performance.






6th generation Wi-Fi will meet the needs of the growing information technology industry today and in the future.

The Wi-Fi Alliance (WiFi Alliance) officially launched Wi-Fi 6 on September 16 with high speed, wide coverage and higher security than previous generations.

2. Why update Wi-Fi 6 standards?

Wi-Fi 6 offers lower latency compared to previous Wi-Fi generations, Wi-Fi 6 delivers the ability to process data between devices as quickly as possible.

Wi-Fi 6 also provides data transfer rates of more than 10,000 Mbps, higher than Wi-Fi 5, which is only 7,000 Mbps.

Wi-Fi	Logo
Wi-Fi 6 (802.11ax)	
Wi-Fi 5 (802.11ac)	
Wi-Fi 4 (802.11n)	

To identify which Wi-Fi standard is working on routers, phones, laptops, tablets or other devices, you can find the Wi-Fi 6 logo printed on the product box or stick directly onto the product. products (for laptops), .

However, the Wi-Fi Alliance (WiFi Alliance) has also proposed plans to display the Wi-Fi generation. These icons look similar to a regular Wi-Fi signal, with the number circled out in the signal.

3. Advantages of Wi-Fi 6

The first is the lower latency compared to previous generation Wi-Fi standards. This means there is no waiting time for data to be sent, and it improves the download speed, helping to avoid loss of connections and other problems.

Because Wi-Fi 6 uses more advanced technologies such as OFDMA (orthogonal frequency division multiple access). Basically, it helps to encapsulate data into better signals.



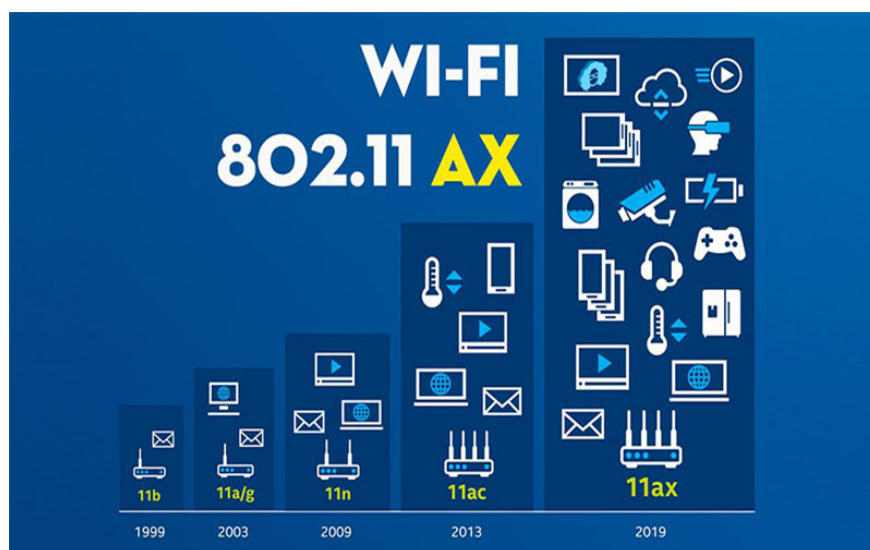
Of course, Wi-Fi 6 is also faster, with full support for technologies such as MIMO *, the quality of the connection will be dramatically improved for Wi- compatible mobile and laptop devices. Fi 6, while also speeding up content delivery.

(*) What is MIMO?

MIMO (Multiple In, Multiple Out) is a way of using multiple antennas to transmit and receive signals of a wireless connection. Thanks to that, electronic devices such as smartphones, tablets, and laptops can receive wifi more easily and exploit the full capacity of the Wifi Router. In other words, MIMO is a part of wireless communication technology, depending on the number of antennas and transceivers, so the connection speed is corresponding.

Even if you don't increase your internet speed, these improvements will increase your Wi-Fi speed.

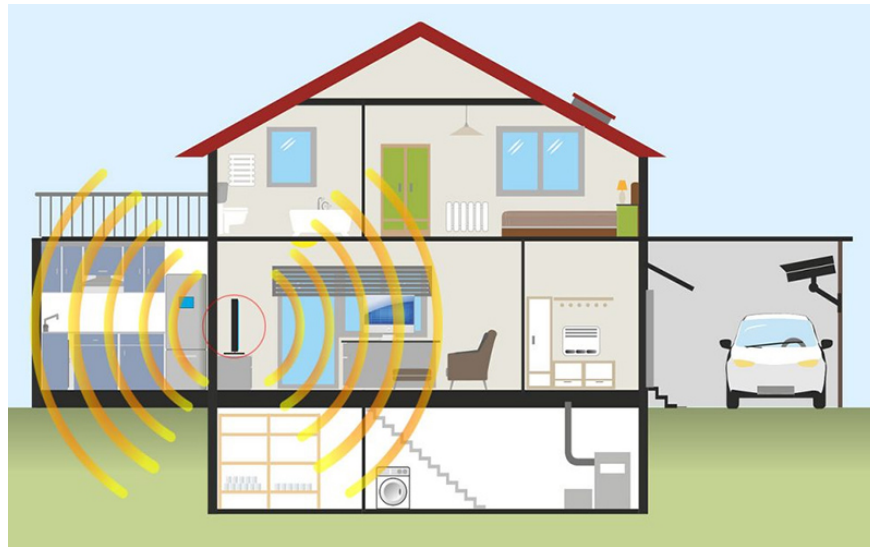
From 2020, there will be more and more laptop devices supported with Wi-Fi 6, improving the speed of internet access, thereby improving daily work efficiency.



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Wi-Fi 6 has less signal resistance thanks to improved beam direction, allowing beams to pass through walls with less signal breakage compared to older Wi-Fi standards. .

Beam orientation is the trick your router uses to focus the signal on a particular device, especially if that device is having trouble connecting.



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A new 'target wake time' (TWT) feature helps smartphones, laptops and other Wi-Fi enabled devices get longer battery life.

Specifically, Wi-Fi 6 technology will automatically recognize when your device is active to activate Wi-Fi and when your device is not in use (not using range 30 minutes) to automatically disconnect Wi-Fi. This will help save more energy as your device will spend more time in 'sleep' mode, and that means longer battery life.

4. Do I need a new router to use Wi-Fi 6?

There are very few devices on the market that support 6th generation Wi-Fi connection. But they are really necessary at this time. It is expected that by the end of 2019 it will officially launch on the market with the 802.11ax Wi-Fi standard. Accompanying WPA3 is a new wireless security protocol that will also come along with this standard.



So you need to check if your router can get the WPA3 firmware update more secure. If not, then you have to buy yourself a new device to help improve your Wi-Fi.

5. Wi-Fi enabled devices 6

This 6th generation Wi-Fi standard is well known since the launch of the Samsung Galaxy S10, Galaxy S10 + super duo. In the near future, Wi-Fi generation 6 will be more popular and available on lower-segment smartphones.

Since the beginning of 2020, there are also many laptops supported with Wi-Fi 6 such as Acer Nitro 5 Laptop AN515 55 58A7, Acer Aspire A514 53G

As devices such as smartphones and laptops become more and more popular, the requirement for data transfer speeds is increasing. Therefore, the introduction of WiFi 6E standard will help solve the above problem.

7. What is WiFi 6E?

WiFi 6E is an upgraded version of WiFi 6. WiFi 6 uses 2.4 GHz and 5 GHz frequencies, however WiFi 6E only exchanges data at 6 GHz.



8. How is WiFi 6E different from WiFi 6?

Since it is an upgrade to WiFi 6, WiFi 6E owns faster Internet transmission speed, lower latency, and less traffic congestion. WiFi 6E also has an ideal transfer rate of 9.6Gbps thanks to the advantage of bandwidth over WiFi 6.

In general, WiFi 6E is nearly identical to WiFi 6. However, the most obvious difference in these two connection standards is the bandwidth that they utilize to connect.



WiFi 6 uses two bands of 2.4 GHz and 5 GHz, which have been around since the early days of WiFi, to connect. Meanwhile, WiFi 6E uses waves in the 6 GHz frequency spectrum to transmit signals, which is an addition on WiFi 6E.

Another difference is in terms of stability. Deploying the WiFi 6E standard will limit congestion on popular frequency bands, improve stability, and provide better performance for many devices connected to the network. Thus, problems such as congestion, network interference over the next several years will ensure almost zero occurrence with 6E WiFi standard.

9. New devices are needed to use WiFi 6E?

Have. You will need to have new devices that are compatible with WiFi 6E. Since WiFi 6E will take advantage of the brand new 6 GHz frequency band to connect, which previous generations of WiFi, even WiFi 6 did not support.

Therefore, to be able to take advantage of this connection standard, devices such as smartphones, computers, and televisions must also support this connection standard.



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10. What are the disadvantages of WiFi 6E?

WiFi 6E will be compatible with old WiFi devices but in terms of speed, bandwidth will not be improved. If we want to experience the optimal features of WiFi 6E, we need WiFi 6E router, and upgrade the network plan if necessary.

New band licensing also depends on the country. In the US, the FCC has licensed the 6 GHz band, but some European countries need to wait for a decision from the European Commission and each country government. That would hinder the implementation of WiFi 6E.

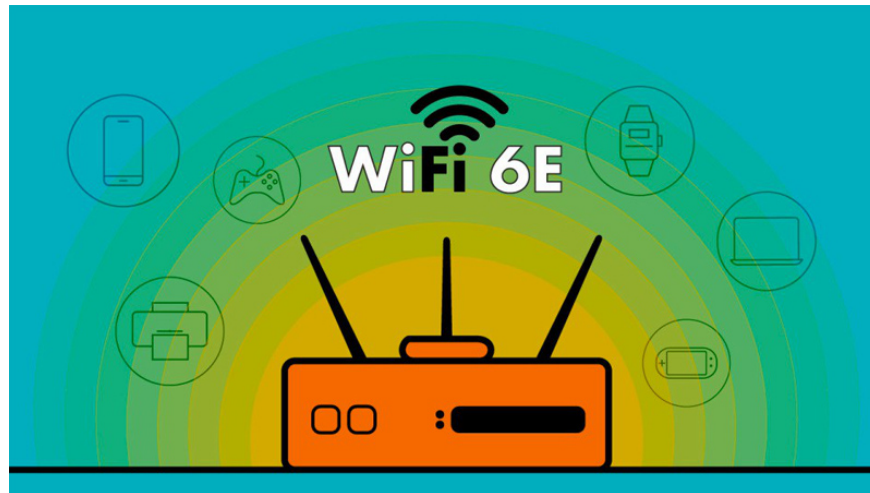


Another downside is the cost. To use WiFi 6E you need to have both a transmitter and an end device that supports the Wi-Fi 6E standard, so it will be more expensive.

11. When will WiFi 6E be put into use?

There are a number of devices and technologies equipped with WiFi 6E, but widespread deployment will begin in 2021 when the Wi-Fi Association expands to certify 6E WiFi devices.

Several manufacturers have made their first moves regarding WiFi 6E. Chip company Broadcom has introduced a mobile processor chip, which supports WiFi 6E. Qualcomm also promised to equip new WiFi technology for future wireless devices. Intel also said that the processor chip that supports WiFi 6E will be released in January 2021.



Meanwhile, two major router manufacturers Linksys and Netgear also confirmed plans to launch WiFi 6E products. Smartphones are said to be the first devices equipped with WiFi 6E, the product is rumored to be iPhone 13 will be released in the fall of 2021.

According to analysis from IDC, an estimated 316 million WiFi 6E devices will be shipped in 2021. Smartphones will be the first launchers of WiFi 6E, followed by electronic devices such as tablets and TVs in 2022. .

The above article has helped you better understand WiFi 6 and WiFi 6E. Hope this article helps you!

Good luck.

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