What is Wi-Fi 7? How fast is possible for speed?

When Wi-Fi technology is still not really popular and widely known, the technology world is preparing to welcome a new, more superior internet connection standard, which is Wi-Fi 7 .

So what is Wi-Fi 7 really and how fast can it provide? Let's find out right here.

What is Wi-Fi 7?

Wi-Fi 7 is a new technical standard for Wi-Fi devices currently under development. Wi-Fi 7 is based on the draft 802.11be standard, which was announced in May 2021. Therefore, the technology is also sometimes referred to as Wi-Fi 802.11be.

The most striking feature of Wi-Fi 7 is that it can make traditional wired Ethernet connections 'outdated' thanks to the speed and stability it brings. In theory, Wi-Fi 7 can support bandwidth up to 30 gigabits per second (Gbps) per access point, which is three times faster than Wi-Fi 6's top speed of 9.6 Gbps. (also known as 802.11ax). Experts call this the 'Extremely High Throughput' (EHT) internet connection standard.

In theory, today's popular wired Ethernet technology provides a maximum transfer rate of 10Gbps (10GBASE-T). But in fact, it doesn't exist in consumer devices at this time. And while higher transfer rates (such as Terabit Ethernet) exist in specialized settings such as data centers, it is certainly a long way off in a home or small business environment. . So for existing users of both Gigabit and 10 Gigabit Ethernet, Wi-Fi 7 can replace the need for a wired connection under optimal conditions.

Some other potential advantages of Wi-Fi 7

In addition to the potential for superfast speeds in theory, the Wi-Fi Alliance also plans to add other notable improvements to the Wi-Fi 7 standard. These include:

1. Backward compatibility: Wi-Fi 7 draft specifications say the technology is capable of supporting backward compatibility with older devices in the 2.4GHz, 5GHz, and 6GHz bands. That means you won't need completely new equipment or hardware to connect to a Wi-Fi 7 router.
2. 6 GHz: Wi-Fi 7 is capable of making full use of the new '6 GHz Band' (actually 5.925–7.125GHz), supported in Wi-Fi 6E for the first time. The 6GHz band is currently only used by Wi-Fi applications, with the advantage of significantly less interference than the 2.4GHz or 5GHz bands.
3. Lower latency: The Wi-Fi 7 specification mentions "lower latency and higher reliability" for 'time-sensitive networking' (TSN) - a much-needed aspect of computing cloud (and cloud gaming). This is also an important requirement to replace wired Ethernet connections.
4. MLO: Wi-Fi 7 supports Multi-Link Operation (MLO) with load balancing and combines multiple channels on different frequencies for better performance. This means that the Wi-Fi 7 router will be able to flexibly use all available bands and channels to speed up the connection, or avoid bands with high

interference levels.

5. Upgrading to 802.11ax: According to draft specifications, Wi-Fi 7 will come with a series of direct improvements of Wi-Fi 6 technology, such as 320MHz channel bandwidth (up from 160MHz on Wi-Fi) - Fi 6), allowing for faster connections, and support for Quadrature Amplitude Modulation (QAM) 4096 technology, allowing more data to be 'crammed' into each Hz.

Above are the basic things you need to know about Wi-Fi 7 technology, as well as the advantages it can bring when deployed in practice.