



WiFi 6E Vs. 5G Cellular Network: From A Gamer's Perspective

If you are a gaming enthusiast yourself or you have a gamer friend circle, you probably know to what extent internet connectivity, speed and ping matter to the whole idea of gaming. However, gamers are only interested in technologies that are going to offer them the perfect internet facilities they need; little do they care about how these technologies operate. And that's completely okay until you get confused with charming advertisements and reviews in this capitalistic world and end up losing money purchasing gadgets and technologies that are incompatible with your system and not worth it.

On 2 February 2022, CITC, Saudi Arabia, announced the debut of WiFi 6e technologies to boost internet access across the nation. Since the launch, it has become a burning question whether this latest technology is optimal for gaming and whether it outperforms the earlier launched 5G network.

In this post, we will shed some light on the comparison of these two technologies from a gamer's perspective.

What is WiFi- 6e and 5G?

WiFi 6E indicates WiFi 6 extended to the 6 GHz band. WiFi 6E is based on the WiFi 6 standard but works on a broader spectrum. 6 GHz is the most current frequency band, having a range of 5.925 GHz to 7.125 GHz with a total spectrum capacity of 1,200 MHz.

The WiFi Alliance reports that WiFi 6E provides "14 more 80 MHz channels and seven new 160 MHz channels." These channels would not overlap, which would help alleviate congestion, particularly in areas with a dense network infrastructure.

On the other hand, Fifth-generation wireless (5G) is the successive version of the previous cellular technologies up to 4G, developed to boost wireless networks' speed and flexibility significantly. 5G offers a data transmission speed of multigigabit rates, with maximum possible rates up to 20 Gbps.

These speeds outdo landline network rates and offer a latency of less than 1 millisecond. This level of speed is appropriate for applications that demand real-time input. In addition, 5G will privilege a surprising rise in terms of data transfer amounts in the shortest possible time, thanks to higher accessible bandwidth and upgraded antenna technology.

Fundamental Differences Between WiFi 6E and 5G Cellular Network

Property	WiFi 6E	5G
Peak Data Rate:	10 Gbps - 5 Gbps	2 Gbps - 1 Gbps
Coverage:	Indoors: up to 50 meters (Varies due to different parameters) Outdoors: 300 meters	Small Cells: 100-300 meters Macro Cells: Up to 10 km
Specific Frequencies:	700 MHz and 3.5, 26, 60 GHz	2.4, 5, 6 GHz
Channel Bandwidth:	20, 40, 80, 160 MHz	20, 40, 80, 100 MHz
Equipment Price	Around \$100	Around \$300
Monthly Expenses	Almost free	\$5 - \$20
Deployment Approach	Uncontrolled and unmanaged	Controlled and managed

Source: Oughton, Edward & Lehr, William & Katsaros, Konstantinos & Selinis, Ioannis & Bublely, Dean & Kusuma, Julius. (2020). Revisiting Wireless Internet Connectivity: 5G vs Wi-Fi 6.

Which One is Better For Online Gaming?

The answer actually depends on your gaming environment, gaming taste and financial abilities.

If you:

1. Want to game only indoors;

2. Do not want to spend too much money on gaming;
3. Play such a game which needs to transmit an enormous amount of data in the shortest possible time;

You should go for **WiFi 6E**. It provides wild speed coverage indoors. The speed is significantly high compared to the practical speed of a 5G cellular network. The speed advantage of [WiFi-6e effect on online casino games](#) are already being seen in some of the latest released versions which are smoother than earlier. Moreover, both the equipment and monthly charge is comparatively low.

Otherwise, if you:

1. Are a fan of such a game that you need to go outdoor or travel to play/ complete challenges;
2. Want to invest a plenty amount of one-time cash for the internet setup of your gaming station;
3. Play relatively light games that do not require instantly transmitting real-time data in a fraction of a second.

Then, consider a **5G cellular network**. It covers a large area regardless of indoors and outdoors. While the connection is not as fast as WiFi 6E, it is more than enough if you are playing the proper game. However, 5G networks need expensive equipment and a monthly fee. Not to mention the fact that setting it up is a hassle itself. However, after you're hooked up, you don't need to stay inside your home network's service area for gaming.

Final Thoughts

So, which one is the best? The question itself is irrelevant as 5G and WiFi 6E are not competitors rather complementary technologies. However, since they have their own strengths and weaknesses, we should think carefully before adopting one for use.