

5G IS COMING. ARE YOU READY?

You've likely heard a lot of chatter about 5G lately. That's because it's the "next big thing" in mobile. But other than the assumption it will be better than 4G, how much do you know about it? In this TECHbrief, we'll cover the basics of 5G and how it could affect you.

What is 5G and how will it compare to 4G?

We don't know all the specifics, but what we do know is that it's the fifth-generation standard for mobile wireless communication and it's focused on carrier aggregation. This means your mobile device will automatically be able to choose the best service based on what's available. For example, if a 800MHz and a 1900MHz signal are both available, your device will connect to the best available network, and the same goes for Wi-Fi.

The 5G standard is currently being discussed by the 3GPP organization, but it has not yet been ratified. Since we don't have the technical specifications, we can't say for sure what it entails, but we expect it will allow faster speeds, larger bandwidth and more frequencies than 4G. This will allow it to transmit large amounts of data quickly. 3GPP is shooting for 20Gbps speeds and 1ms latency.

5G will truly be designed for the connected world, in which billions of devices depend on constant connectivity. From autonomous vehicles to in-home appliances, everything will be talking to each other. In response to the ever-increasing volume of network-connected devices, 5G should be able to prioritize devices based on their needs. For example, it will recognize that it's much more important that a self-driving car maintains connectivity over a refrigerator.

When will 5G be available?

The 5G standard is expected to be ratified in 2018 by 3GPP, with initial deployment beginning in 2020. However, considering how long it took us to get to true 4G, it's unlikely 5G will be ready for mass deployment before 2022. Deployment and adoption take time, so don't expect 5G to be working flawlessly from the get-go; it could be several years before you're able to take advantage of all the features.

How will 5G be used in commercial environments?

Existing 4G works by transmitting a signal from a huge outdoor tower that can radiate great distances to distributed antenna systems (DAS) and Wi-Fi access points throughout buildings. However, since 5G may be functioning at a much higher frequency, it can't travel as far and will have difficulty getting past obstacles. That means 5G is more likely to be a network of small cells, requiring many more antennas to achieve the same coverage you had with 4G.

To sum things up, 5G will be fast, but deployment will be slow. If you have additional questions regarding 5G, Anixter's experts are always up to date on wireless standards and commercial building trends. Feel free to contact us or visit anixter.com/wireless to learn about the wireless solutions we provide.

Mobile Communication by Generation

