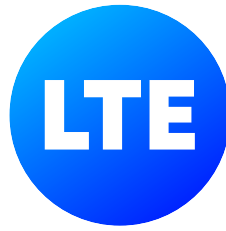




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How Do They Compare?

4G

2G, 3G, and now 4G, have revolutionized how people communicate and use the internet. **4th Generation** cellular networks provide faster data transfer speeds than 2G or 3G, resulting in fewer dropped calls, higher quality voice calls, video calling, and improved download speeds, streaming, and browsing the web. Whereas 2G was good for a basic phone services like making calls and sending text messages, the **4th Generation** standard dramatically increases the capacity so that people can now make video calls, stream high-quality audio and video, play games, and even use a GPS all from their pocket. 5G is being developed by telecommunications networks across the world but for now, 4G provides enough bandwidth for most people's needs — although we're certainly not done with technological advancement yet.

LTE

LTE has become almost ubiquitous in today's digital world. It stands for Long Term Evolution and is conveniently referred to as **4G LTE** on the average consumer's device. This standard was developed during the early 4G stages, alongside others like UMB (Ultra Mobile Broadband) and WiMax, but ultimately won out as the global standard for cellular communications as it is an open, interoperable system used by all carriers. As such, every major smartphone uses **LTE** now to communicate with towers.

Somewhat ironically, **LTE** actually represents the step just before true 4G - defined by speeds of over 100 Mbps - that few networks or phones were capable of at its development time. Thus, the term **4G LTE** was adopted to bridge the gap between technologies until faster speeds could be achieved. Ultimately though, any device purchased in recent years is likely utilizing this amazing technology.

4G LTE-A

4G LTE-A, also known as LTE-Advanced and LTE+, is an improved and upgraded version of 4G LTE. It offers faster download speeds and better bandwidth than traditional 4G networks, providing peak download speeds of 3 Gbps and uploads at 1.5 Gbps, which is up to three times faster than regular 4G connectivity. This advanced version of the network ensures less buffering and data rate increases. While some consumers are led to believe that this service is "true 4G," it is actually just a marketing ploy by the carriers that have renamed their 4G networks in order to give customers the perception of an upgraded service. Either way, **4G LTE-A** offers enhanced reliability and stability for those who don't want to entirely switch to true 5G speed yet.

Combining multiple carriers of data together might sound complicated but it is actually easier than you think. Carrier aggregation, which combines up to five signals at once, improves the system's bandwidth and creates faster speeds while wireless devices use MIMO (multi-input and multi-output) technology to ensure that the signal can be transmitted and received from multiple antennas. Together, these two technologies create efficient traffic management and reliable connections with increased coverage thanks to the added relay nodes that fill in gaps in the network. All this combined provides a network full of faster speeds and more reliable connections for users to enjoy.

5Ge vs 4G?

AT&T has recently been rolling out a new service called "**5Ge**". The thing is, it's not actually 5G; it's still just 4G LTE-A, meaning that the technology you're using remains the same as before. In spite of the misleading name, **5Ge** means that AT&T is providing customers with improved LTE-Advanced service on their phones in certain areas. While the uplifted speeds may be noticeable on certain devices and apps, keep in mind that **5Ge** isn't truly 5G and won't offer the same features as upcoming 5G technologies.

Comparing 5G to 4G

4G, or the **4th Generation** of wireless technology made pervasive the idea that we'd never need wires for our communication needs. **5G** or the **5th Generation** has been the latest evolution of this technology to date, making it possible for faster speeds over short distances as well as other technological advancements. With **5G**, data rates are 20 times faster than with **4G**, and latency – or delay between two points– is almost non-existent at 1 millisecond. This allows for a number of remarkable possibilities - from being able to drive self-driving cars, conduct remote medical procedures and surgeries, and enjoy extremely complex online video games. While **5G** is not yet available in many rural regions, **4G** still remains an invaluable tool until it can be rolled out in those locations. In any case, **5G** continues to provide infinite possibilities whereas **4G** gave us just one decade before.

The introduction of **5G** technology has been revolutionary and is providing a user experience that was not possible before. However, the current generation of **5G** experiences limited range; with cell towers having to be close together and devices needing to be within range to receive signals. To work around this limitation, soon C-band **5G** will be rolled out that has better reach. It is important to note that although **5G** will be available nationwide, it will use 4G LTE coverage as a complementary technology to completely cover bigger distances between cell towers. This introduction of C-band **5G** signals is sure to create an even more transforming user experience than before.

How Does 5G C-Band Work?

C-Band offers a perfect solution for **5G** networks. It has a wider bandwidth than either the mmWave or low-band spectrum, allowing it to transfer data faster and with better signal strength. It is already being used for satellite TV broadcasts, meaning that much of the infrastructure is already in place to make use of **C-Band for 5G** networks.

5G networks operating on C-Band will offer much more consistent speeds and coverage than other existing spectrums, making it an attractive option for carriers looking to upgrade their services. As **5G** continues to be adopted more widely, we can expect to see more carriers taking advantage of C-Band in order to provide customers with reliable wireless connections. This could be a game-changer for **5G** and could revolutionize the

way we use mobile technology. C-Band is a powerful tool that will only become more important in the future. It's just a matter of time before carriers switch to this new spectrum and take advantage of its capabilities!

So, Where is it Going?

As 5G technology continues to be rolled out in more and more places, the need for 4G and LTE will continue to decline. As such, it is important to know what this all means when you are looking at getting a new phone or device.

For most people, if you have access to 4G or LTE then that should suffice for your needs. If you're in an area where only LTE-A is available then that may also provide satisfactory service. However, if you live in an area with 5G coverage then it would make sense to take advantage of its faster speeds and more reliable connection. Still, keep in mind that even if you have 5G coverage, C-band can still offer enhanced performance as well.

At the end of the day, it's important to understand what all of these different networks mean and how they will impact your connection speeds. By having a better understanding, you'll be able to make an informed decision when it comes to choosing the right network for your needs.