What does LTE mean on a phone?

If you're using a mobile phone released after 2011, you may see 'LTE' displayed at the top of your phone's screen, next to the battery icon.

If you're wondering what LTE means, here's everything you need to know.

What does LTE mean?

LTE stands for Long Term Evolution, a wireless data transmission standard that allows you to browse the Internet, visit websites, watch your favorite videos, and stream music with Spotify or Apple Music.

However, more commonly, LTE is referred to as 4G or 4G LTE. This is why you may see 4G or 4G LTE instead of LTE displayed at the top of your phone screen.

Compare LTE and 4G

So do 4G and LTE mean the same thing?

LTE was initially proposed and introduced as a successor to the third generation of wireless mobile telecommunications technology (3G), but it did not meet the criteria of the International Telecommunication Union (ITU). for fourth generation (4G). The ITU specifies that true 4G networks, such as LTE Advanced, must provide high data speeds of at least 1 Gbps. However, LTE falls short of this, only providing speeds of around 100 Mbps

As a result, a better version, LTE Advanced, was created, incorporating more advanced technologies such as carrier aggregation, multi-band aggregation, advanced MIMO configurations, and efficient modulation schemes. more, recognized by ITU as 4G.

However, LTE, which is a significant improvement over 3G, is commonly known as 4G. Essentially, while LTE Advanced is true 4G, LTE, also known as 4G, is the technology that powers most 4G networks.

How does LTE work?

LTE uses specific radio frequencies and bands, which vary by operator, mobile device, and region. Imagine you use an LTE-enabled phone with a specific carrier in a country. Chances are you won't be able to use the same phone with a carrier in another country (although most smartphones are configured to use multiple bands, so you can still using your smartphone).

Area	Popular LTE bands	Describe
USA	Band 2 (1900 MHz), Band 4 (AWS 1700/2100 MHz), Band 12 (700 MHz)	These bands are used in the United States because they provide a good balance between coverage and data throughput. For example, Band 12 offers broad coverage and indoor penetration, making it ideal for both rural and urban environments.
Europe	Band 3 (1800 MHz), Band 7 (2600 MHz), Band 20 (800 MHz)	Europe uses Band 7 to serve dense urban areas, while Band 20 is used to cover wider areas due to its lower frequency, providing better coverage and capacity. Signal transmission through the house better.

These differences in frequency and bandwidth can affect the speed and performance that users will experience. Some carriers even offer faster versions of LTE (LTE Advanced), such as LTE+ (Verizon), 4G+ (Vodafone), and LTE-A (T-Mobile), which can reach 1 Gbps for downloads. down under optimal conditions (theoretically).

How fast is LTE?

So what kind of speeds can you expect on an LTE network? Generally, LTE provides download speeds from 20 Mbps to 150 Mbps and upload speeds from 5 Mbps to 50 Mbps. Of course, your phone's capabilities, network congestion, and other factors will determine the actual speeds you'll experience.

Technology	Maximum theoretical speed
3G	Up to 2 Mbps
LTE	Up to 100 Mbps
4G (LTE Advanced)	Up to 1 Gbps
5G	Up to 10 Gbps or more

However, LTE offers a significant improvement over 3G networks. Here are some key areas of improvement:

1. **Faster speeds** : LTE offers significantly faster upload and download speeds than 3G. If you had to download a 1GB movie, it would take about 7 minutes under optimal 3G network conditions but less than a minute under peak LTE network conditions. You'll enjoy downloading streaming videos, playing online games, and more on LTE rather than 3G.

2. **Lower latency** : Unlike 3G networks which have higher latency, there is typically no need to wait more than 10 milliseconds for data to be sent over the LTE network. This provides a smoother experience with real-time applications such as augmented reality (AR) navigation systems.
3. **Seamless transition** : LTE enables a seamless transition to legacy technologies like GSM and CDMA2000, as well as newer technologies like 5G. This is why you may see LTE showing up on your 5G phone because it can still be used to access the Internet in areas without 5G coverage.

While 5G and all newer generations offer faster speeds and better network connectivity than LTE, it is still very important in wireless networking technology. It remains widely deployed, providing reliable Internet access, especially in areas where 5G infrastructure is developing.