4G LTE TECHNICAL BENEFITS OVERVIEW

4G LTE: The Fastest, Most Advanced 4G Network in America

Speed and reliability matter when it comes to a wireless network. That’s why Verizon Wireless has chosen Long Term Evolution (LTE) as its fourth-generation (4G) network technology. You expect more from your wireless network, and LTE will deliver. The following is just a sample of what Verizon 4G LTE can do for you.

**Amplified Performance**
Enabling your mobile workers to operate at peak efficiency.

**Blazingly fast. Brilliantly powerful.**
Verizon 4G LTE will support faster download and upload rates up to 10 times faster than our existing 3G technology. The average download rate for LTE will be 5 to 12 Mbps, with the average upload rate being 2 to 5 Mbps. With these speeds, you’ll be able to communicate in new and innovative ways.

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<tr>
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<th>1xRTT</th>
<th>1xEV-DO Rel. 0</th>
<th>1xEV-DO Rev. A</th>
<th>4G LTE</th>
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<tbody>
<tr>
<td><strong>Average user throughput</strong></td>
<td>60–80 Kbps (downlink)*</td>
<td>400–700 Kbps (downlink)**</td>
<td>600–1,400 Kbps (downlink)*</td>
<td>5–12 Mbps (downlink)**</td>
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<td></td>
<td>60–80 Kbps (uplink)*</td>
<td>60–80 Kbps (uplink)*</td>
<td>500–800 Kbps (uplink)*</td>
<td>2–5 Mbps (uplink)**</td>
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**Lower latency.**
Lower latency in LTE contributes to a better user experience. The user-plane latency achieved in LTE is nearly one-fourth of the corresponding latency in existing 3G technologies. So you have a fast, real-time connection through the LTE network.

* Based on advertised Verizon Wireless average user throughput.
** Based on preliminary analysis by multiple wireless vendors and Verizon Wireless.
Simultaneous user support.
With existing 3G technology, only one user can be serviced on the downlink in any given time slot. LTE can service up to 50 users in a given time slot, which provides you a better, real-time experience. This simultaneous user support feature also makes widespread embedded applications and systems possible.

Increased security.
The Verizon Wireless network is a secure network. LTE won’t change that. In fact, LTE will provide enhanced security through strong mutual authentication, user identity confidentiality, along with other security enhancements, making it even more secure than existing 3G technologies.

Efficient Communication
Enhancing your mobile workers’ ability to communicate and collaborate directly with customers, clients, and coworkers.

Taking advantage of a global standard.
LTE has a user-footprint advantage over competing 4G technologies, with major worldwide network operators on board, such as Vodafone, China Mobile, and DOCOMO.

One device for home and abroad.
We also see a need for devices with inherent global mobility, and while we currently offer a number of great products that meet this need, LTE promises a blazingly fast global customer experience for a broad array of new devices. This means less time spent fussing with your global device and more time spent using it to accomplish your business goals.

Transformative Innovation
Innovate the way your vital business information is exchanged.

New, innovative 4G LTE apps.
Our Verizon Developer Community (VDC) is the place to find apps that take full advantage of our 4G LTE wireless network. The VDC provides application developers and our Business Solution Alliance members the platforms, tools, and resources they need to build innovative 4G mobile apps, such as software developer’s kits (SDKs) and application programming interfaces (APIs). The VDC also offers testing, certification, and a streamlined go-to-market process to place new 4G apps in our V CAST apps store. We feel the VDC is more than just an apps store; it’s a support system that helps developers get their 4G applications to market quickly and easily.

Developing and deploying LTE-capable devices.
We expect LTE to usher in a whole new era of “connected devices” that, by the very nature of them being connected, will open up new opportunities to improve your life. Over the past year, we’ve fostered programs and initiatives designed to take advantage of LTE’s capabilities and bring new, innovative devices to market. Our Open Development program stimulates the creation of new and nontraditional advanced wireless devices, applications, and services that take advantage of LTE’s capabilities. Similarly, our machine-to-machine (M2M) initiatives look to spark the development and deployment of advanced data solutions, such as smart metering, vehicle telemetry, medical device monitoring, and more—all made possible through LTE.

Developer support programs and initiatives.
Our goal is to attract premium partners and make Verizon Wireless the first place that developers come to sell products that take advantage of LTE’s capabilities—and, ultimately, the first place that you’ll come to for 4G LTE services. That’s why we’ve created programs and initiatives designed to spur and support 4G LTE development.

The Joint Innovation Lab is one of these support programs, where we’ve partnered with Vodafone, China Mobile, and Japan’s Softbank to provide developers a “write once, publish to a billion” environment for mobile 4G LTE applications. Our LTE Innovation Center is another developer support program focused on bringing the benefits of LTE to devices, especially in consumer electronics.
Enabling mass deployment.

LTE’s inherent support for IPV6 addressing and IMSI-based telephone number identifiers makes mass deployments over LTE more easily achievable. The deployment of large numbers of mobile devices (think tens of thousands) becomes much more feasible because of LTE’s use of 15-digit IMSI telephone number identifiers for large-scale deployments, such as M2M or embedded wireless applications. 3G network technologies were limited by their use of 10-digit telephone number identifiers, which made large-scale deployments more difficult. With LTE, mass deployment of wireless services and applications, such as VoIP, smart metering, vending, and telematics, is now practical.

It’s the ultimate 4G network. From the ultimate wireless network.

To learn more about Verizon 4G LTE and what it can do for your business, go to verizonwireless.com/4glte or speak with your Verizon Wireless business specialist.