

Fast-forward to the future with 5G networks

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The future has never been so close.

With fanfare, excitement and speculation, 5G is slowly making the transition from general idea to network implementation. Network operators are already scheduling 5G network trials and test beds to sort out how the 5G vision will be realized.

5G networks promise to support new services, more video, and cloud connectivity. There are three main case uses driving the 5G revolution:

- 1. Enhanced mobile broadband.** With the promise of 10 Gbps connectivity and latency of less than five milliseconds, it's no surprise the ongoing surge in demand for mobile connectivity will accelerate dramatically. The industry estimates this increased speed will result in a 10- to 100-fold increase in the number of 5G-connected devices over the number of 4G devices.
- 2. The Internet of Things (IoT).** Thanks to 5G's virtualized, radio technology-agnostic core, published predictions estimate as many as 20 billion IoT connections by 2020—connections that will drive smart buildings and smart cities. CommScope anticipates 5G will offer 1,000 times the bandwidth of 4G and up to five times the density, making room for all those "things" on the network.
- 3. High-reliability, low-latency networks.** Beyond just doing what 4G does better and faster, 5G opens new doors to allow driverless cars to coordinate over the network, enable augmented reality and virtual reality and expand the horizons of remote surgery and other applications that can fulfill their promise only on a network with such ultralow latency times as 5G's five-millisecond threshold.

With these case uses in mind as the template for a real-world 5G rollout, it makes sense to also consider what can be done to make these applications possible. For operators, that plan boils down to three key strategies.

The first is densification, or the practice of increasing capacity in a given area through more antennas, small cell sites or other measures. Upgrading to MIMO and sector splitting technologies also falls under this strategy. The second is virtualization, shifting the work of physical equipment to virtualized environments operating in centralized data centers. This strategy's inherent efficiency can reduce costs by as much as 70 percent. The third strategy is optimization of existing assets and processes, including—but not limited to—repurposing earlier-generation wireless and TV spectrum and moving computing resources closer to the edge. Throughout the converged network, efficiency will be a critical design requirement for all aspects of 5G.

Getting ready for 5G is as important as knowing how it will be used. CommScope has made an extensive study of the pre- 5G and coming 5G landscape, and we are excited to share what we know. To participate in a 5G workshop, learn more about CommScope's solutions, request a quote or begin a new partnership, visit commscope.com or contact us anytime. 5G is coming. Powered by experience and focused on progress, CommScope can't wait to help you unlock the power and potential of 5G networks.

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