



Five Ways 5G Makes IoT Better

5G was the first generation of cellular developed to support a wide variety of use cases beyond mobile broadband, including critical IoT applications with a very low tolerance for latency and massive IoT applications that demand very high capacity and throughput. Read about five ways 5G takes IoT to a new level.

Support for greater device density.

5G can support millions of devices in small areas, so network connectivity is never a problem. This will enable many different sensing systems to use the same network reliably. For example, a smart city could use 5G services to connect thousands of sensors for a multitude of functions, such as smart streetlights or video analytics, to make the city safer for citizens.

Lower latency.

5G Standalone New Radio is very flexible and can support much lower latency for critical IoT applications, such as machine control, autonomous vehicles, or different types of robots. Not only can 5G SA NR lower latency over the air, but when combined with edge computing, it further reduces latency by moving the computer/data closer to the source.

Highly customizable.

5G networks can be configured to provide different levels of service to different devices. A private 5G network, for example, can be customized to provide higher throughput for data-intensive applications, like AI, or lower latency for automated guidance vehicles in a warehouse.

Support for eSIM.

5G networks will soon be able to use virtual SIM cards, making device identification much easier to manage. Instead of having to manually swap a physical SIM card, network managers will be able to remotely update any device. Because of the advantages this offers, it's estimated that **by 2025**, more than six billion eSIM-enabled devices will be shipped, with just over half of these being smartphones. The remainder will be in IoT devices used in agriculture, healthcare, manufacturing, and other sectors.

Greater throughput.

A mix of low-band and mid-band frequency signals will support massive IoT with massive machine-type communications (mMTC) to handle the large-scale use of IoT sensors and the colossal amount of data they'll produce.