Qualcomm's 5G modem for IoT could accelerate mission critical IoT applications

Article

Qualcomm says was built specifically with enterprise and industrial applications in mind, was designed with an eye toward upgradability and prolonging IoT device lifespans. The new

modem could promote IoT innovation across numerous industry use cases, from retail and automation to manufacturing and precision agriculture.

5G allows for rapid, real-time data analysis of devices. 5G networks generally will enable higher data speeds, lower latency, and can support more connections for each network node. For IoT, those lower latency 5G networks will allow companies to deploy real-time remote analytics to make quick decisions using cellular networks. Companies will also be able to use IoT sensors and devices in new ways to achieve scale and efficiency.

5G connectivity improvements are essential for "mission critical" IoT applications that require guaranteed data delivery with specified latency targets.

- **Agriculture:** Farmers can use 5G-enabled IoT devices to monitor field conditions and receive rapid alerts when crops need watering, pesticides, or fertilizer.

- **Energy:** Remote monitoring of smart sensors in energy plants can be used to more accurately analyze and adjust energy levels. These sensors can also be used to address energy inefficiencies, which in turn could help companies reduce their greenhouse gas emissions. Source

- **Manufacturing:** 5G and IoT could improve robotics and warehouse communications and accelerate transitions to truly wireless business.

- **Connected cars and autonomous vehicles:** Real-time remote analysis will become essential for the auto industry, which is rapidly increasing the number of sensors in its vehicles. 5G-connected IoT devices will also be crucial for AV commercial viability since AVs will have to interact with traffic management systems, weather and road condition data, and other external resources to make decisions in real time.

Qualcomm's new 5G IoT modem could accelerate IoT device adoption. Worldwide, ABI Research predicts IoT mobile connections will increase from 800 million in 2020 to 5.7 billion in 2026. By that same year, Ericsson predicts broadband and critical IoT using 4G and 5G will account for 44% of all cellular IoT connections, with 4G connecting the majority according to a 2020 mobility report. Qualcomm's modem could accelerate this new adoption since its offering can switch over to LTE when needed and can be deployed over public or private 5G networks. Ultimately, Qualcomm's modem will enable IoT devices to perform more mission-critical communications thanks to the newfound ability to operate on 5G networks. Additionally, real-time remote analytics offered by 5G-connected IoT could significantly reduce operating cost for enterprises.

Internet of Things (IoT) Mobile Connections Worldwide, 2014, 2020 & 2026
billions

Year	Value
2014	0.2
2020	0.8
2026	5.7
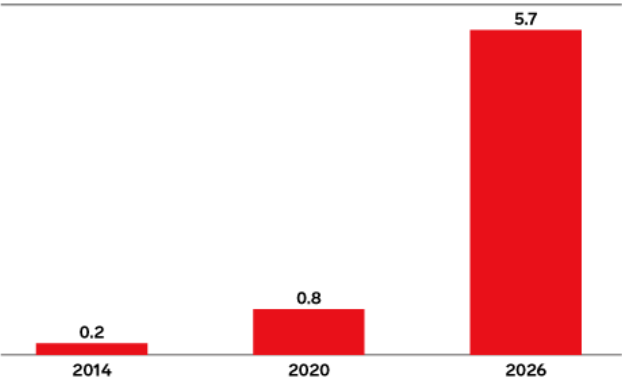
Note: active IoT devices connected via cellular networks; excludes devices connected via Wi-Fi
Source: ABI Research, "Tomorrow's Smart Connected Products Require Smarter Connectivity Services Today" as cited in press release, Nov 17, 2020

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