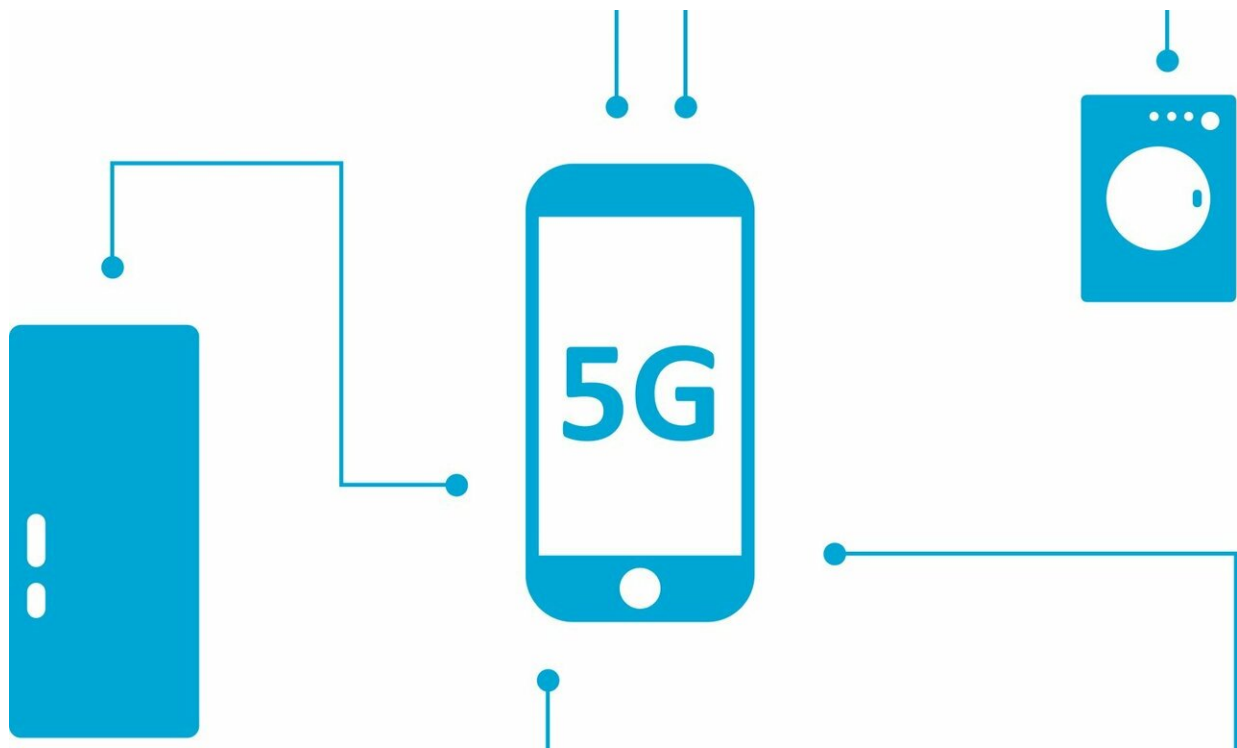


# Qualcomm brightens 5G future with modem, antenna module news

February 20 2019, by Nancy Cohen

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Good timing. Just ahead of Mobile World Congress (Feb. 25 to Feb. 28), Qualcomm on Tuesday announced its next gen 5G modem and a new mmwave antenna module. They said the modem "extends the company's 5G and 4G leadership with comprehensive modem-to-antenna solution. "This next-gen modem is dubbed the X55.

*TechCrunch's* Frederic Lardinois was not surprised yet one more headline was focusing on 5G and this time on a modem. "After years of hype without any real products, this is finally going to be the year that 5G—and especially 5G phones—will become available. 5G phones obviously need 5G modems."

The rollout, he said, will be global. It will "feature devices from plenty of OEMs with support from more than 20 global [operators](#)."

David Ruddock, managing editor of *Android Police*, can be counted as happy over the news. He emphasized The X55 as "going to be the first globally viable 5G modem on the market when it begins shipping at the end of 2019." What's so good about it is that "it's the first one to support all the various known incarnations of 5G and offer 4G LTE, 3G, 2G, and CDMA in [a single](#) chip."

This is how Qualcomm touted support: "The Snapdragon X55 5G modem supports virtually any combination of spectrum bands and/or [modes](#): 5G mmWave and sub-6 GHz, standalone and non-standalone modes, TDD and FDD, spectrum sharing, LTE and legacy modes (3G, 2G). This is designed to enable OEMs to bring blazing fast connected devices to global networks in nearly any form factor."

Ruddock also commented on how Qualcomm is talking "second generation" when even the first 5G [phones](#) are not out yet. Ruddock said that the X55 "probably will have worked out some of the bugs carriers and OEMs discover in these first-generation 5G devices."

Lardinois said, "it supports every recent technology from 2G to 5G and every spectrum band in any region. It's a 7nm chip and it has one more important trick up its sleeve: 5g/4G spectrum sharing, which allows operators to support 5G and LTE on the same spectrum."

That "important trick" is addressed in the Qualcomm news release. The Snapdragon X55 modem was engineered to support dynamic spectrum sharing between 4G and 5G. The business advantage is that operators can accelerate 5G deployments, said Qualcomm, by using existing 4G spectrum holdings to deliver both 4G and 5G services dynamically.

Small wonder that *Android Authority's* headline was an enthusiastic "Qualcomm's Snapdragon X55 modem is the [4G/5G](#) solution we've been waiting for."

Along with multi-mode 4G and 5G in a [single chip](#), Senior Features Editor Robert Triggs, noted "blazing fast 7Gbps speeds, and futureproof support for the 5G Standalone specification." Triggs elaborated on the speeds. "Theoretical peak speeds are boosted from 5Gbps to 7Gbps download and up to 3Gbps upload."

*TheStreet* 's Eric Jhonsa elaborated on what X55 delivers.

"The X55 adds [support](#) for frequency-division duplex (FDD) communications, in which uploads and downloads are handled via different slices of spectrum. And whereas the X50 only supports non-standalone (NSA) 5G networks that need to lean on 4G networks for certain radio and core network functions, the X55 also supports standalone (SA) 5G networks."

*Android Police*: "The important thing to know about X55 is that it enables a far, far larger ecosystem of 5G smartphones to be developed. That's because the X55 works with sub-6GHz FDD 5G networks; the X50 does not."

What can be said about the new antenna module? It is called QTM525. Triggs said it was slightly [slimmer](#) than the previous design; that works in that it "can be built into phones thinner than 8mm thick." If the

QTM525 decreases thickness requirements for a mmWave 5G smartphone, said Ruddock, designs under 8mm will be possible.

The company release said the QTM525 5G mmWave antenna module "builds on the innovation of Qualcomm Technologies' first mmWave antenna module by reducing the height of the module to support 5G smartphone designs [sleeker](#) than 8 millimeters thick."

As for strategy and timing of the announcement, Qualcomm apparently wishes to be in the frontlines of 5G leadership, staking its edge in being able to offer customers a comprehensive solution.

What's next?

Qualcomm said Snapdragon X55 is currently sampling to customers. [Jon Fingas](#) in *Engadget*: "Device makers already have samples of the X55, and the [modem](#) is poised to reach shipping hardware sometime in late 2019."

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