

Qualcomm's 'lucky 888' processor offers integrated 5G, superior photo capabilities

2 December 2020, by Peter Grad



Credit: Qualcomm

Qualcomm has made significant leaps in technology to produce its new 888 system on a chip, unveiled at the virtual Snapdragon Tech Summit Tuesday. Although limited details were available on the first day of the two-day conference, it is clear the Snapdragon 888 processor will define a powerful new generation of Android smartphones for the class of 2021.

The new SoC features a powerful X60 5G modem that will be faster and operate more efficiently along nascent 5G networks. While last year's Snapdragon 865 broke tradition by requiring a separately housed modem chip, the Snapdragon 888 brings back the fully integrated 5G modem and RF front end. The result will be slimmer phones with more room for other critical components such as batteries. It will also help lower costs and offer longer battery life.

According to Techanalysis Research analyst Bob O'Donnell, "It gives you everything you need in a single package and theoretically makes phone design easier, cheaper and just better integrated."

With increased communication speeds between 10 and 100 times current 4G speeds, 5G will bring improvements to teleconferencing, advanced augmented reality apps and gaming.

The X60 modem relies on millimeter-wave and sub-6 spectrum airwaves to help it achieve download speeds up to 7.5 Gbps and uploading speeds up to 3 Gbps.

One forecast of 5G usage sees 218 million 5G subscriptions worldwide by the end of this year. Snapdragon processors power smartphones by computing and telecommunication giants including Samsung, OnePlus, Sony LG, Asus and Lenovo.

Qualcomm reported that its redesigned Hexagon processor baked into the Snapdragon 888 will allow performance rates nearly twice that of the Snapdragon 865. The 888 can reach 26 TOPS (trillion operations per second). This will pave the way for the creation of innovative and more powerful AI programs.

The Snapdragon also offers a dramatic boost in photographic capability. It allows the capture of 120 12-megapixel photos per second, with a transfer rate of 2.7 gigapixels per second. This is a 35 percent speed boost over the previous processor. With smartphones constantly making inroads into faster and more creative photographic effects such as slow-motion capture, enhanced high-dynamic-range imagery and multi-camera video capture, the Snapdragon 888 could accelerate a gradual shift by professional photographers from professional 35mm cameras to the mobile platform.

A Qualcomm blog post this week stated, "Snapdragon 888 will triple down on the future of computational photography and transform smartphones into professional quality cameras."

Qualcomm's sequential numbering system for its high-end processors of recent years—Snapdragon

835, 845, 855, 865—was disrupted for the 888. The number is seen as a nod to the Chinese community, which considers 8 to be a lucky number, with multiple 8s even luckier. The Chinese word for "8" sounds like the word for "prosper." This belief is so strong that in 2003 Sichuan Airlines paid more than a quarter-million dollars to purchase the phone number +86 28 8888 8888.

Qualcomm, based in San Diego, is doubtless aware that its fiercest competitor is Huawei Technologies, a Chinese-based multinational technology giant, and that friction between China and the United States has been heightened during trade disputes during the Trump administration.

The new SoC should appear on the first smartphone models in March 2021.

More information:

[www.qualcomm.com/news/releases ... -summit-digital-2020](http://www.qualcomm.com/news/releases...-summit-digital-2020)

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