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Testing the Galaxy S22 Ultra



In review: realme GT 2 Pro



Motorola Edge 30 Pro in Review



Survey: Laptop & Phone Support Satisfaction

Computex 2019 | 7 nm MediaTek Helio M70 SoC with Cortex-A77 set to arrive on smartphones by Q1 2020

The Helio M70 will be the most advanced SoC yet from MediaTek with its integrated 5G and new AI processing unit for enhancing and de-blurring pictures. The chip will power the next generation of "new premium" smartphones retailing in the \$500 to \$600 USD range.

Allen Ngo, 05/29/2019 [Android](#) [Touchscreen](#) [Smartphone](#)

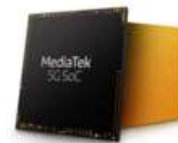
5G is all the rage this year with most major telecommunication companies in the process of upgrading their respective networks for the inevitable 5G-enabled smartphone market. As of this writing, however, only the most advanced (and expensive) smartphones are capable of 5G and the options available are far and few between.

This will all change once MediaTek begins offering 5G-enabled SoCs. The company is well-known for incorporating high-end features onto its mid-range and budget SoCs for ultimately more affordable smartphones. As **unveiled at MWC 2019** and then further detailed at Computex 2019, the Helio M70 will be MediaTek's first 7 nm SoC based on the Cortex-A77 architecture to integrate both a 5G modem and a Mali-G77 GPU. ARM Holdings only recently announced the Cortex-A77 architecture which promises support for 4K60 video encoding/decoding and up to an 80 MP camera should such a sensor ever be developed for a consumer smartphone.

An important limitation to keep in mind is that the integrated 5G in the Helio M70 will support sub-6 GHz bands only. Millimeter wave in frequencies greater than 6 GHz will not

Introducing MediaTek's High Speed 5G SoC Chipset

The first fully integrated 7nm 5G solution, delivering an Extreme Experience



7 nm MediaTek Helio M70 SoC with Cortex-A77 set to arrive on smartphones by Q1 2020 (Source: MediaTek)

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be supported on the SoC as MediaTek says most carriers have yet to offer such a service in large cities. Once costs come down and the service becomes more common, however, there's no question that MediaTek would eventually develop a new SoC to support the high frequency bands.



The Basics

With the MediaTek Helio M70 5G modem built in, the 5G chipset packs world-leading technology into its compact design.

- World's 1st 7nm 5G SoC with ultra low power
- World's fastest sub-6 GHz 5G modem integrated
- World's 1st ARM Cortex-A77 CPU
- World's 1st ARM Mali-G77 GPU
- Industry leading APU 3.0 that brings powerful AI performance
- Lead customer samples by Q4 2019, and commercial devices ready by Q1 2020

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Latest CPU Technology

A performance powerhouse with the just announced new Arm Cortex-A77 CPU.



State-of-the-art GPU

A robust new Arm Mali-G77 GPU that enables seamless extreme streaming and gaming experiences at 5G speeds.



Source(s)

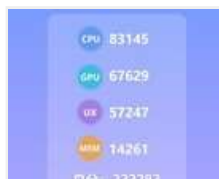
<https://www.mediatek.com/news-events/press-releases/mediatek-unveils-groundbreaking-new-5g-soc-for-first-wave-of-5g-flagship-devices>

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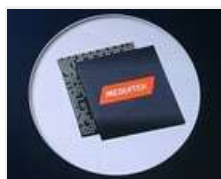
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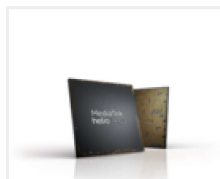
Intel and MediaTek announce a new 5G partnership 11/25/2019



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MediaTek announces the Helio P65 SoC with Cortex-A75 and A55 cores, improved AI, and 48 MP sensor support



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Rich IoT program will put MediaTek SoCs in everything from smart doorbells to washing machines 05/20/2019



Sprint launches pre-orders for the LG V50 ThinQ and HTC 5G Hub 05/17/2019



Samsung Galaxy A10 variant with MediaTek processor shows up on Geekbench 05/15/2019



MediaTek Helio P22-driven Oppo A1K coming soon 03/14/2019



Ulefone T3 with MediaTek Helio P90 SoC showcased 03/13/2019



MediaTek Helio P70-powered Vivo S1 hits Geekbench 03/11/2019



An upcoming 7nm MediaTek SoC will also be 5G-capable 03/07/2019



MediaTek Helio M70 MT6297 will be the company's first multi-mode 5G modem 02/26/2019

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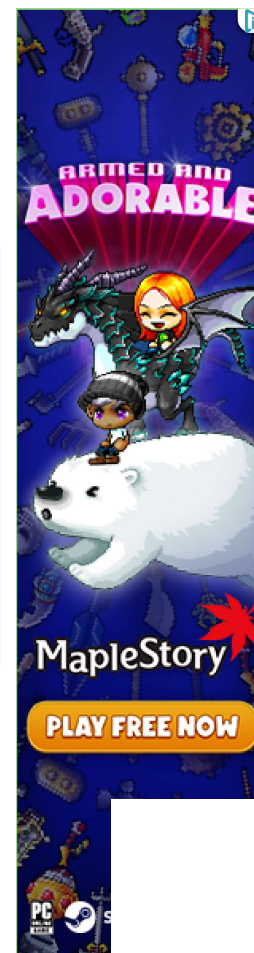


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After graduating with a B.S. in environmental hydrodynamics from the University of California, I studied reactor physics to become licensed by the U.S. NRC to operate nuclear reactors. There's a striking level of appreciation you gain for everyday consumer electronics after working with modern nuclear reactivity systems astonishingly powered by computers from the 80s. When I'm not managing day-to-day activities and US review articles on Notebookcheck, you can catch me following the eSports scene and the latest gaming news.

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Allen Ngo, 2019-05-29 (Update: 2019-05-30)



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