

Kirin 990 5G - Huawei's strategic 'weapon'

Kirin 990 5G octa-core is a chip that is receiving special attention from the tech loving community

The Android world has always fascinated people with the richness it brings. The abundance here not only appears in the way manufacturers customize the operating system, create new interfaces, but also in the way they develop hardware devices to fit the strategy. his business.

Huawei is a case in point for flexibility in the Android world. The world's second-largest smartphone manufacturer has both its own customized Android version (EMUI) and a homegrown chip (Hisilicon Kirin) instead of a ready-made product. Third parties like Qualcomm or MediaTek are the same as the majority of Android smartphone manufacturers in general.

1. Huawei officially launched its own Harmony OS, ready to quit Android



Kirin 990 5G has just launched and is receiving a lot of attention from the community

Investing in the development of a processing chip production line is a risky task and will cost a huge amount of money. So what are the benefits worth trading here? First of all, owning a chip will bring a great deal of initiative to the manufacturer in determining the selling price for each of its products. The second is to bring compatibility, better support between the processor chip and the customized operating system version of the device, thereby providing a more optimal user experience.

The latest chip, which is also the highest peak just recently launched by Huawei is the Kirin 990 5G octa-core that is receiving special attention from the tech loving community, promising to bring processing capabilities. and support great new features for the company's upcoming handsets.

1. 5G Qualcomm modem will be available on mid-range smartphones next year, officially opening the era of 5G universalization



Kirin 990 5G will be Huawei's strategic product in the premium segment

Indeed, it can be said that Kirin 990 5G will be Huawei's strategic product in the high-end smartphone segment with a lot of significant improvements and additions compared to the previous version. Processing power, energy efficiency, as well as software compatibility, camera support - the most important elements for a smartphone today - will all have major upgrades.

However, don't forget that another important feature on this chip is the ability to support 5G connectivity with the modem built into the CPU instead of using a separate 5G modem as most. High-end smartphone models today.

Basically, the 5G modem built into the CPU will completely eliminate problems related to optimizing the space inside the device, optimizing battery efficiency, improving heat dissipation performance and The last is for the ability to operate more stably. In terms of design, this allows designers to further optimize the thinness and lightness of the product, similar to current LTE phones. Huawei says that the Kirin 990 5G is 36% smaller than CPUs that don't have an existing 5G modem built-in.

1. The mysterious Snapdragon chip reached a record score on Geekbench

Check out a few other notable improvements. The Kirin 990 5G is developed by Huawei on 7nm EUV process and includes more than 10.3 billion transistors. This, along with a number of other software enhancements provided by AI technology, promises to help optimize the chip's energy efficiency to extremely impressive levels. Huawei representatives confidently affirmed that Kirin 990 5G power consumption is equivalent to current 4G LTE-enabled chips. This, if true as Huawei says, will be an extremely impressive advantage, which can bring high competitive efficiency for its products.

Going deeper into the processing power of Kirin 990 5G. Huawei asserts that end users can easily feel the positive changes in performance that Kirin 990 brings compared to their predecessors, especially in the case of forced to handle heavy tasks, need lots of data. The chip incorporates machine learning technology to estimate exactly which channel will be used during data transmission and reception with a 5G connection.

1. Apple will equip a new coprocessor chip on the iPhone 2019 with many interesting additional features



Huawei claims users can easily feel the positive changes in performance that Kirin 990 brings

Not only that, when the 5G signal on the device is too weak or the connection is interrupted, unstable, AI will automatically make a decision to use a separate 4G modem, in parallel with 5G, allowing flexible rotation between 2 types of connection when needed. Huawei says this feature can make connection performance 5.8 times faster under adverse conditions compared to just using a single connection.

In fact, AI technology has been integrated into Kirin chips for a long time. However, the Kirin 990 5G will be a huge improvement because the company has completely overcome some of the weaknesses found in its predecessors, while introducing a few performance improvements and Very valuable feature in practical use.

Huawei's latest chipset: Kirin 980, provides native support for 90% of the most popular neural network technologies. The tasks related to AI and ML (machine learning) are performed 4.76 times faster than Kirin 970 (featured on Huawei P20 Pro and Honor 10) while still giving more optimal energy efficiency, such as For simple AI use cases such as facial recognition, the Kirin 980 uses 24 times less power than the Kirin 970.

And the Kirin 990 promises even better!

1. Snapdragon 865 and Apple A13: Which will be the most powerful mobile CPU in the world?



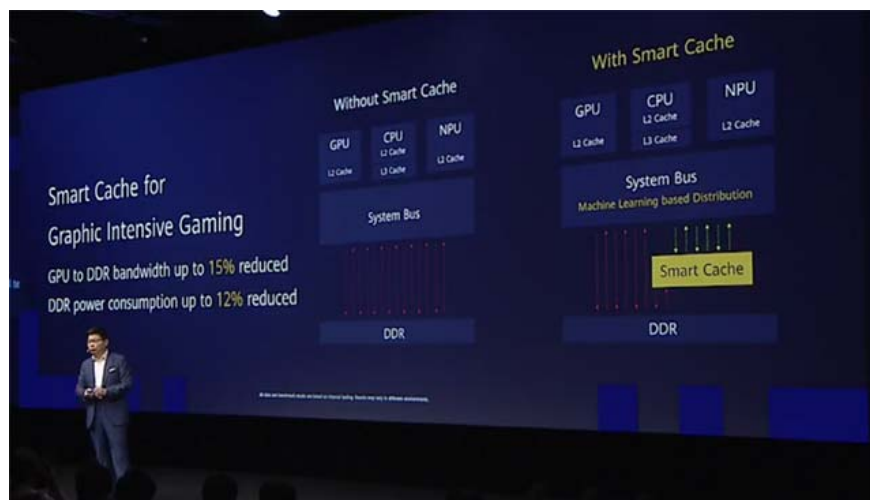
The Kirin 990 5G is developed by Huawei on 7nm EUV process and includes more than 10.3 billion transistors

Of course, the competitor Huawei wants to target on the Kirin 990 5G is not its predecessor, but Qualcomm's most powerful chip, its direct competitor in the market: Qualcomm Snapdragon 855, currently equipped on most flagship smartphones like OPPO Reno or OnePlus 7. According to Huawei's calculations, Kirin 990 brings single core performance 10% faster than Snapdragon 855, while performance multi-core performance is also 9% better.

Of course, these are only data provided by Huawei itself, and no intermediaries have yet to verify them, so they are for reference only.

Similarly, the graphics processing capacity (GPU) on Kirin 990 5G has been improved quite a lot compared to the predecessor Kirin 980 version. The number of GPU cores is increased from 10 to 16 - which Huawei says will help improve processor performance by 6% when you use intensive graphics applications, along with the efficiency of the battery. improved by 20%. That is a big plus, especially in the context of the growing mobile gaming market with the explosion of mobile games that require high graphics processing capabilities such as Fortnite or PUBG mobile.

1. Snapdragon 855 Plus will be a high-end, gaming-grade chip with significant improvements



The processing power of Kirin 990 5G graphics is also greatly improved compared to its predecessor

It is impossible not to mention another factor that is very interested in Huawei's smartphone models: the ability to take photos. So how does the Kirin 990 contribute to the improvement of photography that has been so highly appreciated on Huawei's flagships?

One of the preminent features of Huawei's smartphone capabilities is that the camera sensor can automatically adjust the settings flexibly based on the context to produce the best quality images. For example, it is possible to recognize between photos of people, food, or landscapes to provide an appropriate setting.

This intelligence is handled by AI, and the chip is the part that provides the power to handle such complex tasks. Kirin 990 5G brings an even stronger improvement in handling AI tasks compared to previous versions. This includes an entirely new image signal processor (ISP), which reduces noise by up to 30% for the camera system, resulting in sharper images (details are clearly reproduced and pins). more real). Also, the noise in video recording is also reduced by up to 20%. The impact here is extremely obvious.

You can expect to see the Kirin 990 5G appearing on Huawei's flagship phone: Mate 30 Pro, which is expected to be launched later this month at an event in Munich. There are also rumors that the chip appears on a remake of the promising folding screen phone Huawei Mate X - although this is still officially confirmed by the Chinese manufacturer. .

1. Does Google confirm that Mate 30 may not install Google applications and services, an end to Huawei in the international market?



Kirin 990 5G will likely be equipped on the Mate 30 Pro flagship

The arrival of the Kirin 990 5G will surely make the 'arms race' in the processor market as well as high-end smartphones become more interesting than ever.

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