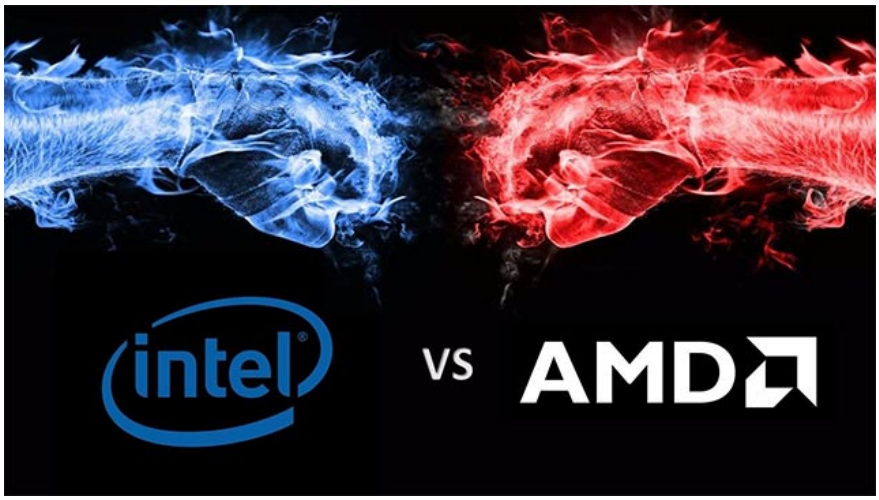
Intel played big, released Comet Lake 10 core chip to 'weigh them' Ryzen 3000 of AMD?

With the position of a manufacturer for many years leading the processor chip market, Intel cannot sit still.

The latest in the AMD family, Ryzen 7 3000, which was officially launched earlier last week as a hit, was aimed at Intel's most high-end product line. In terms of performance, the Ryzen 9 3900X did a nice job of Core i9 9900K on all tests, thereby taking the opponent's crown in the segment below $ 500. Intel's "nightmare" has not stopped there when even a Ryzen 7 3700X juniors product is still overpowering the Core i9 9900K in most basic to advanced workloads, while having nearly half cheaper prices.

1. AMD Ryzen 7 benchmark score 3800X crushed Intel i9 9900K rival



The battle between Intel and AMD in the high-end segment is heating up

With the position of a multi-year manufacturer leading the processor chip market, once held in the hands of marketable power like Intel, the failure is unacceptable. The problem of affected sales is something that will inevitably happen, but that is only part, more importantly, the company's reputation has been seriously affected in the eyes of the PC user community. We all know that the high-end segment is always the most intense 'competition' to identify the manufacturers' things in general, not just the CPU market. Any failure if existed for so long will leave a precedent and a bad impression. Intel obviously knows this better than anyone else, and they certainly won't accept sitting down for so long.

A recently leaked source has revealed a more detailed view of Intel's counter-attack plan in the future. As always, rumors like this are often for reference only, especially due to the unusual nature of the market, but they still contain information worth analyzing.

It will be a completely new, previously unknown socket: LGA 1159, 10 cores, with the return of Hyper-Threading (after being omitted on all Intel chips, except products). the most advanced Gen 9 product), and most likely will be developed on the '14nm +++' process. Besides, the most advanced cores of this chip will lack IGP, which is understandable because this is not something that Intel is willing to meet, at least for the time being.

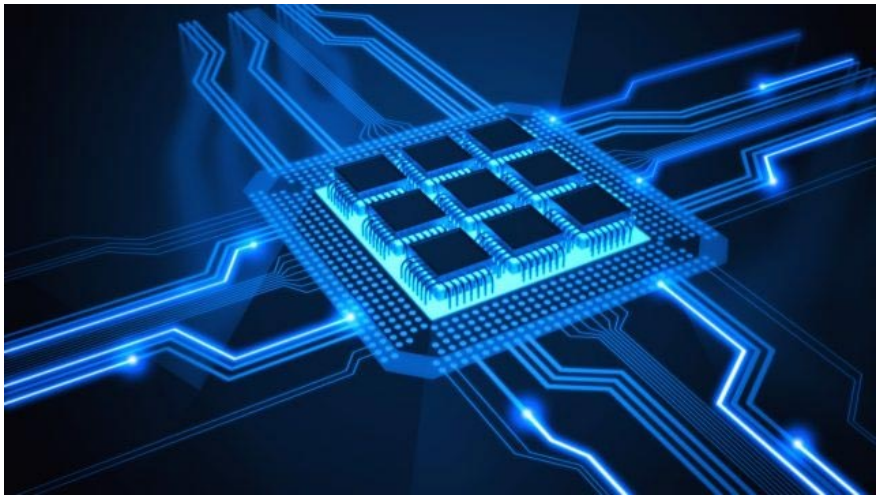
1. Intel launches automatic CPU overclocking tool with one click

AMD products are temporarily dominant

It is unclear whether this 10-core chip will be integrated with the GPU, but predictions are leaning on the assumption that Intel will build a completely new model without the GPU's presence. The leaked information also implies that Intel will add hyperthreading (Hyper-Threading) in all the models that will be available in the near future (not just the high-end segment). This information is not surprising because this is the plan that the company once maintained. The last notable information is about the maximum boost frequency for all-cores boosts - information is rarely mentioned by Intel in product launches.

One information can be certain, which is the decision to name the five digits of the product - matching previous reports. Besides, quite reliable information about TDP, Intel's TDP usually derives from the base clock (basic clock), and the low base clock in this case can give good support for operation. efficient a 10 core chip. For example, the Core i7-9700 is CPU 8C / 8T with a base clock of 3GHz in TDP 65W, so the new chip will not be based on Intel's existing product lines.

1. This is why you will choose AMD's latest 3rd generation Ryzen CPU instead of Intel chips



Hyper-Threading is an essential addition to Intel products at this time

Regarding Hyper-Threading, Intel cures never publicly explaining why they removed this technology from most of their 9th generation CPUs, or whether they actually developed a complete product template. all other without the GPU. There are a lot of related rumors, but the most compelling reason for the absence of Hyper-Threading is likely to be related to two serious security holes Specter and Meltdown, which were revealed in January 2018. and severely damaged hundreds of thousands of Intel computers worldwide. Regardless of its reason, leaked information implies that Intel will let Hyper-Threading 're-export' across its product lines as believable because this is what the previous company have done it without too many difficulties.

The re-introduction of Hyper-Threading in the upcoming 10th generation CPUs will be a great option for Chipzilla to improve the additional performance on its product lines, thus gaining a little advantage. before the opponent. Hyper-Threading is often said to provide additional performance from 1.1 to 1.2 times, but this number will also vary depending on the game and the different applications, possibly more or less, or you can't even notice any changes.

If the leaked information is correct, it is likely that Intel will have to rearrange its product lines as well as its competitive segment. The addition of Hyper-Threading will make the Core i3 and i5 chips more powerful, able to compete seamlessly with Ryzen 3 and Ryzen 5. Models like Core i3-10350K can provide 4C / 8T and all-core boost up to 4.6GHz with a price of about 179 USD will face Ryzen directly 3. While Core i5-10500 (6C / 12T, 3.1GHz base clock, and all-core boost 4.4GHz) promises to be Ryzen 5 3600 (6C / 12T, 3.6 GHz base clock, 4.2GHz boost), priced at 199 USD.

1. Intel officially launched the first Ice Lake Gen 10 CPU built on the 10nm process

Intel product classification table (rumor)

If the above product chart is correct, it can be seen that Intel was really serious about confronting AMD in all product lines of all its segments. The introduction of Hyper-Threading back to Core i7 as well as the addition of this technology for the first time on Core i3 and Core i5 will bring a new wind, along with higher competition for spectrum segment products. Intel and mid-range.

In addition, the decision to increase the 2 cores for the Core i9-9900K will help add this chip to the number of 'horsepower' needed to pass, or at least keep up with Ryzen 7 3700X and 3800X. It is unclear whether such a chip can beat the 12-core Ryzen 9 3900X (that's not to mention the 'Ryzen 9 3950X' monster will be released next September), however with the Such rational improvements and additions (if true) - will certainly help Intel significantly improve its overall competitiveness across the entire product range.