

AMD launched Zen 2 for the data center, the world's first x86 7nm CPU

Double core number, higher IPC, more power saving.

AMD's new Zen 2 CPU promises improved performance and security, while also consuming less power, more flexible CPU setup options thanks to the new chiplet design.

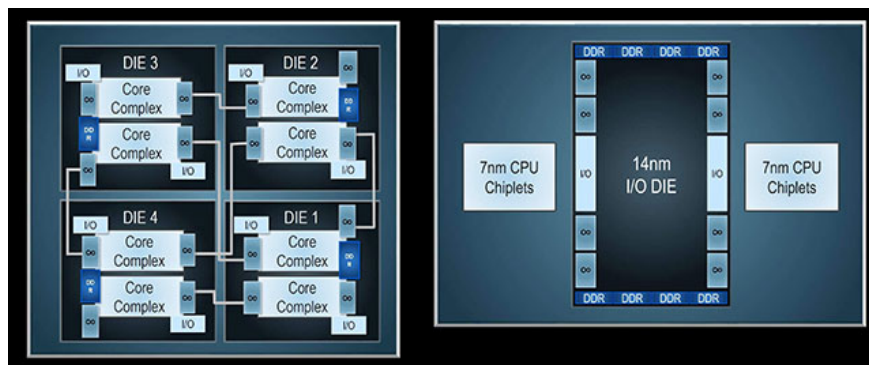
AMD has just announced the release of the latest chip design Zen 2, introducing the first 7nm x86 CPU in the market and announcing more details about architectural improvements. At AMD's Next Horizon event, they introduced CPUs for the first 7nm server based on the new Zen 2 architecture.

EPYC Rome is a continuation of EPYC Naples, with twice as many cores as the previous processor, compatible with Naples, making it easier and more economical for those who have used previous generation processors.

This chip has a design of 64 cores, 128 threads, PCIe 4.0, supposedly FPU increased 4 times on each socket. The 7nm process developed in cooperation with TSMC also offers a number of other improvements: double semiconductor density, reduced power consumption by half (with the same performance), 25% efficiency increase (with the same contour capacity).

In addition, Zen 2 also offers more advanced, predictive (branch predictor) improvements, higher security to prevent vulnerabilities like Specter, improved implementation lines, and fetching. instruction pre-fetching is also better and larger Ops cache .

Not only that, Zen 2 is also the start of the CPUs that both AMD and Intel still look forward to for many years: CPU module built on the link network (Infinity Fabric) connects multiple CPU chiplets (in this case is CCX).



Zen (left photo) and Zen 2 (right photo)

The long-term plan that Lisa Su, AMD's CEO, still insisted on overtaking Intel in the data center as promised and made the promise of designing 10nm server chips of Intel (Ice Lake) useless. . Zen 2 is here, and Ice Lake is a year away.

Intel could not keep its promise, and AMD did not. They launched Zen in 2017, improved with Zen + this year and are about to design Zen 2. According to AMD, many partners are waiting to be used in Rome and this is bad news for Intel.

See more:

1. The benchmark of i7-9700K chip also surpassed the multi-core Intel Core i7-8700K and AMD Ryzen 7 2700X chips
2. AMD's Ryzen Threadripper 2990WX achieved 6Ghz overclocking speed on all 32 cores, breaking many records
3. AMD stopped producing 32-bit drivers

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