

Revealed Intel Core i9-12900K Alder Lake-S CPU configuration with 16 cores, 24 threads, supports DDR4 RAM

Relatively detailed information about Intel's high-end Core i9-12900K Alder Lake-S CPU model has just been unexpectedly found in the database of the UserBenchmark hardware review site. The chip was found to be running on a high-performance desktop platform, and has an impressive configuration

In fact, the CPU model found in UserBenchmark's database is not explicitly named. However, based on leaked specifications, it can be almost certain that this is the Core i9-12900K S, the flagship chip in the flagship Alder Lake-S product line that Intel is expected to launch later. this year.

This processor owns 16 cores, of which 8 are based on the Golden Cove architecture and 8 are based on the Goldmont architecture. This configuration will provide a total of 24 threads (16 threads from the high-performance core and 8 threads from the power-saving core). As for the clock speed, since this is a test prototype, the base clock stops at 1.80GHz, while the boost clock also only reaches 3.65GHz. However, these numbers can be much higher on the commercial version released to the market.



Speaking of cache, the specs are shown correctly for 10 cores, which means that the software is correctly reading 8 high-performance cores, but the power-efficient 4-core cluster is being recognized as 1 total core. This may be because existing software is not fully updated to correctly recognize hybrid CPUs like Alder Lake-S.

In a nutshell, the CPU has 3MB per high-performance core, which equates to 24MB, along with 3MB per cluster of power-efficient cores, which equates to 6MB. Thus, this chip will have a total of 30MB of L3 cache (L3 cache). Such L3 cache capacity is also consistent with previous rumors. Overall for performance, it's also nothing special at the moment, as the low clock levels are listed.

Here are the core configurations of all the Alder Lake CPUs compiled so far:

1. Intel Core i9 K-Series (8 Golden + 8 Grace) = 16 cores / 24 threads

2. Intel Core i7 K-Series (8 Golden + 4 Grace) = 12 cores / 20 threads
3. Intel Core i5 K-Series (6 Golden + 4 Grace) = 10 cores / 16 threads
4. Intel Core i9 A-Series (8 Golden + 8 Grace) = 16 cores / 24 threads
5. Intel Core i7 A-Series (8 Golden + 4 Grace) = 12 cores / 20 threads
6. Intel Core i5 A-Series (6 Golden + 0 Grace) = 6 cores / 12 threads
7. Intel Core i3 A-Series (4 Golden + 0 Grace) = 4 cores / 8 threads

Intel Core i9-12900K tested on HP OMEN 45L desktop platform including 16GB DDR4-3200 memory. Judging by the test setup, this is definitely a preliminary configuration, rather than a proper Z690 motherboard due out in Q4 2021. The chip will definitely be a 125W variant with limited Maximum power up to 468W (PL4).

Recently, there has been a lot of information that Intel Alder Lake CPUs will include both DDR5 and DDR4 memory configurations and this is highly likely to be correct.

The Intel Alder Lake-S desktop CPU lineup and the Z690 platform are expected to launch on October 27 this year. This will be Intel's first mainstream commercial processor platform to use PCIe5.0 and DDR5 technology.

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