

AMD's Ryzen 7000 X3D CPUs arrive next month to take on Intel for PC gaming

AMD is bringing its impressive 3D V-Cache technology to its Ryzen 7000 desktop processors. Starting in February, the Ryzen 9 7950X3D, 7900X3D, and 7800X3D will all start shipping with some big promises of PC gaming and productivity gains. AMD could be about to regain the PC performance crown it lost to Intel's Core i9-13900K just a few months ago.

There's reason to be excited if you're just about to build a PC gaming rig. AMD's first desktop chip to use its 3D V-Cache technology, the Ryzen 7 5800X3D, outclassed its own Ryzen 5900X and Intel's 12th Gen Core i9-12900K last year for PC gaming. Even against the Core i9-13900K, it held its own in a number of games.

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AMD's choice to extend its 3D V-Cache technology to its Ryzen 9 chips this time around means we're truly going to see how it will impact productivity and rendering apps, alongside the usual PC gaming performance improvements at the highest level of AMD's consumer CPU offerings.

The flagship Ryzen 9 7950X3D will ship with 16 cores, 32 threads, a 120-watt TDP, and nearly 150MB of combined L2 and L3 cache. AMD is promising that this will be the "ultimate processor for gamers and creators," with promises of between

15–25 percent better performance in games that are CPU bound at 1080p.

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On the productivity side, AMD is promising up to 52 percent performance improvements in file compression (7-Zip) over the i9-13900K, 17 percent on Adobe Premiere Pro (PugetBench Live Playback Score), and 4 percent on file encryption (VeraCrypt AES). We'll have to test these claims fully, but given how well the 5800X3D performed in gaming, it's reasonable to expect some solid performance gains on the 7950X3D side.

While AMD is announcing a rough February ship date for the Ryzen 9 7950X3D, 7900X3D, and 7800X3D, there is no pricing available just yet. Intel undercut AMD's pricing by around \$100 on the i9-13900K vs. the 7950X, so it'll be interesting to see whether AMD is able to strike back with a combination of price and performance for its Ryzen 7000 3D chips.

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If you're not interested in the top-of-the-line flagship processors that put dollars on your energy bill, AMD is also launching 65-watt Zen 4 CPUs. The Ryzen 9 7900 will ship with 12 cores, up to 5.4GHz boost, and on-chip Radeon graphics all

for \$429. It's designed to compete with Intel's latest 65-watt 13th Gen chips with a balance of power efficiency and performance for gaming and productivity.

AMD also has a \$329 Ryzen 7 7700 with 12 cores and a 5.3GHz boost, plus a \$229 Ryzen 5 7600 with six cores and a 5.1GHz boost. All three will be available starting January 10th and support the AM5 platform with both PCIe Gen 5 and DDR5 support.

<https://www.theverge.com/2023/1/4/23539277/amd-ryzen-7000-x3d-zen-4-cpu-9-7950x3d-specs-release-date-ces-2023>