

AMD's new Ryzen 7000 mobile processors include a massive 16-core chip

AMD has announced its new Ryzen 7000 mobile CPUs for laptops. The list is a real who's who of mobile processor architecture, including Zen 4, Zen 3 Plus, Zen 3, and Zen 2 chips.

The potential star of the show is the "Dragon Range" Zen 4 Ryzen 9 7945HX, which has 16 cores and 32 threads, frequencies of 2.2-5.4 Ghz, 80MB cache, and 55-75 watt TDP. I repeat – 16 cores in a laptop. These aren't Intel's little efficiency cores. These are 16 full Zen cores in a laptop's chassis.

This may seem like an underdog compared to Intel's top 13th-Gen chips, which have 24 cores – Intel has claimed that its Core i9-13980HX is the "world's fastest mobile processor". This chip, however, only has eight performance cores and 16 efficiency cores, while all 16 of the Ryzen's will be going full-speed ahead. This is essentially two full eight-core chips stuffed into one.

It's hard to know how exactly these two laptops will perform relative to one another and whether either of them will burn a hole in your table until we've gotten to try these units out for ourselves. But at the moment, the Ryzen 9 7945HX is looking very competitive. AMD is claiming that these chips will deliver a 78 percent increase in Cinebench performance over last year's Ryzen 6900HX. With the specs I'm seeing here, that would not surprise me.

We can expect to see this top series (the 7045 series) in some of the most extravagant and expensive Ryzen gaming laptops of

this year. Those will include Alienware's m16 and m18 (which have the AMD Advantage label, a similar certification to Intel's Evo program), Asus's ROG Strix, and Lenovo's Legion line. Frankly, I have no idea how putting this kind of chip in a laptop is going to go, but it will certainly be interesting to see.

Moving on to the more... down-to-earth chips, the 7040 is also built on Zen 4. Its Ryzen 9 7940HS and Ryzen 7 7840HS both have eight cores and 16 threads, boost up to 5.2 GHz, and 34-45 watt TDP.

The Zen 3+ 7035 series is the first group where "incredible battery life" is listed as a selling point in AMD's slideshow. The Zen 3 7030 series is purported to have "proven great battery life," which, you know what, I'll take.

The first 7040 laptops are expected to ship in March, while the 7045s are supposed to drop in February.

<https://www.theverge.com/2023/1/4/23539638/amd-ryzen-7945hx-mobile-cpu-laptop-7940hs-ces>