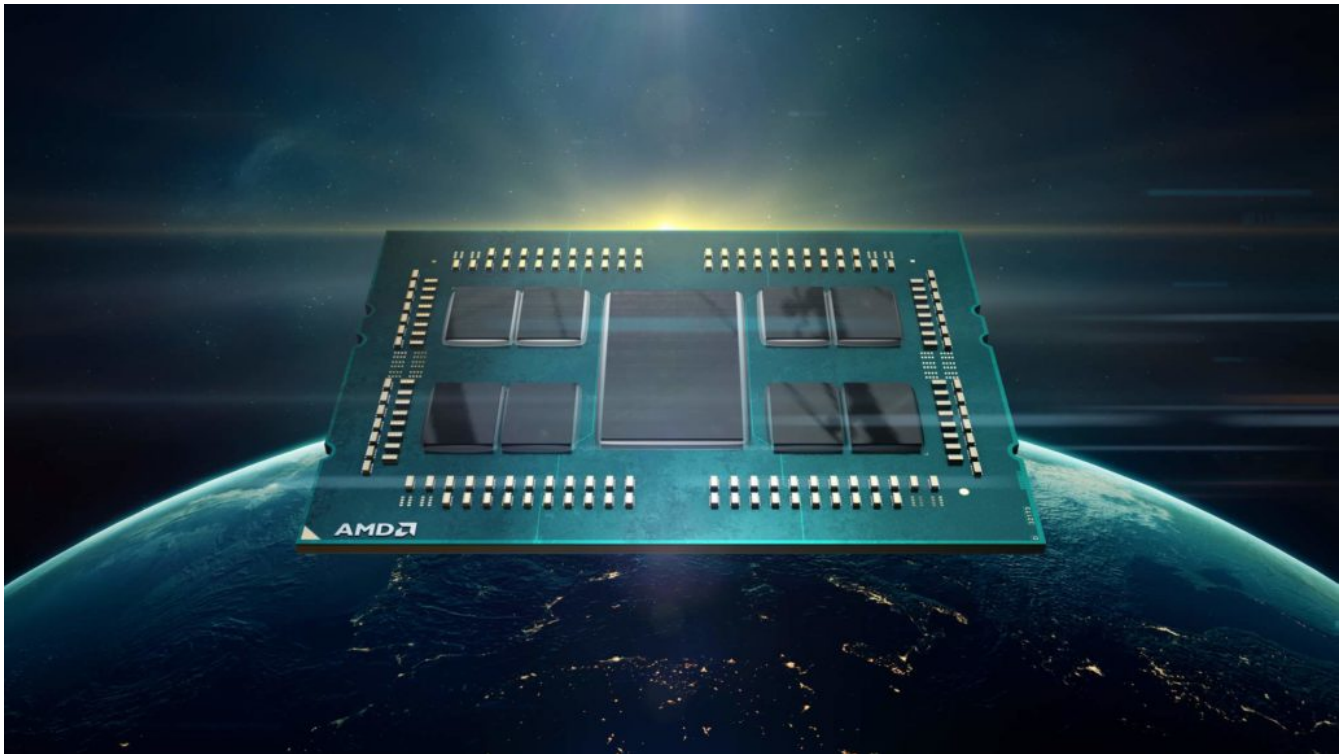


AMD Intros 2nd Gen EPYC Datacentre Processors

Written by Marco Attard
08 August 2019

AMD launches the 2nd generation of EPYC datacentre processors, codenamed "Rome" with 19 SKUs featuring up to 64 cores, all built using a 7nm process the company claims sets "the new standard for the modern datacentre."



"Today, we set a new standard for the modern datacentre with the launch of our 2nd Gen AMD EPYC processors that deliver record-setting performance and significantly lower total cost of ownership across a broad set of workloads," CEO Dr. Lisa Su says. "Adoption of our new leadership server processors is accelerating with multiple new enterprise, cloud and HPC customers choosing EPYC processors to meet their most demanding server computing needs."

According to the company, the 2nd gen EPYC processors do nothing less than "redefine economics in virtualisation, cloud, HPC and enterprise applications." As such, it promises an 83% performance boost in Java applications compared to the previous generation, up to 43% better SAP SP 2 Tier performance than the competition and "world record" performance on Hadoop real time analytics. AMD also claims record-setting floating point performance and the most DRAM and I/O bandwidth for HPC workloads.

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Inside the EPYC 7002 processors are up to 64 Zen 2 cores per SoC, allowing for up to 23% instructions per clock (IPC) per core on server workloads and up to x4 more L3 Cache compared to the first generation. AMD Infinity Architecture provides more I/O and memory bandwidth, including PCIe 4.0, while "hardened to the core" security features such as Secure Memory Encryption and Secure Encrypted Virtualisation ensure data protection.

The lineup consists of 14 dual-socket CPUs compatible with single-socket configurations, as well as 5 single-socket CPUs. Processors offer 8-64 cores, with base frequencies ranging from 2 to 3.2GHz, all with 8 DDR memory channels (with maximum DDR4 frequency of 3200MHz) and 128 or higher of PCIe 4.0 connectivity. The flagship product is the EPYC 7742, a 64-thread chip with 128 threads, 2.25GHz base frequency, 3.4GHz boost frequency, 256 megabytes L3 cache and a thermal design of 225W able to go up to 250W.

The launch comes with products from 60 partners, including ODMs such as Gygabyte and QCT, IHVs like Broadcom, Micron and Xilinx, and OS support from Microsoft and multiple Linux distributions.

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