Written by Alice Marshall 03 May 2019

Fujitsu looks to the future as it announces the completion of a "Post-K" supercomputer-- an exascale machine designed in collaboration with the Japanese Riken research institution, to be launched sometime in 2021.



The K supercomputer is a massive machine housed in the Riken Advanced Institute for Computational Science (R-CCS) campus in Kobe, Japan. It was built by Fujitsu in 2011, and features over 80000 nodes using Sparc64 VIIIfx processors, a derivative of the Sun Microsystems Sparc processor developed prior to the 2010 acquisition of Sun by Oracle.

Back when it first switched on, the K was the top supercomputer in the world. It also managed to be the first supercomputer to top 10 petaflops in November 2011. It was eventually lost the position of fastest supercomputer in the world to the IBM Sequoia, but even 8 years on it remains one of the top 20 supercomputers in the world.

But what about "Post-K"? According to Fujitsu, the machine will be one of the first capable of reaching compute performance of one exaFLOPS (a billion billion calculations per second, or 1000 petaFLOPS). The project has been in the works since 2014, and is based on ARMv8-A architecture and Fujitsu-designed 48-core A64FX processors. Also in use is HBM2 memory and the Tofu Interconnect already in use in the K supercomputer.

Once finished, Post-K will be installed at the same R-CCS campus as the K supercomputer. Will Fujitsu-- and by extension, Japan-- beat the competition from the US and China to reach exascale capabilities?

Fujitsu Completes "Post-K" Supercomputer Design

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Go Fujitsu Post-K