

64bit RISC-V core can operate at up to 5GHz

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Micro Magic in California has designed a 64bit RISC-V processor that can run at a 5GHz clock frequency.

The company claims this is the world's fastest 64-bit RISC-V core although 5GHz exceeds the clock frequency of most mainstream processors.

It is not clear whether this is just a design or what manufacturing process it might be targeting, or is design that has gone to silicon and proved to operate with a 5GHz clock.

The use of so-called overclocking of mainstream x86 architecture processors has produced record speeds above 8GHz but these require liquid nitrogen cooling to extract the tremendous levels of heat generated in such processors.

Micro Magic claims that its design/chip achieves a performance of 13,000 CoreMarks when operating at 1.1V and 5GHz clock frequency. The power consumption was not given. The same core running at 0.8V delivers 11,000 CoreMarks at 4.25GHz clock frequency while only consuming 200mW, the company states in an extremely short press statement.

Micro Magic provides EDA tools for high speed digital design, hardware IP and design services and claims it is the leader in 3D layout tools for through-silicon-vias.

The company was founded in 1995 by engineers who had previously worked on a on a 900ps 16kbyte cache SRAM, the SPARC V9 architecture definition and 300MHz SPARC processor. Although intending to design processors the team ended up developing custom tools before moving into design services. The company was acquired by Juniper Networks Inc. in December 2000 for \$260 million.

In May 2004 the founders of Micro Magic restarted the company and set about producing a completely revised set of EDA tools. The company now builds and licenses out its design tools and uses them in design service contracts.