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Centaur Technology unveils new family of chips to take on Intel

Austin company has been working on power-saving design for four years.

By Kirk Ladendorf
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Tiny Centaur Technology Inc. plans to unveil today a family of computer processors chips, code-named Isaiah, that it hopes will bring wider market acceptance from computer makers.

The first Isaiah chips won't ship until midyear or so, but the Austin engineering company is working with engineering samples, and it is optimistic that they will outperform new chips from industry giant Intel Corp. aimed at smaller, lower-power computing devices such as low-cost desktop computers, laptops and pocket-size mobile computers.

Intel's new low-power chip, called Silverthorne, is also designed in Austin and is expected to ship in small computers in the next few months.

Centaur anticipates that Isaiah will deliver considerably more performance than Silverthorne with about the same level of power consumptions (about 2 watts).

"I'll bet you a case of Diet Tab that it outperforms Silverthorne," said chief executive Glenn Henry, the 65-year-old former IBM Fellow who founded Centaur 13 years ago.

Centaur is the processor design arm of Taiwan-based Via Technologies Inc., which analysts say holds roughly 1 percent of the Windows-compatible processor chips market worldwide.

The Austin company has just 95 workers and only 40 chip design engineers.

Henry is the only manager, and he estimates that he spends 95 percent of his work time on engineering. The key to the company's success, he said, is to hire capable, self-motivated engineers and give them a lot of leeway to manage their own parts of the chip design with minimal management bureaucracy.

The company's veteran engineers typically say it's the best engineering job they've had.

Centaur has designed 11 different chips in its 13 years, but Henry said Isaiah is something special.

"We started with a clean sheet of paper and built something totally new," he said.

The chip is far more complex than Via's current generation of products, and it delivers two to three times the performance.

It also offers some of the advanced features of high-performance chips, including the ability to execute multiple computer instructions at once.

The early versions of the chip will run as fast as 2 gigahertz, which is fast for a chip that uses so little electrical power.

Centaur already is working on two future versions of chips derived from the first Isaiah design, and Henry says the new chip will be the foundation for up to 10 years of Via products. The real trick, Henry said, is to get greater performance from the new chip without using any more electrical power than its predecessor.

The company demonstrated early prototypes of the new chip Wednesday running a 3-D computer game on one computer and playing a high-definition video program on another

The chip was four years in the making, starting with Henry and a few other engineers working on the overall design architecture and the chip's internal software, called the microcode. The company's entire engineering team got involved in the chip in the past year and a half.

"This is a significant improvement over their previous generation, and that makes it a more competitive product in a growing marketplace," said analyst Dean McCarron with Mercury Research in Cave Creek, Ariz.

Now the challenge is to secure more design wins with larger computer makers that can drive product volumes higher.

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Centaur Technology Inc.

CEO: Glenn Henry, former IBM Fellow and former chief technology officer at Dell Inc.

Founded: 1995; bought by Via Technologies Inc. of Taiwan in 1999.

Products: Centaur turns out designs for Windows-compatible processors that Via makes and sells to computer makers.

Employees: 95 people, including a 40-person engineering design team.
