AT A GLANCE

MIPS R12000 to Hit 300 MHz 1

In 1H98, Silicon Graphics will deploy an improved version of the R10000 with a 300-MHz clock and several minor enhancements. The speed increase comes from a new 0.25-micron manufacturing process and a deeper pipeline. But at 17 SPECint95 and 27 SPECfp95, the chip won't match competitive products from HP and Digital.

Editorial: Somerset Has Outlived Its Usefulness 3

With Apple and IBM now the only major customers for desktop PowerPC chips, Motorola should bail out of Somerset and focus on PowerPC for the embedded market.

Most Significant Bits 4

PA-8200 grabs performance lead; AMD samples 0.25-micron K6; IBM planning shrink per quarter for 6x86MX; Tears of a clone, part II; NEC pushes R10000 to 250 MHz; Intel ships multilevel flash technology.

Embedded News 8

Motorola spins embedded 603e for $20; IDT's R4640 reaches 180 MHz, WebTV Plus; Sun acquires Chorus real-time OS; VLSI glues ARM to Oak, ARM7 Hits 120 MHz; Siemens reveals TriCore plans; Galileo chip set adds 64-bit PCI.

Cogency Pushes Asynchronous Logic 10

The first product from Cogency is a fully asynchronous DSP designed for LG Semicon. The stDSP is roughly the same size as a functionally identical synchronous version but uses 47% less power.

NEC R4111 Boosts Speed of Windows CE 13

The new NEC chip is a pin-compatible upgrade of the R4102 that boosts performance to 100 MHz while reducing power usage. It also includes the MIPS-16 code-compression module.

iReady Makes Silicon Internet Interface 14

Startup iReady has taken an unusual approach to network connectivity, developing a state machine that implements protocols such as TCP/IP and basic HTML without a CPU or any software.

Asynchronous Design Shows Promise 18

Extensive research into building chips without clocks shows the potential for significantly decreasing power consumption without sacrificing cost or performance. The design issues are daunting, however. Complete chips that are asynchronous will be few and far between, but more products may include small clockless circuits.

The Slater Perspective: MIPS to Fade Away on Desktop 23

SGI's recent announcement that it will add Intel-based workstations to its lineup puts it on a slippery slope that will restrict MIPS to ever-smaller high-end niches.

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EMBEDDED

MICROPROCESSOR REPORT

Founder and Editorial Director
Michael Slater
mslater@mdr.zd.com

Publisher and Editor in Chief
Linley Gwennap
linley@mdr.zd.com

Senior Editors
Jim Turley, jturley@mdr.zd.com
Peter Song, psong@mdr.zd.com

Senior PC Analyst
Peter N. Glaskowsky
png@mdr.zd.com

Associate Editor: Kathy Acuff

Editorial Board
Dennis Allison, Rich Belgard
Brian Case, Jeff Deutsch
Dave Epstein, Don Gaubatz
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Nick Tredennick, John F. Wakerly

Editorial Office
298 S. Sunnyvale Avenue
Sunnyvale, CA 94086-6245
Phone: 408.328.3900 **Fax:** 408.737.2242

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MICRODESIGN RESOURCES

President: Peter Christy
pchristy@mdr.zd.com

Business Office
874 Gravenstein Hwy. So., Suite 14
Sebastopol, CA 95472
Phone: 707.824.4004 **Fax:** 707.823.0504
Subscriptions: 707.824.4001
cs@mdr.zd.com

World Wide Web: www.MDRonline.com

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