

**Digital's 21164 Reaches 500 MHz** . . . . . 1  
 By erasing Intel's IC process lead, Digital has moved its 21164 well ahead of Pentium Pro, as well as other RISC chips, in performance. The 500-MHz device, now sampling, delivers more than 13 SPECint95 and more than 18 SPECfp95. The chip should keep Digital in the performance lead for at least the next 12 months. Pentium Pro retains a sizable price/performance advantage for mainstream systems.

**Editorial: Intel's Network Computer Dilemma** . . . . . 3  
 Intel is publicly ignoring the fledgling NC, but if the low-cost platform picks up speed, Intel could be caught with its head in the sand.

**Most Significant Bits** . . . . . 4  
 Samsung to supply Alpha chips; Intel accelerates 0.25-micron efforts; AC '97 defines audio I/O standard; NEC rolls R4101 for handheld units; Hyatt rejected as inventor of microprocessor; Errata: PA-8000 photo, 1-GHz DAC.

**Intel Updates Its iCOMP Index** . . . . . 6  
 Intel's in-house performance rating has been updated. The new version, iCOMP 2.0, includes no 16-bit code and adds a multimedia benchmark. These changes will improve the scores of forthcoming devices such as the P55C and the P6-based Klamath. Other x86 vendors will probably continue to ignore iCOMP, which exists mainly to serve Intel's marketing needs.

**ARC Core Gives ASICs Programmability** . . . . . 8  
 British firm Argonaut Technologies has developed a customizable ASIC core processor, dubbed ARC, that can be implemented in 16,000 gates. Although the processor has only 16 major opcodes, its instruction set is similar to that of MIPS or other simple RISCs. Customers can add their own features and instructions to the VHDL description, a potential advantage for some applications.

**Teknema Divulges Internals of Net Box** . . . . . 10  
 Teknema has designed a Web terminal that can be built for less than \$200. Like the Oracle NC, Teknema's Easy Rider is built around the highly integrated ARM7500. The Silicon Valley startup has developed its own operating system and browser; it will work with an unnamed distributor to market the systems later this year.

**Viewpoint: Integration Challenges PC Architects** . . . . . 13  
 Consultant Mike Webb sees 100-million-transistor chips becoming common in just a few years. These "GigaChips" will enable highly integrated processors, core logic—even systems on a chip. While some combinations of functions are more attractive than others from a technical standpoint, a key business consideration is whether vendors will be able to pull together the necessary design expertise.

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Microprocessor Report is published every three weeks, 17 issues per year. Rates are: N. America: \$495 per year, \$895 for two years. Europe: £375 per year, £645 for two years. Elsewhere: \$595 per year, \$1,095 for two years. Additional copies in the same envelope: \$175 per year in North America, \$225 elsewhere. Back issues are available.

**Published by**



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**Winner, Computer Press Award, 1993, 1994**



Printed on recycled paper with soy ink.