

AT A GLANCE

New Embedded CPU Goes ShBoom 1
 Patriot Scientific's PSC1000 is the first device to implement the ShBoom architecture, an unusual stack-based instruction set. By operating mainly on the top of stack, the instructions avoid operand specifiers, allowing them to fit into 8 bits. These tiny instructions in turn reduce code space. At \$20 and about 20 Dhrystone MIPS, the chip sets no price/performance records; Patriot believes the stack-based design will perform well on Java applications, however. The company expects to sample the PSC1000 in the next few months.

Editorial: Intel Takes a Breather 3
 Intel's pace of product introductions will slow in the coming months, with nothing much planned before the introduction of the P55C late this year. As the Pentium family nears maturity, Intel's average selling price (ASP) for PC processors is falling, causing revenue growth to slow. The introduction of new P6-family parts in 1997, however, will raise both the ASP and revenue growth.

Most Significant Bits 4
 HP grabs performance lead; Digital developing low-cost 21164; Cyrix PCs debut; AMD advances Elan with SC310; AGP to provide new graphics connection; 3DO licenses technology to Cirrus; Intel delivers docking chips.

Intel's i960 Loses Its Luster 11
 Once the leader in 32-bit embedded RISC sales, the i960 has fallen to number two in 1995 and is likely to be no better than third in 1996. The company's initial success was in laser printers, but this market is maturing while the growth is coming from emerging consumer devices such as video games. Intel's current products are too expensive and power-hungry for these consumer devices, locking them out of these design wins. Intel is scrambling to reposition its i960 line, but it looks like the company may be too late to ride the wave of new consumer products.

Viewpoint: Java Virtual Machine Should Stay Virtual 14
 Sun Microelectronics has proposed a plan to build microprocessors that directly execute the Java instruction set. Brian Case points out that this plan has many drawbacks and should be scrapped. Java runs just fine on general-purpose processors using just-in-time compilation techniques, whereas a Java chip would be unable to execute non-Java code. Thus, the volume of Java chips is likely to be far smaller than that of general-purpose devices, and economies of scale will hamper the Java chips. A better approach would be to enhance a standard processor core with a few Java acceleration instructions.

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MICROPROCESSOR REPORT

Publisher and Editorial Director
 Michael Slater
 E-mail: mslater@mdr.zd.com

Editor in Chief
 Linley Gwennap
 E-mail: linley@mdr.zd.com

Senior Editor
 Jim Turley
 E-mail: jturley@mdr.zd.com

Senior Analyst
 Yong Yao
 E-mail: yyao@mdr.zd.com

Editorial Assistant: Suzanne Gifford

Editorial Board

Dennis Allison	Rich Belgard
Brian Case	Dave Epstein
John Novitsky	Bernard L. Peuto
Nick Tredennick	John F. Wakerly

Editorial Office
 480 San Antonio Rd., Suite 210
 Mountain View, CA 94040
Phone: 415.917.3050 **Fax:** 415.917.3093

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President: Michael Slater

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

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