

Literature Watch

Buses

Bus extenders and expanders alleviate IEEE-488 restrictions.

Laura Golla, National Instruments, Personal Engineering and Instrumentation News, 6/93, pg 49, 4 pgs.

Development Tools

Fuzzy software tool competition heats up.

Tom Williams, Computer Design, 6/93, pg 38, 3 pgs.

Mixed-signal simulation: best of both worlds? Potential users must consider several interacting factors that encompass the entire design environment. Dündar Dumlüoglu, David Reed, Cadence Design Systems; Electronic Products, 6/93, pg 27, 6 pgs.

Denser, faster FPGAs vie for gate-array applications. Improved architectures and higher-density processes boost FPGA complexities and speeds. Dave Bursky, Electronic Design, 5/27/93, pg 55, 11 pgs.

ESDA boosts productivity for high-level design. Use electronic system design automation to graphically interact with data and verify high-level descriptions before synthesis. Lisa Maliniak, Electronic Design, 5/27/93, pg 125, 3 pgs.

CAD system for ASICs unites RF and IC domains. Single tool set integrates fast analog, digital, and mixed-signal circuits for wireless communications. Milt Leonard, Electronic Design, 5/27/93, pg 135, 3 pgs.

Memory

Specialty SRAM combines best of dual-port SRAMs and FIFOs. Jeffrey Child, Computer Design, 6/93, pg 34, 2 pgs.

RISC and Pentium drive demand for SRAMs that are fastest of the fast. Jeffrey Child, Computer Design, 6/93, pg 101, 6 pgs.

High-performance DRAMs. Manufacturers have developed several techniques to keep DRAMs in step with ever-faster microprocessors. David W. Bondurant, Ramtron; Electronic Products, 6/93, pg 47, 5 pgs.

Miscellaneous

Packaging innovations help engineers break free from design constraints. Mike Donlin, Computer Design, 6/93, pg 65, 5 pgs.

High-performance semiconductors. Bob Nunn, Vitesse Semiconductor, Computer Design, 6/93, pg 121, 8 pgs.

Why miserable part shortages continue. Insufficient capacity, poor forecasts, and the current PC boom are creating havoc for IC buyers — yet again! Carol Rosen, Electronics Purchasing, 6/93, pg 51, 2 pgs.

Drying up. Despite another round of UNIX unification, workstation vendors still face the one-two punch of Intel's Pentium chip and Microsoft's Windows NT operating system. Here's what's likely to happen. Gary Andrew Poole, UnixWorld, 7/93, pg 47, 3 pgs.

Peripheral Chips

GaAs/CMOS cache chip set powers 66-MHz CPUs. Attain zero-wait-state performance for 66-MHz Pentiums with a GaAs cache controller and a CMOS datapath buffer. Dave Bursky, Electronic Design, 5/27/93, pg 43, 4 pgs.

MPEG audio decoder chip delivers compression and CD-quality sound. Jack Shandle, Electronic Design, 5/27/93, pg 139, 1 pg.

Processors

Architecture of the Pentium microprocessor. Donald Alpert, Dror Avnon, Intel Corporation; IEEE Micro, 6/93, pg 11, 11 pgs.

The Alpha AXP architecture and 21064 processor. The 21064 microprocessor is the first Alpha AXP implementation. Operating at speeds up to 200 MHz, this chip serves as the heart for current systems that offer the highest microprocessor-based performance in the industry. Edward McLellan, Digital Equipment Corporation; IEEE Micro, 6/93, pg 36, 12 pgs.

Performance features of the PA7100 microprocessor. Jeff Yetter, et al., Hewlett-Packard; IEEE Micro, 6/93, pg 22, 14 pgs.

Sparcle: an evolutionary processor design for large-scale multi-processors. Working jointly at MIT, LSI Logic, and Sun Microsystems, designers created the Sparcle processing chip. Anant Agarwal, et al., MIT Laboratory for Computer Science; IEEE Micro, 6/93, pg 48, 14 pgs.

SPARCs fly as RISC race heats up. The second and third generation of boards and subsystems from third party vendors built around the HyperSPARC and SuperSPARC are emerging. Warren Andrews, Computer Design, 6/93, pg 46, 2 pgs.

Programmable Logic

Get to the market faster with

FPGAs. Ware Myers, IEEE Micro, 6/93, pg 73, 2 pgs.

What can users of programmable logic devices expect from PREP benchmarks? Can you trust PREP's suite of standard benchmarks for FPGAs and complex PLDs? Are the capacity and performance numbers a reflection of reality? What don't the benchmarks address? Barbara Tuck, Computer Design, 6/93, pg A21, 5 pgs.

System Design

Sun's serious server. Sun's new server is a small SPARCcenter in a tall pizza box. Also, TI's SuperSPARC+ gets Sun back in the race. Mark Cappele, Shalini Chatterjee, SunWorld, 6/93, pg 13, 4 pgs.

Graphics system rivals supercomputer performance. Mike Donlin, Computer Design, 6/93, pg 90, 3 pgs.

A dynamic processor allocation policy for multiprogrammed shared-memory multiprocessors. Cathy McCann, Raj Vaswani, John Zahorjan, University of Washington; ACM Transactions on Computer Systems, 5/93, pg 146, 33 pgs.