

## Literature Watch

## Buses

**Avoiding VMEbus board incompatibilities.** Despite a well-established standard, VMEbus boards may fail in an intense, multiprocessing environment because of the VMEbus' liberal specifications. Jeff Durst, Heurikon Corp.; Electronic Products, 4/93, pg 65, 4 pgs.

**Processor independence reaches VME.** Warren Andrews, Computer Design, 4/93, pg 33, 4 pgs.

## Development Tools

**System designers face hard choices when forging simulation strategies.** As traditional methods of circuit board prototyping and debugging become obsolete, PCB designers are turning to simulation to ensure quality and verify functionality. But choosing the right tools for the job can be a confusing and time-consuming project. Mike Donlin, Computer Design, 4/93, pg 62, 6 pgs.

## DSPs

**Development of a multichip module DSP.** A highly modular processor architecture based on off-the-shelf components supports an MCM design implementation that delivers 400 million floating-point operations per second in a 75-gram package. Robert K. Scannell, John K. Hagge, Rockwell International; Computer, 4/93, pg 13, 9 pgs.

## Memory

**High-speed DRAMs for high-performance PCs.** Vendors rush to ramp up production of four new types of memory chips. They could replace today's DRAM designs. Bill Arnold, Electronic Business, 4/93, pg 95, 2 pgs.

## Miscellaneous

**Design for packageability.** Early consideration of packaging from a VLSI designer's viewpoint. Peyman H. Dehkordi, Perceptics/Westinghouse Corp.; Donald W. Bouldin, University of Tennessee; Computer, 4/93, pg 76, 6 pgs.

**Trends in low-cost, high-performance substrate technology.** Reducing interconnection cost and production time through use of multichip modules. David H. Carey, Microelectronics and Computer Technology Corp.; IEEE Micro, 4/93, pg 19, 9 pgs.

**Return of seller's market has distributors smiling.** A snapshot of 1992 and preview of 1993; who's on top and who's not in the top 100; distributors' vital statistics; guide to the biggies; Arrow's 11 tips for using distributors; Bull's distributors do (almost) everything; take Avnet's sourcing IQ test. Fred Gardner, Electronics Purchasing, 4/93, pg 29, 21 pgs.

**Designing with superconductors.** Superconducting microwave ICs can usefully outperform far larger devices, despite the cost of cooling them to liquid nitrogen temperatures. Robert B. Hammond, et.al., IEEE Spectrum, 4/93, pg 34, 6 pgs.

**Everything you always wanted to know about fuzzy logic.** David I. Brubaker, The Huntington Group; EDN, 3/31/93, pg 103, 4 pgs.

## Processors

**Intel's Pentium finally arrives, complete with local bus and multi-processor support chips.** Ray Weiss, EDN, 3/31/93, pg 66, 3 pgs.

**Processor, chip set take computing to new heights.** Superscalar Pentium processor runs at 66 MHz, while an accompanying chip set pushes data across the PCI local bus. Richard Nass, Electronic Design, 4/1/93, pg 92, 4 pgs.

## Programmable Logic

**FPGA, complex PLD vendors rush to support silicon with advanced tools.** Barbara Tuck, Computer Design, 4/93, pg 28, 3 pgs.

**FPGA extends MC68HC000 data hold time.** Chuck Rushing, 3M; EDN, 3/31/93, pg 109, 1 pg.

**Logic emulator meets the demands of CPU designers.** An emulation system caters to team-based CPU design with modular 1-million-gate units and a parameterizable memory module. Lisa Maliniak, Electronic Design, 4/1/93, pg 36, 4 pgs.

## System Design

**The Alpha AXP in server dimensions.** With the 160-MHz Alpha chip, Digital Equipment Corp.'s AXP systems provide lightning-fast performance. Our review looks at the 3000/500S AXP server for departmental networks. Alan Southerton, Edwin C. Perkins Jr., UnixWorld, 5/93, pg 98, 4 pgs.

**SPARCstation LX: Sun's next generation shines.** LX is a worthy successor to the top-selling IPX. All it needs is software. Dave Taylor, SunWorld, 4/93, pg 55, 6 pgs.

**A multichip module design process for notebook computers.** This article examines the packaging-system design process, with application to choosing an MCM card for a 386SL notebook computer. Paul D. Franzon, North Carolina State University; Robert J. Evans, IBM Personal Computer Company; Computer, 4/93, pg 41, 9 pgs.

**3.3-V ICs save power today, offer performance gains tomorrow.** Goodbye 5-V! Driven by the quest for longer battery life in portables, the 3.3-V revolution is driving smaller process geometries and faster, quieter I/O schemes tomorrow. Don Tuite, Computer Design, 4/93, pg 79, 6 pgs.

**Sparc-based CPU board lassoes MicroSparc power.** SBus board design allows users to easily migrate Solaris 1.X applications to Solaris 2.X. Richard Nass, Electronic Design, 4/1/93, pg 90, 2 pgs.

**Fuzzy-logic control system.** Designing a ferryboat docking system using both conventional control equations and fuzzy logic shows you the strengths and limitations of both technologies. Doug Conner, EDN, 3/31/93, pg 77, 9 pgs.