

Literature Watch

ASICs

ASIC family adds antifuse field programmability to library. Richard A. Quinnell, EDN, 11/12/92, pg 75, 1 pg.

Buses

Small, smart PC cards strive for compatibility. They're not just for memory anymore. PC cards—modules not much bigger than credit cards—now contain modems, faxes, LAN adapters, and even disk drives. Unfortunately, similar cards from different vendors aren't always interchangeable. Gary Legg, EDN, 10/29/92, pg 49, 5 pgs.

Development Tools

More logic synthesis for ASICs. Hardware description languages are key to easing the data entry tasks of ASIC designers. Michael J.S. Smith, University of Hawaii; IEEE Spectrum, 11/92, pg 44, 4 pgs.

Designing mixed-signal ICs. Designers often confront complex challenges when including both analog and digital designs on the same IC substrate. Ramesh Harjani, University of Minnesota; IEEE Spectrum, 11/92, pg 49, 3 pgs.

Multiplexing enhances hardware emulation. Software innovations combined with dedicated IC's and a multiplexed architecture boost emulation capacity to 6 million gates. Lisa Maliniak, Electronic Design, 11/2/92, pg 76, 2 pgs.

Tools for embedding DSP. As the applications of embedded DSP designs increase, so do the number and scope of development tool packages. Robert W. Robison, Southwest Research Institute; IEEE Spectrum, 11/92, pg 81, 3 pgs.

Mixed-signal simulation searches for answers. For mixed-signal system modeling to mature, silicon IC suppliers, CAE vendors, and users must all recognize model cost and value. Frank Goodenough, Electronic Design, 11/12/92, pg 37, 9 pgs.

Memory

BiCMOS process yields 66-MHz 1Mbit SRAMs. Jon Campbell, Electronic Design, 11/12/92, pg 122, 2 pgs.

Miscellaneous

Microsoft and Windows NT take on the world ...again! Rick Whiting, Electronic Business, 11/92, pg 43, 6 pgs.

SPARC update—Sun sells 'limited edition' SPARCstation 10, clones still waiting for TI. SPARCstation 10/20 uses 33-MHz SuperSPARC processor. Shalini Chatterjee, SunWorld, 11/92, pg 30, 4 pgs.

Peripheral Chips

Chip set simplifies the design of Pen-Based PCs. A trio of chips bids to simplify the pen-interface portion of the latest pocket and palmtop computers with electrostatic digitizers. Dave Bursky, Electronic Design, 11/2/92, pg 80, 3 pgs.

Unsurpassed flexibility heralds clock generator. Offering almost unlimited timing options, a flexible clock generator eliminates skew and clock-distribution issues. Dave Bursky, Electronic Design, 11/12/92, pg 63, 3 pgs.

Dual-processor SCSI chip improves system response. A 16-bit RISC core and a smart SCSI control block team up with an SBus interface to cut system overhead and simplify designs. Dave Bursky, Electronic Design, 11/12/92, pg 118, 3 pgs.

2-chip set for FDDI cards handles fiber optics or twisted-pair wire. Richard A. Quinnell, EDN, 10/29/92, pg 82, 1 pg.

Processors

Intel's 586 strategy: it's always been US versus THEM. Intel helped ignite the PC revolution with its 8088 processor. Will the 586 prompt lightning to strike twice? Valerie Rice, Electronic Business, 11/92, pg 53, 4 pgs.

Single-chip PC searches for a market. ASIC and chip set vendors are pairing off with microprocessor houses to develop low-power, highly integrated PC-on-a-chip packages for markets they hope will materialize. David Webb, Electronic Business, 11/92, pg 145, 3 pgs.

Hitachi H8/570 μ C teams CPU and 64-bit I/O subprocessor with abundant I/O hardware. Steven H. Leibson, EDN, 10/29/92, pg 86, 2 pgs.

System Design

Chip sets help bring PC architectures to embedded control. The IBM-PC architecture offers many advantages as the core of an embedded-control design. However, unless you have special needs, designing with PC chip sets can be more trouble than it's worth. Richard A. Quinnell, EDN, 10/29/92, pg 65, 5 pgs.

Speed system operation by matching CPU to need. Understanding the many forms of context switching is the key to maximizing RISC performance in embedded-system applications. Daniel Mann, Advanced Micro Devices; Electronic Design, 11/2/92, pg 44, 8 pgs.

Signal processing. Designing an optimum signal-processing system means choosing components, both analog and digital, based on their relative strengths. Traditional—but not necessarily archaic— analog components can speed up systems and reduce complexity. Anne Watson Swager, EDN, 11/12/92, pg 109, 10 pgs.

Architectural choices provide the key to reliable fixed-point filters. Fixed-point DSP μ Ps offer significant cost-performance advantages over their floating-point counterparts when creating digital filters. Unfortunately, fixed-point filters can yield poor performance if improperly implemented. Fred J. Taylor, University of Florida; Glenn S. Zelniker, Monica A.B. Murphy, Henry A. Gancedo, The Athena Group Inc.; EDN, 11/12/92, pg 159, 8 pgs.