

Literature Watch

Buses

Major board vendors keep up with shift from traditional bus-based systems. Warren Andrews; Computer Design, 7/92, pg 44, 3 pgs.

Development Tools

Develop large-scale embedded designs. Switching from 8-bit to 32-bit projects involves more than just scaling up the work. Steve Dearden, Applied Microsystems Corporation; Electronic Design, 6/11/92, pg 96, 5 pgs.

Getting the most out of a logic analyzer. Balancing triggering capability and memory depth can greatly speed the debugging process. Robert Twete, Tektronix, Inc.; Electronic Products, 7/92, pg 37, 3 pgs.

Logic analyzers tackle the "deeper" problem. Jeffrey Child; Computer Design, 7/92, pg 101, 5 pgs.

Testing the SCSI bus— an overview. A wide variety of SCSI testers is available, ranging in price from a few hundred dollars to tens of thousands of dollars. Thom Steury, Pacific Electro Data, Inc.; Electronic Products, 7/92, pg 47, 3 pgs.

Tool suite targets 32-bit microcontrollers. Tom Williams; Computer Design, 7/92, pg 38, 3 pgs.

Memory

Detect/correct errors to improve data reliability. Expanding memory intensity makes choosing and implementing the appropriate EDC scheme critical. Anupama Hedge, Integrated Device Technology, Inc.; Electronic Design, 6/11/92, pg 75, 6 pgs.

Miscellaneous

Approaching the quantum limit. In devices with features smaller than 0.1 micrometer, electrons behave more like waves in

waveguides than like particles. Karl Hess, University of Illinois & Gerald J. Iafrate, U.S. Army Research Office; IEEE Spectrum, 7/92, pg 44, 6 pgs.

DSP for motion control: analog movements go digital with DSP. J.D. Mosley; EDN, 6/18/92, pg 51, 4 pgs.

Fuzzy logic finally gains acceptance in the U.S. The technology is built into many of the products we use everyday, but only now is it making a move to the forefront. Richard Nass; Electronic Design, 6/25/92, pg 37, 4 pgs.

Fuzzy logic flowers in Japan. Born in the United States in the 1960's the fuzzy logic approach is now catching on for many control and other applications. Daniel G. Schwartz, Florida State University, & George J. Kir, State University of New York at Binghamton; IEEE Spectrum, 7/92, pg 32, 4 pgs.

Fuzzy-logic basics: intuitive rules replace complex math. Although "fuzzy logic" may seem to imply imprecision, it's based on a reliable and rigorous discipline. Fuzzy logic lets you accurately describe control systems in words instead of complicated math. David I. Brubaker, The Huntington Group; EDN, 6/18/92, pg 111, 5 pgs.

Fuzzy-logic system solves control problem. Complex, nonlinear control problems can yield to simple fuzzy-logic techniques that require no modeling. Although fuzzy logic does not produce an analytic solution, you can verify the solution's validity using simulation. David I. Brubaker, The Huntington Group, and Cedric Sheerer, C/S Associates; EDN, 6/18/92, pg 121, 7 pgs.

High-performance networks challenge Ethernet. Warren Andrews; Computer Design, 7/92, pg 77, 10 pgs.

The enduring appeal of consulting. Independent consulting has its drawbacks, but for some engineers it's the only way of life. Jay Fraser; EDN, 6/18/92, pg 205, 4 pgs.

Peripheral Chips

Application note: Inmos colour look-up tables. An introduction to colour look-up tables is given with reference to the Inmos G17x family, including examples of pin designations, troubleshooting and RFI minimization. Inmos Ltd.; Microprocessors and Microsystems, v16#1, 92, pg 37, 13 pgs.

Comm controller handles 8 channels simultaneously. Multiprotocol controller chip for telecom and datacom applications offers big savings in cost, power, and board space. John Gosch; Electronic Design, 6/11/92, pg 117, 2 pgs.

Processors

16-bit microcontroller upgrades to 20-MHz clock, 32-kbyte ROM. Ray Weiss; EDN, 6/18/92, pg 81, 2 pgs.

How DEC developed Alpha. Bringing a new computer architecture into existence was for Digital Equipment Corporation, a critical necessity that radically changed the firm. Richard Comerford; IEEE Spectrum, 7/92, pg 26, 6 pgs.

SPARC scales up. New superpipelined and superscalar RISC designs provide mixed bag of benefits. Ken Marrin, Marrin-Davis Communications; SunWorld, 7/92, pg 82, 6 pgs.

Superscalar SPARC chips offer performance gains, compatibility. Tom Williams; Computer Design, 7/92, pg 32, 3 pgs.

The world of 8- and 16-bit microcontrollers. From meager beginnings, microcontrollers have evolved into a wide range of diverse processors. Ray Weiss; EDN, 6/18/92, pg 90, 11 pgs.