

LITERATURE WATCH

ASICS

The challenge of verifying a synthesizable core. Whether you build your own core or purchase one from a core provider, you need to be aware of the steps involved in verifying a synthesizable core. Thomas L. Anderson, Virtual Chips; *Computer Design*, 7/96, p. 69, 3 pp.

AUDIO/VIDEO

MPEG-2 decompression board puts real-time video on the PC. The Zantares board is based on the VxP505 video processor from AuraVision and the TC81200F video decoder from Toshiba. Richard Nass, *Electronic Design*, 7/8/96, p. 157, 2 pp.

Image-processing architectures take new twists. Some vendors use hardwired designs while others rely on high-end DSPs or CPUs like the i860. Jeff Child, *Computer Design*, 7/96, p. 53, 8 pp.

\$59 videoconferencing PCI reference design. Zoran and DSP Group have joined forces to deliver a videoconferencing reference design called EyeWay95. Ray Weiss, *Computer Design*, 7/96, p. 108, 2 pp.

Filter IC eliminates need for precision and discrete parts. The Micro Linear ML6423 provides a low-cost sixth-order video filter. Paul McGoldrick, *Electronic Design*, 7/22/96, p. 143, 2 pp.

BUSES

New fieldbus standard a mixed blessing. EN 50170 is a European standard combining Profibus, World FIP, and P-Net. Jeff Child, *Computer Design*, 7/96, p. 28, 2 pp.

Serial link breaks the I/O bottleneck. Fibre Channel offers high speed without the baggage associated with parallel links. Karen O'Connell, Tom Harrington, LSI Logic; *Electronic Design*, 7/22/96, p. 124, 5 pp.

Ten ways to bulletproof RS-485 interfaces. RS-485 provides a low-cost bidirectional multipoint interface that supports high noise rejection, fast data rates, long cables, and a wide common-mode range. John Goldie, National Semiconductor; *EDN*, 8/1/96, p. 141, 8 pp.

DEVELOPMENT TOOLS

CPLD/FPGA tools strive to stand out. New CAD tools from Aldec, Orcad, and others handle programmable devices. Mike Donlin, *Computer Design*, 7/96, p. 24, 2 pp.

MISCELLANEOUS

It's not your father's television anymore. Although the FCC jury is out, the specs are in and the technology is ready for advanced TV. Clifford Meth, *Electronic Design*, 7/22/96, p. 48, 4 pp.

PERIPHERALS

Available Bit Rate bridges the gaps in ATM networks. ATM networks have yet to live up to promises of bandwidth on demand and quality of service. A new ATM Forum standard and forthcoming ICs offer hope, however, and a new flow-control scheme, ABR, could optimize bandwidth usage in typical ATM networks. Stephen Kempainen, *EDN*, 8/1/96, p. 87, 9 pp.

Single IC stores and plays back four minutes of voice. Information Storage Devices' ISD33000 is a nonvolatile analog memory that runs at just 2.5 V. Frank Goode-nough, *Electronic Design*, 7/22/96, p. 67, 5 pp.

PROGRAMMABLE LOGIC

CPLD market could jump to \$800 million by 2000. A survey of available CPLDs. John H. Mayer, *Computer Design*, 7/96, p. 116, 5 pp.

Low-complexity programmable logic delivers top speed. Still delivering the shortest propagation delays, PLDs continue to offer advantages. Dave Bursky, *Electronic Design*, 7/22/96, p. 79, 8 pp.

SYSTEM DESIGN

Use simulation to spot and fix EMI problems. Reducing board-level EMI is the most cost-effective approach to meeting overall system-level EMC goals. Cheung-Wei-Lam, Jon Powell, Quad Design Technology; *Electronic Design*, 7/22/96, p. 95, 7 pp.

New architectures lead the way. A variety of technologies are used in multiprocessor systems, including MBus, C-Bus II, SCI, and Sun's UPA. Maury Wright, *EDN*, 7/18/96, p. 36, 9 pp.

Chip hardware and software: Why can't they just get along? Everyone is talking about hardware/software codesign, but few companies are doing much about it. Jim Lipman, *EDN*, 7/18/96, p. 75, 8 pp.

Noise budgets help maintain signal integrity in low-voltage systems. A peaceful coexistence of CMOS and low-voltage I/O logic, such as 1.5-V GTL, requires system designers to pay close attention to noise budgets. Greg Edlund, Chen Systems; *EDN*, 7/18/96, p. 111, 10 pp.

Early simulation eases system design. Using high-level simulation tools can ease late design headaches. Mike Donlin, *Computer Design*, 7/96, p. 45, 4 pp.

Building FIR filters in programmable logic. PLDs with lookup-table architectures are suited to the implementation of math-intensive functions. Martin S. Won, Caleb Crome, Altera; *Embedded Systems Programming*, 8/96, p. 48, 8 pp.

Hot docking: a new world of on-demand, powered-up desktop connections. To penetrate the desktop market, cooperative engineering between system-software, hardware, and operating-system providers will be needed. Robert F. Angelo, SystemSoft; *Portable Design*, 7/96, p. 25, 2 pp.

Echo-canceller design ensures hands-free, high-fidelity telephony. This circuit uses two PCM codecs and two echo-cancellation ICs, one of which cancels echoes on the acoustic side and one of which cancels echoes on the line side. Jamal Sarma, Oki Semiconductor; *EDN*, 8/1/96, p. 131, 3 pp.