AUDIO/VIDEO

Set-top-box chip sets evolve for digital TV. DTV vendors are offering flexible chip sets and reference designs, so innovative designers can customize TV peripheral products for the big wave in DTV consumerism. Stephen Kempainen, 4/9/98, *EDN,* 4/9/98 p. 97, 9 pp.

Use programmable DSPs for cost-effective PCI digital audio design. Balancing the workload between host CPUs and DSP accelerators brings performance closer to that of dedicated hardware accelerators. Jeffrey Barish, EuPhonics, and John Croteau, Analog Devices; *Electronic Design,* 4/20/98, p. 44, 4 pp.

DSP

DSP-architecture directory. EDN's annual DSP directory is packed with details of 27 general-purpose DSP architectures. Markus Levy, *EDN,* 4/23/98, p. 40, 34 pp.

An introduction to digital signal processors. For those of you who have been dog-paddling through recent DSP articles, here's a basic orientation to keep you in the swim. Jack G. Ganssle, *Embedded Systems Programming,* 5/98, p. 24, 6 pp.

Focus report: digital signal processors. Fierce competition across an expanding field of applications has DSP vendors fine-tuning features, consolidating functions, and otherwise pushing the price/performance envelope for 16-bit fixed-point units. Gil Bassak, *Integrated System Design,* 5/98, p.52, 9 pp.

IC DESIGN

Hardware design and software tools grow from one source. Processor architecture can be defined at the same time designers create the tools to write the code. Tom Williams, *Electronic Design,* 3/23/98, p.44, 4 pp.

Graphical HDL tools promote accuracy through better communication. A unified graphical environment reduces errors and enhances communications among system engineers, designers, synthesis experts, and managers. Roger Zinszner, Speed Electronic; and Jergen Wolf, Siemens Semiconductor; *Integrated System Design,* 5/98, p. 38, 6 pp.

Adopting VHDL for PLD design and simulation. As your designs become more complicated, it becomes more efficient to use hardware description languages, such as VHDL. Troy Scott, OrCad; *EDN,* 4/9/98, p. 139, 7 pp.

MEMORY

Optimized DRAMs deliver top-notch performance. RDRAMs, SGRAMs, DDR SGRAMs, and new memories answer the demand for faster speeds at lower power. Dave Bursky, *Electronic Design,* 3/23/98, p. 89, 7 pp.

MISCELLANEOUS

Fibre channel finally fills the gap in I/O subsystems. After a decade of development and waiting in the wings, Fibre Channel appears poised for deployment—delivering 100-Mbyte/sec data rates in storage and networking subsystems. Maury Wright, *EDN,* 4/9/98, p. 59, 8 pp.

Next-generation cellular technologies: convergence or chaos? Competing standards and uncertain technologies characterize efforts to deliver third-generation wireless services with the promise of an advanced global network on the horizon. Lee Goldberg, *Electronic Design*, 4/20/98, p. 69, 8 pp.

Lower costs open new application areas for CCD, CMOS image sensors. In the field of solid-state imaging, mature charge-coupled-device (CCD) sensors are being challenged CMOS. Charles H. Small, *Computer Design*, 4/98, p. 37, 6 pp.

PERIPHERAL CLIPS

DVD drive functionality packs into a single chip. High integration helps single-chip drive manager increase performance while reducing cost and design complexity. Lisa Maliniak, *Electronic Design*, 4/6/98, p. 122, 2 pp.

PROGRAMMABLE LOGIC

Get ready for reconfigurable computing. Market forces in the embedded arena will make it worthwhile for designers to tap the added performance offered by flexible hardware optimized to run particular algorithms at low power. Nick Tredennick, *Computer Design*, p. 55, 7 pp.

Implementing a DSP in programmable logic. The numerous advantages of PLDs allowed designers at Kaytronics to create an easily modifiable DSP for system-on-a-chip designs. Martin Langhammer. *isd*, 5/98, p. 14, 5 pp.

PROCESSORS

Performance simulation of an Alpha microprocessor. Modern microprocessor architectures are the result of invention and progressive refinement guided by the performance model described here. Matt Reilly, Digital, and John Edmondson, Analog Devices; *Computer*, 5/98, p. 50, 9 pp.

Information appliances: from Web phones to smart refrigerators. Embedded information processors are spawning many unexpected applications as they use LAN and Internet protocols to communicate across almost any network. Lee Goldberg, *Electronic Design*, 3/23/98, p. 69, 8 pp.

High-integration controller tackles automotive and industrial needs. Based on the PowerPC, this RISC CPU packs 448 Kbytes of flash and is a complete data-acquisition and control system. Dave Bursky, *Electronic Design*, 4/6/98, p. 40, 5 pp.

SYSTEM DESIGN

Printed-circuit board changes enable new design possibilities. Designers must cope with an evolving market and understand complex advances in PC-board technology. Cheryl Ajluni, *Electronic Design,* 4/6/98, p. 83, 6 pp.

Sockets and adapters keep pace with latest chips. High-pin-count sockets and adapters ease prototyping and testing of today's ICs. Spencer Chin, *Electronic Products,* 5/98, p. 57, 4 pp.