AUDIO/VIDEO

Small and mid-size flat-panel displays heat up the mainstream. New choices for thin graphics displays expand the number of options available for designers. Chris Chinnock, *Electronic Design*, 8/17/98, p. 44, 5 pp.

Image processing boards leverage PCI and multimedia technology. Cost and performance benefits of PCI and MMX are pushing VME and proprietary designs into smaller niches. Jeff Child, *Electronic Design*, 7/20/98, p. 77, 7 pp.

BUSES

Fibre channel ready for the big time. Multimedia applications and the extending reach of distributed computing architectures are putting the squeeze on today's transport technologies to move larger blocks of data faster—and over longer distances. Vincent Biancomani, *RTC*, 8/98, p. 49, 4 pp.

DEVELOPMENT TOOLS

SOC and deep-submicron technology drive new DFT strategies. Designers look to ATPG, boundary scan, and various flavors of BIST to test increasingly complex ICs. In this age of deep-submicron geometries and system-on-a-chip (SOC) ICs, design-for-test (DFT) faces serious challenges. To meet them head on, DFT companies are developing new test tools and employing older tools in new ways. Joseph Desposito, *Electronic Design*, 8/3/98, p. 49, 7 pp.

DSP

Motorola woos Lucent. Although Motorola and Lucent have been dating for just a short time, a little bundle is already on the way. Jim Turley, MicroDesign Resources; *Embedded Systems Programming*, 9/98, p. 19, 2 pp.

Multiprocessing with the SHARC. When a single processor cannot provide sufficient processing capability to meet real-time requirements, system designers must turn to a multiprocessor approach. Lynn Patterson, Ixthos; *RTC*, 8/98, p. 39, 3 pp.

Embedded DSP core successfully juggles critical design parameters. Satisfying high-volume DSP applications calls for an optimum balance among performance, price, and power consumption. Alfred Vollmer, *Electronic Design*, 7/20/98, p. 44, 4 pp.

IC DESIGN

Close the information gap on IC-package reliability. Before engineers can take advantage of advanced IC packages, they must have a clear understanding of their relative merits. Reza Ghaffarian, California Institute of Technology; *Electronic Design*, 8/3/98, p. 71, 7 pp.

Semiconductor makers pick up process equipment to deliver multilevel copper ICs. Circuits that use copper wiring can operate faster. The wiring resistance is much lower than that of aluminum or tungsten, thus reducing on-chip RC delays. Dave Bursky, *Electronic Design*, 8/17/98, p. 26, 1 pp.

Closing the design gap: formal verification is turning the corner. Sooner than almost anyone thought possible, formal verification tools are departing the groves of academe for the untidy arena of real-world engineering. Gary Smith, *Electronics Journal*, 9/98, p. 4, 5 pp.

MEMORY

Enhanced memory interface speeds systems with foreground and background operation. Various suppliers of motherboard chip sets, graphics chips, and DRAM are pitching their support for the Virtual-Channel Memory (VCM) interface. Dave Bursky, *Electronic Design*, 7/20/98, p. 30, 2 pp.

PERIPHERAL CHIPS

Speed does matter: gigabit switch chip raises the bar. New switch-chip family cuts the cost of a gigabit switch port below $100. A flexible ring architecture and modular design support many applications. Lee Goldberg, *Electronic Design*, 7/20/98, p. 53, 4 pp.

CMOS "camera-on-a-chip" uses smart pixels to deliver high-quality digital video. A recently developed, high-performance "camera-on-a-chip" technology may lead to marble-size video cameras ideally suited for PC video conferencing and security applications. Lee Goldberg, *Electronic Design*, 9/1/98, p. 32, 2 pp.

PROCESSORS

RISC and CISC processors compete for embedded applications. With effective throughputs of 200 MIPS and more, superscalar CPUs tackle throughput-intensive embedded needs. Dave Bursky, *Electronic Design*, 8/17/98, p. 83, 7 pp.

New processor bridges the gap in R3000/R4000 performance. Integrated Device Technology unveiled the RC32364 microprocessor, the first member of its low-cost, 32-bit RISCore32300 family of embedded processors. The new line is intended to bridge the performance gap between R4000- and R3000-class devices. Robert A. Gott, *Computer Design*, 7/98, p. 14, 2 pp.

SYSTEM DESIGN

Multiprocessing goes mainstream. Multiprocessing (MP) is no longer a black art. Today MP is doable, and system engineers have a wide range of MP technology choices to multiply processor power. Ray Weiss, *RTC*, 8/98, p. 19, 4 pp.

Full-system verification comes to the masses. Automated solution boasts stimulus generation, dynamic-coverage feedback, and distributed simulation capabilities. Cheryl Ajluni, *Electronic Design*, 9/1/98, p. 35, 3 pp.