

AUDIO/VIDEO

Advanced displays mobilize applications. New LCDs, and advances in the process technologies used to make them, promise lighter, brighter, and better portable devices. John Bond, *Portable Design*, 7/99, p. 18, 4 pp.

Microdisplays to enable portable, high-information-content viewing. More than 30 manufacturers have staked their claim on microdisplays, loosely defined as displays measuring no more than 1.5" in diagonal and requiring additional optics for viewing. Patrick Mannion, *Electronic Design*, 8/9/99, p. 89, 5 pp.

BUSES

USB heating up; Firewire smolders. USB and Firewire appear to have carved out different market niches, but delays in Firewire's implementation and enhancements to USB are changing the situation. Kurt Shafer, *Silicon Strategies*, 8/99, p. 31, 3 pp.

PC-MIP gains momentum. This new PCI-based mezzanine bus is a good bet to dominate the small-form-factor market. PC-MIP is moving toward acceptance as a VITA standard. John Wranovics, *RTC*, 7/99, p. 45, 3 pp.

PCI bridging: speeding up, widening out before the storm hits. PCI bridging technology and products are moving up the performance curve. New changes range from PCI-X, to Future I/O and NGIO, to switched serial PCI. Ray Weiss, *RTC*, 7/99, p. 17, 8 pp.

Can CompactPCI set the standard for high availability? Although standards for redundant CPU architectures do not exist for CompactPCI today, suppliers recognize the importance of establishing standards to ensure a technology's ultimate success. Pete Holmes, *CompactPCI Systems*, 7/99, p. 53, 3 pp.

DEVELOPMENT TOOLS

The right technique yields critical Direct Rambus signal-integrity measurements. To complement the traditional logic-analysis-measurement techniques with a signal-integrity-measurement tool, time-domain reflectometry (TDR) is the tool of choice. Michael Resso, Hewlett-Packard; *EDN*, 8/5/99, p. 61, 4 pp.

New debug tools give designers alternatives to in-circuit emulators. Traditional ICES are being challenged in 32-bit systems but remain the best choice for 8- and 16-bit embedded projects. Joseph Desposito, *Electronic Design*, 8/9/99, p. 47, 5 pp.

Source list: device programmers. Although nearly all the manufacturers claim universal programmers, they don't necessarily mean the same thing. And universality of any sort depends on updates to stay universal. *Electronic Products*, 8/99, p. 55, 2 pp.

Co-verification tools: a market focus. Though not for everyone, co-verification tools may help accelerate development of highly integrated systems. Daya Nadamuni, *Dataquest; Embedded Systems Programming*, 9/99 p. 119, 4 pp.

IC DESIGN

Analyze ASIC designs to optimize integration levels. When doing an ASIC design, break down your application's needs to determine the best system partitioning and the highest integration. Mark Dorais, Rohm Electronics; *Electronic Design*, 8/9/99, p. 83, 4 pp.

MEMORY

Feature-rich flash memories deliver high density. With a wide variety of features and densities of up to 128 Mbits per chip, NOR-style flash memories satisfy many system needs. Dave Bursky, *Electronic Design*, 8/9/99, p. 67, 5 pp.

PERIPHERAL CHIPS

Two-chip modem delivers low-cost remote access. The Si2400 ISOModem, a two-chip modem developed by Silicon Laboratories Inc., provides a simple, low-cost solution that runs at 2,400 bits/s. Dave Bursky, *Electronic Design*, 8/9/99, p. 39, 3 pp.

Selecting silicon sensors. Recent innovations allow silicon sensors to have access to new environments, such as inside of the human body, and hence new applications. Rick Hagen, Silicon Microstructures; *Electronic Products*, 8/99, p. 33, 2 pp.

PROCESSORS

System-on-chip processor targets handheld appliances. The Cirrus EP7211 is a comprehensive system on a chip for handheld devices needing sprightly performance and long battery life. Tom Woolf, Cirrus Logic; *Electronic Products*, 8/99, p. 66, 2 pp.

PROGRAMMABLE LOGIC

Figuring out reconfigurable logic. High-density programmable logic is blurring the historical division between what you do in hardware and what you do in software. Brian Dipert, *EDN*, 8/5/99, p. 103, 7 pp.

Slugfest. Altera and Xilinx fight for kingpin status, while dominating the PLD market. Bill Arnold, *Electronic Business*, 8/99, p. 77, 4 pp.

SYSTEM DESIGN

Embedded technology transforms the automobile. If you are looking for opportunities on the leading edge of electronic technology, check out the latest changes in the family car. Warren Webb, *EDN*, 8/19/99, p. 91, 5 pp.

Product update: cooling devices. Here are some of the latest fans, blowers, heat sinks, and other thermal-management products. *Electronic Products*, 8/99, p. 41, 8 pp.

The future of systems research. The new provost of Stanford University calls for a shift in focus for systems research. Performance—long the centerpiece—needs to share the spotlight with availability, maintainability, and other qualities. John Hennessy, Stanford; *Computer*, 8/99, p. 27, 7 pp.

Processors measure up to the power challenge. $P = V \times I$: the fundamental principle behind power consumption. Although the equation appears simple, the physical measurement of the variables presents a challenge to many system designers. Markus Levy, *EDN*, 7/22/99, p. 62, 8 pp.