

AUDIO VIDEO

Video codec: high-quality compression for price-sensitive applications. The ADV601LC draws on wavelet compression and decompression technology to operate a video encoder and a decoder, which expands the same video to its original form. Charles Small, *Computer Design*, 2/98, p. 80, 2 pp.

BUSES

How much universal serial bus performance do you need? Different types of peripherals require different levels of support and performance. These trade-offs determine the device's cost. Jeffrey S. Schaver, Motorola; *Electronic Design*, 1/12/98, p. 142, 3 pp.

Overview of Fibre Channel. Fibre Channel offers higher bandwidth and capacity than SCSI and other storage interfaces. Walt Hinton, *Windows NT Systems*, 3/98, p. 43, 7 pp.

Optical processing paradigms for electronic computers. Used as special-purpose architectures, optical or optoelectronic processing systems can enhance the performance of electronic computers. Pericles A. Mitkas, et al, *Computer*, 2/98, p. 45, 7 pp.

CPU

Self-programming microcontroller networks sensors and transducers. Analog Devices' ADuC812 MicroConverter is a mixed-signal device with a digital section comprised of an 8052 CPU core, flash memory arrays and RAM. Milt Leonard, *Electronic Design*, 2/9/98, p. 92, 2 pp.

DSP

Double-duty DSP. What first appears as just another DSP turns out to be much more. Zilog's Z89xx3 DSP offers the usual DSP goods and acts like many highly integrated controllers for a fraction of the cost. Tom Cantrell, *Circuit Cellar Ink*, p. 82., 6 pp.

IC DESIGN

Building complex designs in high-density logic. Using high-density logic requires changes in the way we think and work. High-density designs require teamwork and project-management skills. Peter Varhol, *Computer Design*, 2/98, p. 41, 7 pp.

Embedded DRAM boosts performance at a cost. Embedded DRAM improves power usage, speed, and reliability, but it adds production costs and risk. It may not be the right choice. Richard A. Quinnell, *Silicon Strategies*, 2/98, p. 18, 5 pp.

Purchased core keeps scanner design on track. When Logitech purchased a USB core for a full-page personal color scanner, it learned that sustained engineering support from the IP provider is critical. Mark Lavelle, *Silicon Strategies*, 2/98, p. 50, 3 pp.

Focus Report: ASICs with embedded memory. Embedded memory cores in ASICs may seem a mundane task, but the impact of embedded memory is greater than you might think. Richard A. Quinnell, *Silicon Strategies*, 2/98, p. 53, 9 pp.

Taking different approaches to design reuse. Whether you choose to use design-migration tools or third-party foundry-portable physical libraries, you need to establish a design-reuse methodology. Barbara Tuck, *Computer Design*, 2/98, p. 50, 4 pp.

1998 technology forecast. Exploring the ramifications of intellectual property issues for electronics designers. Walden Rhines, Mentor Graphics, et al; *Electronic Design*, 1/12/98, p. 41, 42 pp.

MEMORY

Memory technology advances and expands versatility. Approaches to main memory and cache RAM are still not solidified, while nonvolatile memory offers more choices than ever. Rodney Myrvaagnes, *Electronic Products*, 2/98, p. 37, 4 pp.

MISCELLANEOUS

Advanced microprocessor and memory ICs bask in ISSCC's glow. Novel clocking schemes, GHz CPUs, and advanced memory ICs lead the stampede of high-performance breakthroughs. Dave Bursky, *Electronic Design*, 2/9/98, p. 46, 5 pp.

Into thin air. The monies pledged to the Federal Communications Commission during its disastrous C-block spectrum auctions have been as evanescent as a radio wave, and so have the businesses of some of the bidders. Tam Harbert, *Electronic Business*, 2/98, p. 42, 6 pp.

Mazeltch on the Mediterranean. Despite a faltering peace process and a worsening recession, Israel's high-tech industry continues to boom, helped by a record inflow of venture capital funds. Neal Sandler, *Electronic Business*, 2/98, p. 50, 4 pp.

SYSTEM DESIGN

Embedded operating systems take on tools, languages, and modules. Developers demand rich functions that work the first time. Kernels alone just won't do the job. Tom Williams, *Electronic Design*, 1/26/98, p. 67, 11 pp.

SPARC workstation takes to the road. Packing midrange workstation performance into a battery-powered portable presents many design challenges. Here's how one design team built a 200-MHz UltraSparc portable. Terri Houston, *Portable Design*, 2/98, p. 45, 7 pp.

Power supplies get smarter with digital control. Power supplies are getting steadily more digital. Like most electronic systems, analog circuits are being converted to their digital counterparts by replacing the analog-based microcontroller-based intelligence. Sam Davis, *Computer Design*, 2/98, p. 63, 3 pp.

Low-cost voice recognition. Brad's Tiny Voice—based on an 'HC705 and powered off a 9-V battery—can be trained to recognize up to 16 command templates and costs less than \$5. Toys, voice-activated padlocks, and remote controls had better listen up. Brad Stewart, *Circuit Cellar Ink*, 2/98, p. 12, 5 pp.