BUSES

High-availability spec on CompactPCI remains elusive. There are almost as many ideas of how to make high-availability platforms as there are vendors looking to make them. Warren Andrews, *RTC*, 7/97, p. 15, 2 pp.

Hot Plug comes to PCI. Compaq has developed the PCI Hot Plug technology as another method to increase availability of industry-standard servers. Karl Walker, Cindy Ramirez, Compaq; *RTC*, 7/97, p. 19, 2 pp.

Control the power interface of USB's voltage bus. The USB voltage bus needs an in-line device for proper operation; picking the right one can make or break a design. Jonathan M. Bearfield, TI; *Electronic Design*, 7/21/97, p. 80, 4 pp.

Understanding Universal Serial Bus: part 2. The article presents several USB peripheral controllers and investigates issues you must address to implement this new standard. John Canosa, Questra Consulting; *Embedded Systems Programming*, 7/97, p. 42, 10 pp.

DEVELOPMENT TOOLS

Better designing through co-simulation of RF and DSP analysis engines. Single-environment signal-path-design solution targets communication system designs. Cheryl Ajluni, *Electronic Design*, 7/7/97, p. 76, 3 pp.

Selecting a logic analyzer for today's demands. Playing an increasing role in integrating hardware and software, logic analyzers require many new features as well as manufacturer support. Phil Stearns, HP; *Electronic Products*, 7/97, p. 23, 3 pp.

IC DESIGN

Finally, behavioral synthesis is production-ready. Until now, you've had to take a hit the first time you used the technology. But new interactive tools are emerging to make your job easier. Barbara Tuck, *Computer Design*, 7/97, p. 57, 5 pp.

Bringing intelligence to HDL. The next generation of HDL software promises productivity improvements through greater intelligence, ease of use, and performance. Peter Varhol, *Computer Design*, 7/97, p. 64, 3 pp.

3D parasitic extraction for deep submicron IC design. Advances in process technologies have increased the requirements for a more complete analysis of interconnect characteristics. Wayne Dai, U.C. Santa Cruz, and Weikai Sun, Ultima Interconnect Technology; *Integrated System Design*, 7/97, p. 22, 5 pp.

Focus report: CMOS ASICs. CMOS ASICs continue to provide designers with an increasing range of capabilities at the cost of design complexity. R.T. Maniwa, *Integrated System Design*, 7/97, p. 40, 3 pp.

MEMORY

Serial flash busts bit barrier. Nexcom's NX25Fxxx chip uses a single-transistor E^2PROM cell with block and chip erasure and SPI serial interface. Tom Cantrell, *Circuit Cellar Ink,* 8/97, p. 82, 4 pp.

PERIPHERALS

24-port switch-on-a-chip slashes the cost of fast Ethernet. The price of fast Ethernet switches tumbles below $100/port, thanks to an innovative RAM-based architecture. Lee Goldberg, *Electronic Design*, 7/7/97, p. 31, 4 pp.

PROCESSORS

Microchip's newest 8-pin controller. Update on the recently released 12C508/9 series of low-cost microcontrollers with enhanced features such as extended power-on and wake-up controls. William Grill, Riverhead Systems; *Microcomputer Journal*, 5–6/97, p. 58, 6 pp.

RISC architects address the embedded world. Embedded RISC vendors are pursuing diversification and integration. Rick Grehan, *Computer Design*, 7/97, p. 90, 6 pp.

Have 'em your way: 8- and 16-bit MCUs/MPUs. The true differentiator between processors is the list of extras—the on-board memory and other peripherals. Nicholas Cravotta, *Embedded Systems Programming*, 7/97, p. 85, 6 pp.

Cache design with path-balancing table, skewing, and indirect tags. Compared with a baseline cache, a cache with path-balancing table, skewing, and indirect tags can simultaneously reduce cycle time, use less area, and reduce miss rate. Tommi Jokinen and Chia-Jiu Wang, Univ. of Colorado at Colorado Springs; *Computer Architecture News*, 6/97, p. 6, 7 pp.

SYSTEM DESIGN

Understanding thermal management of electronic enclosures. There are many methods available to remove heat, and this article examines some of the more commonly used techniques. George Ross, Vero Electronics; *RTC*, 7/97, p. 33, 3 pp.

Powering up PCs. Hardware accelerators and new software are unleashing workstation performance on PCs. Raymond E. Chalmers, *Integrated Design & Manufacturing*, 5–6/97, p. 14, 4 pp.

Embedded PCs: presents from above. The gifts of the desktop continue to rain upon the embedded plain. Rick Grehan, *Computer Design*, 7/97, p. 73, 8 pp.

Fan-control methods for computers. Precise control of fan speed and operation can increase efficiency, lower noise, and improve overall system performance. Jerry Steele, National Semiconductor; *Electronic Design*, 7/21/97, p. 38, 4 pp.