Literature Watch

ASICs

Bringing IC layout in house. *For large, high-speed digital ICs, physical layout can upset logic design goals, lengthening time-to-market. Doing your own place and route can shorten your design cycle.* John C. Napier; EDN, 9/3/92, pg 108, 9 pgs.

Understanding synthesis begins with knowing the terminology. *Jargon and buzzwords make synthesis confusing. You can cut through much of the confusion by sticking to a vocabulary that has gained wide acceptance.* Steve Carlson, Emil Girczyc, Synopsys, Inc.; EDN, 9/3/92, pg 125, 7 pgs.

Buses

Futurebus+ standards spur commercial products. *Futurebus+ fans should be happy to learn that real-live products are beginning to proliferate. Finalized documents are providing the impetus to move this sauntering architecture off the drawing board.* John Gallant; EDN, 9/3/92, pg 51, 10 pgs.

Futurebus+ analysis tools ease transition from VME. Warren Andrews; Computer Design, 9/92, pg 40, 3 pgs.

Silicon, tools and specs join to drive Futurebus+ growth. *The first Futurebus+ systems are now emerging, but introductions are lagging far behind expectations. The bandwagon is rolling, however, and the players are jumping on.* Warren Andrews; Computer Design, 9/92, pg 71, 7 pgs.

Applications, not technology, drive embedded computers. *"Business as usual" is no longer the rallying cry of standard-bus technology at the board level. The key is finding real solutions-not just throwing more advanced technology at the problems.* Warren Andrews; Computer Design, 9/92, pg 83, 8 pgs.

The STD 32 bus shifts into high gear. *A 32-bit scalable processor board lets users start with a 486, then upgrade as next-generation processors evolve.* Richard Nass; Electronic Design, 8/20/92, pg 87, 2 pgs.

DSPs

Multirate filters alter sampling rates even after you've captured the data. *You've digitized an analog signal, but the sampling rate is too high-or too low-for your system. Multirate filters can't supply missing information, but they can alter the effective sampling rate after you've aquired the data. With graphical development tools, designing such filters isn't difficult.* John Allen Mitchell, Comdisco Systems; EDN, 8/20/92, pg 129, 8 pgs.

Graphics

Build an intelligent display. Tom Ryan, VESA; Electronic Design, 8/20/92, pg 80, 1 pg.

Memory

Portable data carriers: small, rugged memories put data where it's needed. *Cleverly packaged memory devices put data in places where a computer can't even go. Some even contain an RF transponder for wireless access.* Gary Legg; EDN, 8/20/92, pg 99, 5 pgs.

Miscellaneous

A tidal wave of 3-V ICs opens up many options. *Logic chips that operate at 3-V or less offer a range of low-power choices for portable systems.* Dave Bursky; Electronic Design, 8/20/92, pg 37, 9 pgs.

Superchips for supercomputing. *The technology for fast gallium arsenide chips is making strides, but familiar silicon still has plenty of potential.* Harold Dozier, Convex Computer Corporation; IEEE Spectrum, 9/92, pg 66, 3 pgs.

The ten commandments of debugging. *When troubleshooting complex systems, don't make the job any tougher than it is-get back to the basics.* Jeff Ziegler, Tim Hornback, and Anthony Jordon, United Technology Microelectronics Center; Electronic Design, 9/3/92, pg 61, 5 pgs.

Peripheral Chips

Basic characteristics distinguish sampling A/D converters. *Part 1 of this 3-part series discusses static and dynamic characteristics; minimizing switching transients, which are inherent to sampling ADCs; and protecting the analog input.* Walt Kester, Analog Devices; EDN, 9/3/92, pg 135, 6 pgs.

Low-voltage analog ICs wait in the wings. *Today's flood of 3-V digital ICs demand compatible analog and power-control support devices.* Frank Goodenough; Electronic Design, 9/3/92, pg 37, 8 pgs.

12-bit IC ADCs guarantee ±1 LSB from -55 to +125 C. Frank Goodenough; Electronic Design, 9/3/92, pg 55, 4 pgs.

Processors

Intel laser-printer i960/coprocessor combination ups performance, cuts logic. Ray Weiss; EDN, 8/20/92, pg 114, 2 pgs.

Hitachi H8/338 µC crams 48-kbyte EPROM/ROM and 2-kbyte RAM into one IC. Ray Weiss; EDN, 9/3/92, pg 97, 2 pgs.

16-bit MCUs advance along many paths. Jeffrey Child; Computer Design, 9/92, pg 127, 5 pgs.

Programmable Logic

PLD architectures. *Different devices suit different jobs.* Om P. Agrawal, Advanced Micro Devices; Electronic Products, 9/92, pg 37, 8 pgs.

Match designs with the right device architecture or else travel down a long, frustrating road. Michael Holley, Data I/O Corp.; Pers. Eng. & Inst. News, 9/92, pg 49, 7 pgs.

System Design

Chipsets and imagination position PC hardware in extremely unusual forms. Paul G. Schreier; Pers. Eng. & Inst. News, 9/92, pg 27, 12 pgs. ♦

