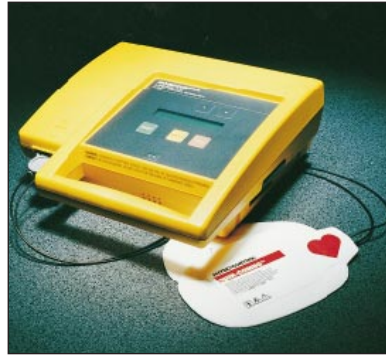


**COVER STORY****Biometrics**

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(Photo courtesy SGS-Thomson Microelectronics)**Defibrillator technology**

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EDN**DESIGN FEATURES****EDN's Innovation Campaign winners**

Your votes have been tallied in *EDN's* annual campaign to recognize innovative people and products. We are proud to present the winners and congratulate all the nominations in a strong field of entries.

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Biometrics: You are your password

For verifying your identity, your physical attributes are better in many ways than a password. But which attributes to use and what mass-market products should be the first to use this technology are provoking a spirited debate in the biometrics community.

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—Dan Strassberg, Senior Technical Editor

EDN's Hands-On Project Getting a handle on HDLs

Programmable-logic chips and designs are growing more complex. As a result, you'll sooner or later need to add HDL expertise to your skills if you want to keep hitting those project deadlines. For this Hands-On project, I learn VHDL, complete a mixed logic and embedded-memory design in an FPGA, and share observations along the way.

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—Brian Dipert, Technical Editor

Defibrillator technology: help in a heartbeat

Advances in medicine normally come from the laboratories of white-coated scientists and physicians. This time, designers can take the credit for an evolutionary step in automatic-defibrillator technology that could save as many as 100,000 lives a year.

97

—Warren Webb, Technical Editor

Power-factor correction: Rx for medical power supplies

A power-factor-corrected power supply allows more instruments to plug into a single outlet, which is an important consideration for both industrial and medical settings. Power-factor correction also ensures adherence to international harmonic-current regulations.

115

—Danis Carter, Principal Engineer, Nellcor Puritan-Bennett

Versatile ICs enable chemistry-independent battery charging

Fast-moving battery technology poses a question for designers: whether to choose the latest technology for maximum performance or to sacrifice performance for a mature and more reliable technology. The advent of chemistry-independent battery chargers helps to resolve this problem.—Matt Schindler, Maxim Integrated Products

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Careful power-distribution design ensures standard-compliant USB operation

Proper component selection and design make your USB system operate properly and adhere to the USB specification.

159

—Larry Mazer and Kevin Lynn, Micrel Semiconductor

LEADING EDGE



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Device gives new perspective to 3-D performance, quality	11	Hardware, software advance PC-graphics realism	14	Arm yourself with desktop codevelopment system	18
Sensor interface measures temperature here and there via SMBus	12	ADSL driver/receiver pumps up the current with fast-slewing drive	14	Gigabit transceiver targets serial-backplane data switches	20
		Switch IC lets you sense when the force is with you	16	Multiprotocol IC trio goes to any port in an interface storm	20
		Supply regulator corrals DSP conundrum	16	Timing-model generators boost static-timing accuracy	22
		Chip integrates T1/E1/J1 framer, analog line interface	16	Diodes fit medical applications	22

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