

INNOVATION

EDN's 2008 Innovation Award finalists:

MAKE YOUR VOICE HEARD

YOU PICK THE WINNERS IN OUR 19TH ANNUAL PROGRAM
HONORING ENGINEERING EXCELLENCE.

ANALOG ICs

AD9272 eight-channel ultra-sound receiver, Analog Devices

CLC1001 ultralow-noise amplifier, Cadeka Microcircuits

CS42L55 portable audio codec, Cirrus Logic

LMV1088 analog dual-input-microphone-array amplifier, National Semiconductor

ADCs AND DACs

ADC12EU050 12-bit, octal ADC, National Semiconductor

DAC9881 18-bit DAC, Texas Instruments

MAX5661 single 16-bit DAC, Maxim Integrated Products

SAM1610/05/00 12-bit ADCs, Samplify Systems

RFICs

0150SC-1250M and **0405SC-1000M** RF-power transistors, Microsemi

HVV1011-300 RF-power transistor, HVVi Semiconductors

VMMK-2x03 RF amplifiers, Avago Technologies

ASSPs

CX20562 USB speakers on a chip, Conexant

Snapdragon platform with custom CPU, Qualcomm

T1000 single-chip content-

2008 INNOVATOR OF THE YEAR

Altera Stratix IV 40-nm FPGA design team

Glenn Woppman, president and chief executive officer, Asset InterTech

Octasic Opus architecture design team

SiGe Semiconductor
SE2593A front-end module design team

inspection processor, LSI Logic

Z-Accel CC2480 2.4-GHz ZigBee wireless-network processor, Texas Instruments

LOGIC AND INTERFACE ICs

26 series SQI (serial quad I/O), SST

ActiveConnect GN8502 multimedia-connectivity solution, Gennum

SN5000A hybrid two-in-one tuner module, Xceive

MEMORY

NANDrive family, SST

SiliconDrive II Blade SSD, SiliconSystems

X-25E Extreme SATA SSD, Intel

XDR2 memory architecture, Rambus

PROGRAMMABLE LOGIC AND FAST-TURNAROUND ASICs

Nextreme-2 45-nm ASICs, eASIC

Stratix IV 40-nm FPGA, Altera

Virtex-5 FXT FPGAs, Xilinx

EDA: DESIGN ANALYSIS

Incisive Palladium DPA (dynamic-power analysis), Cadence Design Systems

JasperGold formal-verification tool, Jasper Design Automation

Olympus-SOC timing analyzer, Mentor Graphics

PowerArtist RTL tool, Sequence Design

EDA: DESIGN CREATION AND IP

C-to-silicon compiler, Cadence Design Systems

Intelli DDR3 memory interface, Virage Logic

PowerOpt RTL tool, ChipVision Design Systems

Zroute chip-level router with integral DFM analysis, Synopsys

EDA: PCB, FPGA, AND MIXED-SIGNAL/RF ICs

Integrated Software Environment (ISE) 10.1, Xilinx

RF Design Solution, Mentor Graphics and Agilent Technologies

Simics Hybrid Simulation

solution, Virtutech

Titan platform, Magma Design Automation

EDA: SYSTEM-LEVEL SYNTHESIS

Matlab/Simulink synthesis technology, Altera

Simscape, The MathWorks

Webench power designer, National Semiconductor

Webench sensor designer, National Semiconductor

EMBEDDED-SYSTEM TECHNOLOGIES

Mirasol displays, Qualcomm

PowerBlock 50 computer, Mercury Computer Systems

Single-Board RIO, National Instruments

USB1032 StackableUSB host microcontroller, MicroSys

MICROCONTROLLERS

PIC32 32-bit microcontroller, Microchip Technology

Piccolo microcontrollers, Texas Instruments

R32C/111 series microcontrollers, Renesas Technology

Xmega microcontrollers, Atmel

MICROPROCESSORS

EP80579 integrated processor, Intel



YES, YOU CAN! The 2008 presidential election may be just a distant memory, but another critical choice requires your voice. Our editors have named the finalists for *EDN's* 2008 Innovation Awards. On these pages, you'll find a list of the finalists in several product and technology categories as well as Innovator of the Year and Best Contributed Article.

Review complete write-ups of the finalists and vote at www.edn.com/innovation. Voting begins Feb 2 and continues through Feb 27.

Your votes determine the Innovation Award winners, who will be honored along with all of the finalists at a reception on Monday, March 30, in San Jose, CA. *EDN* readers are invited to attend; **you can also find event and ticket information at www.edn.com/innovation.**

LPC3130 ARM9 microcontroller, NXP Semiconductors

MIPS32 1004K coherent-processing system, MIPS Technologies

OMAP35x application processor, Texas Instruments

PASSIVE COMPONENTS AND SENSORS

ADXL001 iMEMS shock and vibration sensor, Analog Devices

LX1973B wide-dynamic-range light sensor, Microsemi

MPR03x proximity-sensor controllers, Freescale Semiconductor

OLED SmartSwitch, NKK Switches

BATTERY ICs

bq27500 system-side impedance-track battery-fuel-gauge IC, Texas Instruments

LTC6802 battery-stack monitor, Linear Technology

MC3467x Li-ion-battery-charger ICs, Freescale Semiconductor

POWER-CONTROLLER ICs

ADP1043 digital-power controller, Analog Devices

PX3560 digital multiphase controller, Primarion

POWER ICs: DRIVERS

AAT1282 2A flash-driver IC, AnalogTech

MAX16826 four-string LED driver, Maxim Integrated Products

SA306-1HZ motor-drive IC, Cirrus Logic

POWER ICs: GENERAL CONVERTERS

FAN5355 800-/1000-mA, 3-MHz buck converter, Fairchild Semiconductor

IRS2530D DIM8 IC dimming electronic ballast, International Rectifier

LTC3642 50-mA synchronous step-down converter, Linear Technology

Simple Switcher controllers and Webench MOSFET-selection tool, National Semiconductor

POWER ICs: MODULES

EP53A8xQI 1000-mA, 5-MHz synchronous buck regulator, Enpirion

LTM4606 ultralow-EMI, 6A dc/dc μ Module, Linear Technology

POWER SEMICONDUCTORS

Electronic-current limiter, Bourns

FSFR series Green FPS power switches, Fairchild Semiconductor

Gallium-nitride power-device platform, International Rectifier

TrenchFET Generation III power MOSFETs, Vishay

BEST CONTRIBUTED ARTICLE OF 2008

USB battery-charger designs meet new industry standards, Takashi Kanamori and George Paparrizos, Summit Microelectronics, Feb 21, 2008, www.edn.com/article/CA6531593

Boost efficiency for low-cost flyback converters, John Betten and Brian King, Texas Instruments, April 2, 2008, www.edn.com/article/CA6544742

Designing a short-range RF link into a consumer-electronics product, Eric Welch, Keyspan, July 8, 2008, www.edn.com/article/CA6576137

High-voltage, low-noise dc/dc converters, Jim Williams, Linear Technology Corp, Aug 7, 2008, www.edn.com/article/CA6582859

Lithium-ion-battery-charging IC powered by charge-transfer, control innovations, Randy Torrance, Chipworks, Oct 1, 2008, www.edn.com/article/CA6599222

POWER SUPPLIES

10-kVA Pulsar MX frame or UPS enclosure, Eaton

BMR453 series dc/dc converters, Ericsson

Liebert NXL 250- to 400-kVA UPS, Emerson Network Power

SOFTWARE/EMBEDDED TOOLS

Beagle Board Linux-development board, Beagleboard.org

SES (Smart Energy Suite), Ember

XDS2000i in-socket development system, XtremeData

XtremeDSP video starter kit, Xilinx

OSCILLOSCOPES

90000A series oscilloscope, Agilent Technologies

DPO3000 digital-phosphor oscilloscopes, Tektronix

PicoScope 9201 sampling oscilloscope, Pico Technology

WavePro 7Zi digital oscilloscope, LeCroy

INSTRUMENTS

DPP12500A-4T four-tap digital pre-emphasis processor, Synthesys Research

MW90010A C-OTDR (Coherent OTDR), Anritsu

PNA-X nonlinear vector-network analyzer, Agilent Technologies

PXI Express 6.6-GHz RF instruments, National Instruments

RSA3000B series real-time spectrum analyzers, Tektronix

DESIGN FOR TEST, PRODUCTION TEST, AND METROLOGY

AVS300CL wireless metrology tool, CyberOptics Semiconductor

Cover-Extend technology, Agilent Technologies

ProVision boundary-scan-development-tool suite, JTAG Technologies