The Tinker's Toolbox - Energy Management and Device Efficiency

Hosted by ECN's Editorial Director, Alix Paultre, the Tinker's Toolbox is ECN's web-based interview show where we talk about the latest technology, components, and design issues for the electronic design engineering community.

In this episode of the Tinker's Toolbox we talk to J. Francois Crepin and James Ashe of Akros Silicon (www.akrossilicon.com [1]) about energy management vs. power managment, and how proper energy management impacts device efficiency. The Energy$ense [2] family of multi-output, digital DC/DC power management unit (DPMU) ICs from Akros has won the 2012 DesignVision Award in the “Semiconductor Components and ICs” category.

Right-click to download the podcast [3]

Here is a link to the podcast in case the playback button isn't visible: Akros Interview [3]

Here is a recent press release about the company's technology:

Akros Silicon, a leading supplier of leading-edge intelligent energy management ICs, today announced that its Energy$ense [2] family of multi-output, digital DC/DC power management unit (DPMU) ICs has won the 2012 DesignVision Award in the “Semiconductor Components and ICs” category. The DesignCon technical committee, including 130 engineers and industry editors, evaluated products from hundreds of entries to choose the winners, who were recognized at an awards ceremony at DesignCon 2012 in Santa Clara, Calif.

The DesignVision Awards celebrate “the achievements of the most innovative electronics companies and the unique tools that support customer needs to improve and simplify the design process,” says Patrick Mannion, Content Director, EDN & EE Times Designlines, for UBM Electronics. “Selection criteria included: industry vision, solution originality, and quality of implementation. "The industry-esteemed DesignVision awards honor the achievements of the most innovative semiconductor companies, the most prominent visionaries, and the most successful design tools in the industry. Reaching a final decision was difficult given the many excellent products submitted deserving of these awards."

“We are honored that our Energy$ense family was recognized with this prestigious award,” said Parviz Ghaffaripour, Akros Silicon’s President & CEO. “Akros developed the AS19xx Series of Energy$ense products to address the growing need for energy savings in modern platforms. Our innovative approach was to change the design paradigm from power management to ‘total energy management.’ Energy$ense products achieve our vision by delivering an energy-saving solution that is both practical and extremely cost-effective. We are delighted to receive this award as a validation of our efforts.”

The 10 pin-compatible DPMUs comprising the AS19xx family come in different combinations of synchronous buck, boost and LED-drive converter configurations. Features include real-time power measurements and power-subsystem health monitoring, high efficiency (94% peak) and ultra-low standby current (<10uA), digital power control (via I^2C) for selectable power operating modes, fast transient-

handling capability for implementing adaptive power profiles, built-in spread-spectrum clocking for EMI management, and built-in sophisticated PWM-dimming for battery-draining LED-backlight displays.

Energy$ense DPMUs are suitable for a wide range of applications. These include 4G LTE residential gateways and femtocells, portable consumer products, NAS and media hubs, Internet-TV and IPTV set-top boxes, automotive infotainment systems, solid-state lighting, communication equipment with cluster-power or intermediate bus architectures, and many others.

For more information, please visit http://www.akrossilicon.com [4].

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