



For more information, contact:  
Jeff Shepard, Publisher  
jshepard@darnell.com  
(951) 279-6684  
<http://www.Darnell.Com>

# Darnell Group

# NEWS

## Darnell Identifies \$800 Million Market for Digital Power ICs

Corona, California, June 28, 2006 – **Darnell Group, Inc.** has just-released the 237-page, Second Edition report on **Emerging Markets in Digital Power Electronics: Component, Converter and System Level Opportunities**. The new edition details how this market will surge to nearly \$800 million in digital power integrated circuit sales within five years. The Worldwide Digital IC market (which includes VR Loop Controllers, Non-VR Loop Controllers, PFC Loop Controllers, Converter Management ICs and System ICs) is expected to be \$169 million in 2006, increasing to \$796 million in 2011, a compound annual growth rate of 36.4%.

Significant commercial strides have been made in digital power management and control over the past couple of years. More power converter companies are introducing products that incorporate digital power management and control IC solutions, both hybrid (analog and digital) and pure digital. In the meantime, system makers are looking seriously at the benefits of digital control and coming up with their own, often proprietary, solutions.

Certain economic factors are also driving the inevitability of digital over analog solutions. Analog IC technology follows its own version of “Moore’s Law.” This means that the die size of analog is shrinking by 30% every generation and the cost is cut in half every 4-8 years. In the case of digital ICs, the die size of digital is shrinking by 2x every new generation. A new generation is 18-24 months. However, since the cost of every new generation is 10-20% higher, it takes about 2-3 years for digital to reduce the cost by 2x. The fabrication node to make digital controllers less costly than analog controllers already exists. Within two semiconductor process lifecycles, it will become cost-effective for use in commodity parts like power supply controller ICs.

Digital is already less expensive than analog if “multiple function” solutions are required for specific applications. These products are available now and offer early adopters advantages over simple analog solutions. Looking at absolute chip costs for analog and digital (on a silicon-to-silicon basis), the decline in prices for digital is expected to “cross over” with analog prices around 2008, with digital chips being cheaper than analog chips after that point. At that point, companies will no longer need to sell digital solutions based on features that make them more cost-effective than analog solutions. The choice will no longer be equal; digital silicon will be less expensive than analog silicon.

The market at both the semiconductor and power conversion levels is expected to remain extremely competitive, with large multinational corporations competing with smaller regional companies for market share. In addition, a growing number of partnerships, acquisitions and alliances among companies are expected to have a significant impact in the growth and development of this industry.

Darnell’s Digital Power Electronics report is now available. For more information, or to order the report, please contact Darnell by phone at (951) 279-6684 x240; by e-mail at [jshepard@darnell.com](mailto:jshepard@darnell.com); or visit [http://www.darnell.com/consulting/study.php?mc\\_id=9](http://www.darnell.com/consulting/study.php?mc_id=9) to view the abstract, outline, brochure and order form.

Darnell Group is the leading source for worldwide strategic information covering the full spectrum of power electronics, energy storage and generation. The company specializes in the economic/business analysis of emerging power markets and technologies.



**The World’s Power Electronics Specialist**



## Digital Power Supply Controller Market Pricing versus Revenue

