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# Darnell Group

# NEWS

## Digital Power is NOT the Next Big Thing

Corona, California, February 26, 2007 – Darnell Group, Inc. recently determined that Digital Power Electronics has entered a new stage in development and can no longer be called: “The Next Big Thing.” According to Darnell’s latest findings, Digital Power has started to reach price parity with conventional analog solutions. The achievement of price parity is beginning to enable commercial adoption of digital power conversion as the preferred technology for both ac-dc power supplies and dc-dc converters and this adoption will accelerate in 2008. As price parity is achieved, digital will become the primary growth engine for the power supply industry.

Darnell Group has been tracking the development of digital power electronics for over 4 years. 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.

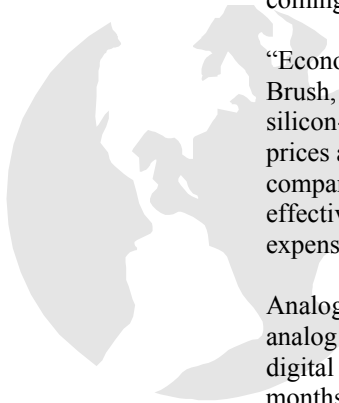
“Economic factors are driving the inevitability of digital over analog solutions,” stated Linnea Brush, Senior Analyst with Darnell. “Looking at absolute chip costs for analog and digital (on a silicon-to-silicon basis), the decline in prices for digital is expected to “cross over” with analog prices around 2008, with digital chips being cheaper than analog chips after that point. At that time, 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 and market adoption will be in full swing,” Brush concluded.

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 the next semiconductor process lifecycle, it will become cost-effective for to use digital technology in commodity parts like power supply controller ICs.

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.

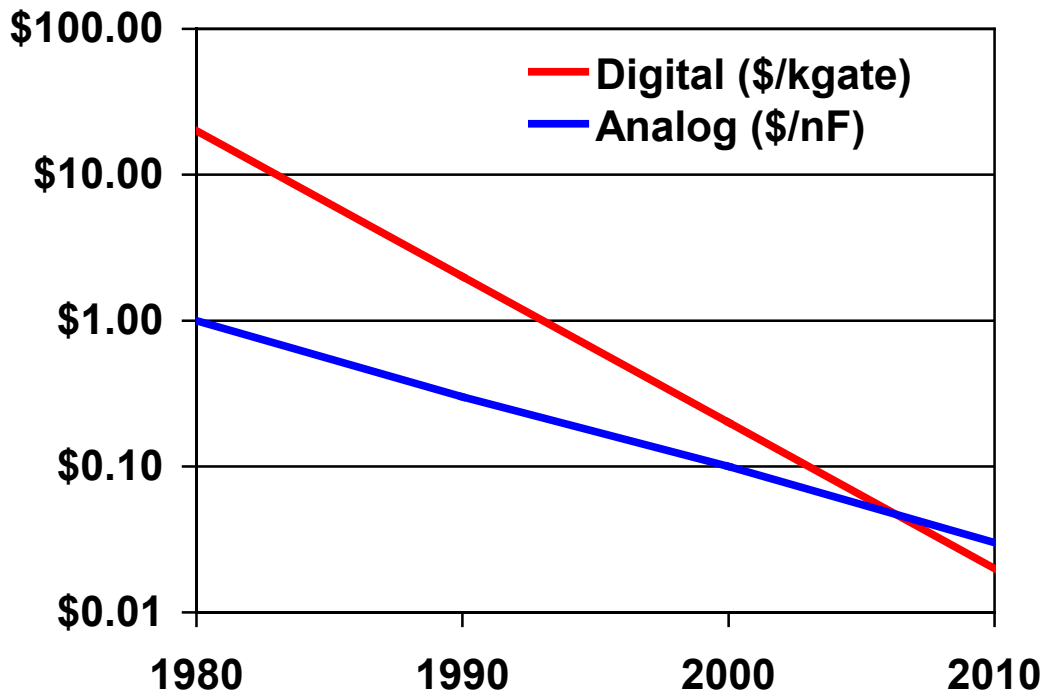
Sponsorships are currently available for Darnell’s Third Edition Digital Power Electronics report. For more information, please contact Darnell by phone at (951) 279-6684 x240; by e-mail at [jshepard@darnell.com](mailto:jshepard@darnell.com). The Fourth Annual Digital Power Forum will be held September 10 – 12 in San Francisco, California. In the first week of November, Darnell will host the First Annual Digital Power Forum, Europe. Details are available at: <http://digitalpower.darnell.com/>

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. <http://www.Darnell.com>



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## Power Supply Controller Pricing Digital versus Analog



**Pricing Cross-Over Starts in 2007**  
**By the End of 2008, Digital Controllers will Cost Less than Analog Controllers**