Darnell Group
1159-B Pomona Road
Corona, CA 92882
(951) 279-6684

DARNELL GROUP

NEWS

DC-DC Market Faces Unprecedented Opportunities

Corona, California, December 20, 2011 – Significant changes are occurring in the dc-dc converter module and IC markets that will produce unprecedented opportunities in the coming year. Although driven primarily by applications, other trends are expected to have a profound impact on sales of dc-dc converter modules. These will lead to a total worldwide revenue market for dc-dc converter modules of approximately $4.3 billion by 2016. The worldwide dc-dc converter IC market is projected to grow from nearly 20 billion units in 2011 to just under 32 billion units in 2016, a compound annual growth rate (CAGR) of 9.7%. Trends affecting the dc-dc converter IC market are evaluated in the report, **Worldwide DC-DC Converter IC Forecasts: Applications, Amperages and Emerging Designs:** http://www.darnell.com/market/product_info.php?cPath=2_24_27&products_id=228

Dc-dc converter modules have become increasingly efficient and cost-effective, with designs that are able to meet very specific system requirements. As a result, most of the problems posed by these "internal" challenges have been addressed through increased package integration and digital control. The focus has now shifted to more "external" factors that are driving the market, such as new power architectures and new materials. These factors are discussed in detail in the report, **DC-DC Converter Modules and ICs: Market Forces, Power Architectures, and Technology Developments:** http://www.darnell.com/market/product_info.php?cPath=2_24_27&products_id=219

For example, Gallium-nitride (GaN) is targeting the dc-dc converter module market and is expected to be a game changer for these products. Changes are occurring in dc-dc converter input voltages, as well. For the foreseeable future, 48V is expected to remain dominant. However, 12V power buses are closing the gap, reflecting the continued growth of the Intermediate Bus Architecture (IBA). The most typical IBA input voltages fall within the 12V segment, which will grow through 2012 and eclipse 48V after 2014. Forecasts for these segments are included in **Worldwide DC-DC Converter Module Forecasts: Power Architectures, Products Types, Voltage Trends and Applications**: http://www.darnell.com/market/product_info.php?cPath=2_24_27&products_id=229

The non-isolated dc-dc converter market is experiencing some of the greatest changes in the dc-dc module market. Multi-core CPUs and low-power microprocessors have been successfully introduced and have reversed the trend toward higher currents. The peak amperage levels are going down, however, with increasing demand for embedded solutions. In addition, the replacement of dc-dc modules by embedded converters, and the increasing difficulty of efficiently producing low-noise, tightly-regulated outputs at increasingly lower voltages, has led to higher growth in the low output voltage ranges.

As components and power architectures evolve, some new approaches could redefine the power supply landscape. The use of "on-chip" power supplies, for instance, includes the distribution of power in high-speed, high-complexity integrated circuits with power levels exceeding many tens of watts and power supplies below a volt. Power-System-in-Package (PSiP) is making steady progress, with commercial products having been available for a few years. The worldwide PSiP market could see growth from approximately $65 million in 2011 to $284 million in 2016, a CAGR of 34.4%. PSiP trends are analyzed in detail in the report, **DC-DC Converter ICs – Power System in Package: Worldwide Technology Trends, Forecasts and Competitive Environment**:
http://www.darnell.com/market/product_info.php?cPath=2_24_27&products_id=236

The opportunities for dc-dc converter makers are greater now than they have been in years, due to new applications, evolving power architectures, advanced materials and components, and energy efficiency standards. These are analyzed in Darnell Group's 2011 series of reports on the DC-DC Converter markets: http://www.darnell.com/dcdc.

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 Global Power Electronics Specialist