



## **Power Integrations Combines High-Efficiency Resonant Controller with High Voltage Drivers and Power Factor Correction in a Single IC**

### **New HiperPLC(TM) Device Targets LCD/Plasma TV, High-Efficiency PC Main Power and LED Streetlights; Cements Power Integrations' Entry into High-Power Markets**

SAN JOSE, Calif., Nov 11, 2008 (BUSINESS WIRE) -- Power Integrations (NASDAQ:POWI), the leader in high-voltage integrated circuits for energy-efficient power conversion, today announced the launch of its HiperPLC (High Power, Power factor corrected, LLC, Controller) power supply controller IC. HiperPLC is the first member of the Hiper(TM) family of highly integrated, high efficiency, high power products. It combines a Continuous Conduction Mode (CCM) PFC controller, an LLC resonant converter and high voltage (800V) half-bridge drivers in a single IC package. It is Power Integrations' first product targeted at applications for high efficiency offline power converters in the power range of 200 to 600 watts such as flat-panel TVs, so-called 80+% efficiency Bronze, 85+% efficiency Silver and 90+% efficiency Gold PC main power and workstation power supplies, and the latest generations of high-brightness LED streetlights. The new device saves costs by combining the PFC (Power Factor Correction) LLC control, high voltage drive functions and a substantial amount of supporting circuitry into a single IC package. Further savings are achieved by leveraging the communication between the PFC and LLC controllers, reducing external component count, the cost of magnetic components and the size of the expensive high-voltage bulk-storage capacitors. The combined PFC and LLC control also ensures a single switching frequency for the entire power supply, reducing differential mode noise and EMI harmonic spectrum components to reduce input filter cost. Moreover, the HiperPLC enables rapid development of highly efficient designs due to the fundamental benefits of the LLC architecture, the high level of integration of the device and PI's convenient, designer-friendly support tools.

HiperPLC combines a continuous-mode power factor correction stage with an LLC half-bridge controller with built-in high voltage (800V) high-side/low-side driver circuitry. The device also provides the necessary protection features for both power stages, increasing reliability and cutting parts count. Continuous-mode PFC minimizes the cost of PFC magnetics by limiting AC flux, obviating the need for expensive Litz wire in the input choke and reducing ripple current delivered to the PFC bulk capacitor. Including both PFC and LLC controllers within a single IC enables numerous cost savings such as locked frequency and phase which promotes ripple current cancelation with less harmonic content, reducing EMI filter requirements. This locked-phase relationship prevents "edge collision" and reduces noise sensitivity, greatly simplifying PCB layout and speeding up design.

Other features include: comprehensive PFC and LLC fault handling and current limiting as well as short-circuit protection designed to protect power components; high-efficiency Zero Voltage Switching (ZVS) LLC; off-time PFC control to eliminate AC input sensing components; configurable, precise dead-time control and frequency limits that prevent hard MOSFET switching; tight LLC duty cycle symmetry for balanced output diode currents; and an internal PFC current sense low pass filter.

Comments Doug Bailey, vice president of marketing at Power Integrations: "HiperPLC embodies at high power all the benefits that our customers have come to expect from Power Integrations' low-power product lines. This includes a very high level of integration with minimal external components, easy system design, high-quality manufacturing, integrated safety and self-protection features and high operating efficiency." Bailey continues: "To simplify the design process, we are also offering downloadable design tools which considerably reduce LLC transformer iterations and development time."

Power Integrations is releasing a Reference Design Kit (RDK-189) describing a 300-watt power supply for LCD TVs using the HiperPLC device. Designers will also find a Design Example Report (DER-189) and full data sheet on Power Integrations' website at (<http://www.powerint.com/products/hiper-family/hiperplc>). HiperPLC is available immediately at \$2.00/ea in 10,000 piece quantities. RDK-189 will be available from December 15 at \$100/ea.

Picture available here ([http://www.powerint.com/sites/default/files/images/prphotos/300dpi/HiperPLC\\_IMG\\_final.jpg](http://www.powerint.com/sites/default/files/images/prphotos/300dpi/HiperPLC_IMG_final.jpg)) (Due to its length, this URL may need to be copied/pasted into your Internet browser's address field. Remove the extra space if one exists.).

#### **About Power Integrations**

Power Integrations is the leading supplier of high-voltage analog integrated circuits used in energy efficient power conversion. The company's breakthrough integrated-circuit technology enables compact, energy-efficient power supplies in a wide range of electronic products, in AC-DC, DC-DC and LED lighting applications. The company's EcoSmart(R) energy-efficiency technology, which dramatically reduces energy waste, has saved consumers and businesses around the world more than an

estimated \$3.0 billion on their electricity bills since its introduction in 1998. Reflecting the environmental benefits of EcoSmart technology, the company's stock is included in clean-tech stock indices sponsored by Nasdaq (Nasdaq:CELS) and the American Stock Exchange (AMEX:CTIUS). For more information, visit the company's website at [www.powerint.com](http://www.powerint.com).

SOURCE: Power Integrations, Inc.

Power Integrations, Inc.

Peter Rogerson, 408-414-8573 (Media)

[progerson@powerint.com](mailto:progerson@powerint.com)

Joe Shiffler, 408-414-8528 (Investor Relations)

[jshiffler@powerint.com](mailto:jshiffler@powerint.com)

or

Billings Europe PR Agency

Nick Foot, +44 (0) 1491-636 393 (Press Agency)

[nick.foot@billings-europe.com](mailto:nick.foot@billings-europe.com)

Copyright Business Wire 2008

News Provided by COMTEX