

Power Integrations' New LinkSwitch-HP ICs Introduce Primary-Side Regulation to Power Supplies Up to 90 Watts

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PSR pioneer eliminates opto-feedback circuitry for higher-power applications; enables 30 mW no-load and high efficiency standby

SAN JOSE, Calif.--(BUSINESS WIRE)-- **Power Integrations** (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today announced **LinkSwitch™-HP**, a new family of energy-efficient, off-line switcher ICs that can deliver up to 90 W output power with accurate primary-side regulation (PSR).

LinkSwitch-HP ICs utilize innovative control algorithms and the properties of the main power transformer and output diode — instead of optocouplers and related feedback circuitry — to determine the amount of power to deliver from the primary to the isolated secondary side. This method dramatically reduces component count, saving space and cost while enhancing reliability. Popularized more than a decade ago with the advent of **Power Integrations' LinkSwitch** line, PSR is now standard in many low-power applications such as mobile-phone chargers but until now has lacked the constant-voltage accuracy required in higher-power products. **LinkSwitch-HP** devices feature a unique multi-mode control architecture that radically advances the state of the art for PSR, making it a viable approach for power-supply applications from 9 W to 90 W.

Comments Doug Bailey, vice president of marketing at **Power Integrations**: "Power Integrations was first to introduce integrated primary-side off-line switcher devices, and **LinkSwitch** products currently out-sell any competing PSR technology across a broad swathe of low-power applications from mobile-device chargers to LED lighting to appliance bias supplies and even smart meters. **LinkSwitch-HP** devices extend the power range of PSR up to 90 W, enabling designers to bring the benefits of PSR to such applications as tablet chargers, ultra-book

adapters, LCD monitors and TVs, STBs, appliances and embedded power supplies. **LinkSwitch-HP** ICs deliver power and performance unequalled by any other PSR solution."

LinkSwitch-HP devices automatically select their control mode according to prevailing line and load conditions to optimize conversion efficiency and response to transient load demands, while minimizing output ripple and audible noise. Continuous-conduction-mode (CCM) operation results in reduced RMS currents, leading to higher efficiency and less heat dissipation, while 132 kHz, full-load operating frequency enables the use of smaller magnetics and LC post-filter components. **LinkSwitch-HP** ICs are capable of no-load power consumption of less than 30 mW at 230 VAC and are more than 50 percent efficient at 0.1 W input power, easily meeting all global energy efficiency regulations such as ErP (EuP), ENERGY STAR® EPS V2.0 and EC Ecodesign Directive Tier 2 for external power supplies.

LinkSwitch-HP devices also reduce the cost and complexity of meeting Chinese safety standard GB 4943.1-2011, which mandates the use of warning labels on power supplies that do not meet strict creepage and clearance rules. Similar to UL 60950-2007 and set to become mandatory on December 1st, 2012, the new rule requires designers to increase the primary-to-secondary clearance by a factor of 1.48 for power supplies used in equipment above 2000 m, or else add a warning label to the product.

LinkSwitch-HP ICs feature a comprehensive protection suite, including selectable current limit, programmable shutdown delay-time extension, brown-out, brown-in, overvoltage, over-current and over-temperature protections. Engineering samples are available now, with production quantities expected by the end of August 2012.

LinkSwitch-HP devices are offered in two different package options: eSIP-7C and eDIP-12B, starting at \$0.42 each for 10,000-piece quantities (LNK6763V). Two supporting evaluation demo boards are available upon request: RDK-321, a 17 W dual-output flyback converter for LCD monitors and RDK-313, a 30 W, 12 V single-output general-purpose adapter.

About Power Integrations

Power Integrations, Inc., is a Silicon Valley-based supplier of high-performance electronic components used in high-voltage power-conversion systems. The company's integrated circuits and diodes enable compact, energy-efficient AC-DC power supplies for a vast range of electronic products including mobile devices, TVs, PCs, appliances, smart utility meters and LED lights. CONCEPT IGBT driver systems enhance the efficiency, reliability and cost of high-power applications such as industrial motor drives, solar and wind energy systems, electric vehicles and high-voltage DC transmission. Since its introduction in 1998, Power Integrations' EcoSmart® energy-efficiency technology has prevented billions of dollars' worth of energy waste and millions of tons of carbon emissions. Reflecting the environmental benefits of the company's products, Power Integrations' stock is included in the NASDAQ® Clean Edge® Green Energy Index, The Cleantech Index®, and the Ardour Global IndexSM. For more

information, including design-support tools and resources, please visit www.powerint.com; visit Power Integrations' **Green Room** for a comprehensive guide to energy-efficiency standards around the world.

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