NXP builds a smarter way to energy efficiency with world's lowest standby power

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NXP Semiconductors today announced a new generation of GreenChip power solutions which feature the lowest standby capability in the industry, reaching levels below 10mW. The NXP GreenChip power ICs, also known as Switch Mode Power Supply controller ICs, are designed for adapters for mobile devices such as cell phone chargers, tablets and notebooks, as well as major home appliances or white goods.

The GreenChip TEA1721 is the first member of the new high-performance low-power supply controllers with less than 10mW standby power consumption, optimized for use in mobile phone chargers and major home appliances. The new GreenChip TEA173x, TEA1753 and TEA1703 ICs deliver extremely low standby power for computing

devices such as notebooks, tablets and netbooks, as well as printer adapters. Together, the devices are designed to meet tomorrow's intelligent power demands from standby to maximum output power, with the lowest standby power capability in the industry.

"From smartphones to home appliances, the consumer electronics industry is hungry for performance devices that come with ultra-low standby power levels. Our extensive GreenChip power portfolio is the answer, enabling new levels of intelligent energy efficiency," said Stephane Curral, general manager, power and lighting solutions product line, NXP Semiconductors. "With the release of our newest GreenChip power supply controllers, we are expanding NXP's leadership in power adapters for notebooks to broader premium products that demand longer battery life and high-efficiency."

NXP GreenChip ICs cover the entire power spectrum from three to hundreds of watts, covering nearly every portable and consumer device, while also going far beyond industry requirements. Designed to improve energy efficiency and reduce carbon emissions, GreenChip technology lies at the heart of NXP's cost-effective, high-efficiency power and lighting ICs. GreenChip products are targeted for any device that draws on AC power and offers many additional smart benefits, from minimal standby power for power supplies to CFL dimming capabilities. Further, NXP's low-cost power supply solutions come in an industry-standard small package with very few external components required, and are developed in a leading power management IC process.

GreenChip TEA172x

The latest handsets, PCs and home appliances require compact, high-efficiency power supplies that consume less power when not in use without sacrificing performance. NXP has developed the GreenChip TEA172x family of power supply ICs for products that have power

requirements below 20W. Complete with the latest feature set and smart power control modes, the GreenChip TEA1721 is designed to help manufacturers develop cost-effective, intelligent devices.

Building on the success of the NXP STARplug family, the GreenChip TEA1721 is an AC/DC controller targeting up to 5W power supplies with ultra-low standby power consumption of less than 10mW. It contains a USB-compliant power supply controller with integrated MOSFET and a minimal number of external components. In addition, the device is compliant to the USB 1.1 and 1.2 charging specification.

GreenChip TEA173x, TEA1753 and TEA1703

PCs, tablets, netbooks, computing peripherals and communications commodity applications all demand efficient power supplies with less standby power loss. For medium power levels, NXP now offers the GreenChip TEA173x and TEA1703, which are designed for applications that require an efficient and cost-effective power supply solution of up to 75W. Both come with a feature set and smart power management modes that resemble more advanced systems such as highly efficient notebook adapters, but at less cost. The GreenChip TEA173x family of AC/DC flyback controllers enables 90-percent efficient power supplies with less than 100 mW of standby power using a minimal number of external components. By combining the TEA173x and TEA1703, manufacturers can create slim, compact designs and achieve standby power levels of even less than 10mW. The ICs combine fixed-frequency operation at high output power with frequency reduction at low output power, resulting in high-efficiency over the total load range.

For higher power levels, NXP provides the TEA1753, which features a flyback controller with integrated PFC controller. The TEA1753 is the latest derivative of the very successful GreenChip III family, which works together seamlessly with the TEA1703 standby controller. While

standby performance of the existing GreenChip III family was already much lower than the 300mW industry standard, the addition of the TEA1703 will contribute a massive improvement to less than 30mW performance.

NXP is showcasing its next-generation GreenChip power ICs with ultra-low standby power at APEC 2011, the Applied Power Electronics Conference, in Fort Worth Texas, March 6 to 10 at booth 509. The GreenChip TEA1753, TEA1738, TEA1733 and TEA1703 are available now and are in volume production. Pricing for 1,000 pieces is US $0.98 for TEA1753, US $0.35 for TEA1738, and US $0.38 for TEA1703.

Provided by NXP