Cirrus Logic's Newest Digital LED Controller Features Two-Color Mixing for Efficient, High-Quality Light and Near 100 Percent TRIAC Dimmer Compatibility

CS163X Family of LED Controllers Offers Up to 30 Percent Higher Lumens Per Watt Compared to Single-Channel Drivers While Providing Improved Color Temperature Quality

AUSTIN, Texas--(BUSINESS WIRE)-- Cirrus Logic Inc. (Nasdaq: CRUS) has introduced its second family of digital LED controllers with digital TruDim™ dimmer compatibility technology designed to accelerate worldwide adoption of LED retrofit bulbs. In addition to providing near 100 percent compatibility with the world’s installed base of dimmers, the new CS163X family provides two-channel LED color mixing capabilities. This allows LED bulb manufacturers to more efficiently create warm, natural light quality while also lowering the cost barrier for two-channel LED retrofit bulbs.

The CS163X family enables improved color quality at up to 30 percent greater efficacy than with single-channel white LEDs. An innovative digital architecture provides the CS163X family with the ability to control two LED strings using components typically used to control a single LED string, resulting in lower system costs compared to today’s two-channel solutions. In addition, the CS163X incorporates powerline calibration technology, allowing manufacturers to calibrate bulb characteristics such as light output and color temperature by sending commands via the AC mains terminals during the final manufacturing stage. This patent-pending technology allows manufacturers to utilize LEDs with a wider variation in performance characteristics, resulting in lower LED costs while maintaining consistency in light output and color temperature from bulb to bulb.

"Cirrus Logic’s CS163X two-channel, TRIAC dimmable digital LED controller is a breakthrough in digital controllers and an ideal system solution for our Brilliant Mix technology," said Horst Varga, Applications Engineering, OSRAM Opto Semiconductors. "CS163X's high level of integration and performance enables many new opportunities for the Brilliant Mix technology in LED retrofit applications requiring high color rendering index (CRI) and high efficacy. The combination of these technologies will accelerate the growth of LED bulbs that match the natural light color quality performance of today’s incandescent and halogen bulbs."

Cirrus Logic entered the LED market in March 2012 with the first product in its roadmap of LED controllers, the CS161X family, which focused on solving dimmer compatibility issues. Fundamental to Cirrus Logic’s LED product family is the company’s digital TruDim technology, which was the result of a three-year investment in TRIAC interface algorithms, LED driver topologies and system architectures. TruDim digital intelligence allows the controller to identify the type of dimmer in use and adapt its dimmer compatibility algorithm to provide smooth dimming in much the same way the consumer has come to expect from decades of using incandescent light bulbs.

"Cirrus Logic’s roadmap of digital LED controllers is helping LED retrofit lamp manufacturers accelerate consumer adoption by solving critical challenges such as dimmer compatibility and color quality," said Will Draper, strategic marketing manager for LED Lighting Products. "The CS163X family builds upon the near-perfect dimmer compatibility of our first family of digital LED drivers, the CS161X family, by adding two-channel color mixing technology to create improved light quality with up to 30 percent more energy savings compared to single-channel white LED bulbs. Having established performance benchmarks in both dimming and color quality, future generation products will focus on lowering system costs while maintaining this performance leadership."

Market Background

LED retrofit bulbs are considered by many as the heir apparent to incandescent and compact fluorescent lamps, due to their
superior energy efficiency and long life. Key barriers to mass adoption have been higher cost and, like compact fluorescent lights (CFL), poor dimmer compatibility and color quality. The challenge posed by color quality improvements represents a significant opportunity for solid-state lighting (SSL) technology, given that consumers are largely dissatisfied with the color quality performance of existing CFLs. Improved color quality is a fundamental advantage for LEDs due to their more uniform optical characteristics. As a result, SSL products can more closely replicate the user experience of incandescent lighting by simultaneously delivering warm correlated color temperature (CCT) with high Color Rendering Index (CRI).

Market analyst firm Datapoint Research estimates that the LED lamp market in ambient lighting applications will grow from around 200 million units in 2011 to around one billion units by 2015.

**Pricing and Availability**

The CS163X is currently in volume production. It is available in a 16-pin SOIC package and is priced at $1.06 (USD) in quantities of 100,000.

**Cirrus Logic, Inc.**

Cirrus Logic develops high-precision, analog and mixed-signal integrated circuits for a broad range of innovative customers. Building on its diverse analog and signal-processing patent portfolio, Cirrus Logic delivers highly optimized products for a variety of audio and energy-related applications. The company operates from headquarters in Austin, Texas, with offices in Tucson, Ariz., Europe, Japan and Asia. More information about Cirrus Logic is available at [www.cirrus.com](http://www.cirrus.com).

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**Safe Harbor Statement**

*Except for historical information contained herein, the matters set forth in this news release contain forward-looking statements, including any plans for the development of future generation products and estimates of the future growth of the LED lamp market. In some cases, forward-looking statements are identified by words such as "expect," "anticipate," "target," "project," "believe," "goals," "opportunity," "estimates," "intend," and variations of these types of words and similar expressions. In addition, any statements that refer to our plans, expectations, strategies or other characterizations of future events or circumstances are forward-looking statements. These forward-looking statements are based on our current expectations, estimates and assumptions and are subject to certain risks and uncertainties that could cause actual results to differ materially. These risks and uncertainties include, but are not limited to, failure of our new products to gain market acceptance; failure of the LED lamp market to grow as anticipated; and the risk factors listed in our Form 10-K for the year ended March 31, 2012, and in our other filings with the Securities and Exchange Commission, which are available at [www.sec.gov](http://www.sec.gov). The foregoing forward-looking statements represent our outlook as of the date of this news release, and we undertake no obligation to update or revise these statements, whether as a result of new developments or otherwise.*

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