



CORRECTING and REPLACING Cirrus Logic Enters LED Lighting Market with Digital Controller Delivering Near 100 Percent TRIAC Dimmer Compatibility

In Volume Production Today with Tier-1 Lighting Company, CS161X Family of LED Driver ICs Uses New TruDim Technology to Help Speed Worldwide Adoption of LEDs

AUSTIN, Texas--(BUSINESS WIRE)-- Sixth graph, third sentence should read: Cirrus Logic's CS161X performed near flawlessly across the test's metrics, achieving 98 percent compatibility (sted achieving 97 percent compatibility).

The corrected release reads:



CIRRUS LOGIC ENTERS LED LIGHTING MARKET WITH DIGITAL CONTROLLER DELIVERING NEAR 100 PERCENT TRIAC DIMMER COMPATIBILITY

In Volume Production Today with Tier-1 Lighting Company, CS161X Family of LED Driver ICs Uses New TruDim Technology to Help Speed Worldwide Adoption of LEDs

Cirrus Logic Inc. (Nasdaq: CRUS) is entering the emerging high-growth LED lighting market with a digital LED controller that directly solves dimmer compatibility issues that have been a major barrier to consumer adoption of LED retrofit bulbs. Featuring Cirrus Logic's new digital TruDim™ technology, the [CS161X controller family](#) has been tested to provide

Cirrus Logic CS161X LED Driver IC. (Photo: Business Wire)

near 100 percent compatibility with a wide array of dimmers representing the vast majority of the installed base worldwide. The CS161X is already in high volume production with a tier-1 lighting company. Cirrus Logic expects to ship between 5-10 million LED controllers during calendar year 2012.

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 fluorescents, poor dimmer compatibility. None of the LED bulbs available today, which are primarily based on analog controllers, provide consumers broad compatibility with the wide variety of dimmers installed within residences, retailers and businesses. Dimmer incompatibility problems, which include bulbs that produce flickering or flashing light or the inability to turn on or off, are a leading cause for high rate of return by consumers.

"Several years ago Cirrus Logic identified the growing LED market as an area where we could leverage our signal processing expertise and solve meaningful engineering challenges," said Jason Rhode, Cirrus Logic president and CEO. "To the consumer, buying an LED lamp today can be a frustrating experience because so many of them just don't work once you take them home. As it turns out, solving the challenges of dimmer compatibility was enormously complex, and we're pleased that one of the largest LED lamp manufacturers has showcased our first LED controller precisely because it provides near-perfect compatibility with every installed dimmer from around the world that we could find and test."

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. "Making LED light bulbs nearly universally compatible with all of the dimmer systems that currently exist around the world is one of the biggest challenges facing LED bulb manufacturers," said Jon Gamble, senior analyst, Datapoint Research. "Solving dimmer compatibility whilst maintaining a competitive bill of materials is key to accelerating the LED market toward widespread consumer adoption during the next few years."

Digital TruDim Technology

The CS161X family enables industry-leading dimmer compatibility as a result of a three-year investment in TRIAC interface algorithms, LED driver topologies and system architecture, which are the foundation of TruDim technology. The CS161X's 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. This smart adaptive digital signal processing technology is not possible with today's analog controllers.

Near 100-Percent Tested Dimmer Compatibility

Cirrus Logic acquired more than 200 dimmers from all over the world and developed a compatibility test to measure the performance of existing solutions against the CS161X products. This dimmer compatibility test, which involves the testing of 120V and 230V products, in single and multilamp configurations of five and 10 lamps in parallel, measures five key parameters for determining dimmer compatibility: (1) functionality (2) flicker-free steady state (3) smooth dimming and (4) dimming range (max-minimum). Cirrus Logic's CS161X performed near flawlessly across the test's metrics, achieving 98 percent compatibility. The closest competitive LED controller performed at 71 percent, and the average among today's current LED controllers was 50 percent.

CS161X Family Product Information

The CS161X is the first family of products in Cirrus Logic's new line of LED controller solutions designed to help leading LED lamp manufacturers solve complex engineering challenges and drive high-volume LED sales growth. The CS161X family's unique adaptive dimmer compatibility algorithm controls the boost stage to enable best-in-class flicker-free phase dimming across the light spectrum, including "deep dimming" down to zero percent of light output with leading edge, trailing edge and digital dimmers.

The CS161X integrates a variable conduction mode boost converter (CRM/CCM), providing power factor correction and dimmer compatibility with primary-side control, constant output current and quasi-resonant flyback or buck output stage and includes solutions for both 100-120 VAC and 220-240 VAC line voltages.

While Cirrus Logic's first LED driver family solves the dimmer compatibility challenge, subsequent products in the company's roadmap are planned to address industry demands for improved LED light color and system cost reduction, showcasing the company's continued long-term investment in LED products.

Pricing and Availability

The CS161X is currently in volume production. It is available in a 16-pin SOIC package and is priced at \$0.81 (USD) in quantities of 100,000.

Video and Press Kit Available

A video demonstration is available of Cirrus Logic's TruDim technology compared to the dimming performance of today's LED bulbs — [watch the video](#) on YouTube. For members of the news media, a [press kit](#) is available in the media section of the Cirrus Logic website.

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.

Cirrus Logic, Cirrus, and TruDim are trademarks of Cirrus Logic Inc. All other product names noted herein may be trademarks of their respective holders.

Safe Harbor Statement

Except for historical information contained herein, the matters set forth in this news release contain forward-looking statements, including our estimates of the expected number of shipments of LED controllers in 2012 and estimates of 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 26, 2011, and in our other filings with the Securities and Exchange Commission, which are available at 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.

Photos/Multimedia Gallery Available: <http://www.businesswire.com/cgi-bin/mmg.cgi?eid=50218260&lang=en>

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