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Marvell Drives Launch of Samsung's Family of Retail LED Retrofit Bulbs

Marvell's 88EM8183 LED Driver IC Selected by Samsung LED Lighting Division for New Line of Retail Bulbs

SANTA CLARA, Calif., April 15, 2013 /PRNewswire/ -- [Marvell](#) (Nasdaq: MRVL) today announced the Marvell® 88EM8183 deep dimming single-stage AC/DC LED driver integrated circuit (IC) will power Samsung Electronics' new suite of LED retrofit bulbs. Announced in [February 2012](#), the 88EM8183 LED driver IC delivers the highest compatibility of wall dimmers, the lowest component count in the industry and supports many of the world's lighting standards, making it a premier solution for OEMs across the globe. Scheduled to be in retail stores next month, Samsung's new Marvell-powered products will include A19, bulged reflector (BR) and parabolic aluminized reflector (PAR) bulbs.

(Logo: <https://photos.prnewswire.com/prnh/20100719/SF36559LOGO-b>)

"With consumers increasingly adopting LED lighting in their homes, it is essential that OEMs address this demand by integrating advanced dimming capabilities into their most efficient bulbs," said Kishore Manghnani, vice president of Green Energy Products at Marvell. "By leveraging Marvell's 88EM8183 driver, Samsung Electronics now produces high-performance, low-cost LED bulbs that offer deep dimming capability and are fully compatible with more than 150 different types of wall-box dimmers around the world. We believe there is no solution on the market that provides the same widespread dimmer compatibility and affordable price point that our LED driver IC provides."

The highly integrated Marvell 88EM8183 LED driver IC is designed to achieve smooth, deep dimming down to 1 percent LED current, which represents significantly improved performance when compared to competitive solutions capable of dimming down to just 10- to 20 percent of current. The 88EM8183 IC also is compatible with many different types of (TRIAC) wall box dimmers from a wide variety of global manufacturers. The architecture of the 88EM8183 LED driver IC allows a high level of integration, which greatly reduces the bill of materials (BOM). By reducing the components count needed for an LED driver by more than half, the Marvell solution requires dramatically less board space, which allows OEMs and ODMs to bring LED lighting to a diverse range of lamp form-factors, including A19, PAR and BR, without compromising dimming performance.

Features of the Marvell 88EM8183

Marvell's 88EM8183 IC is designed to:

- Implement advanced dimming control algorithms to comply with the National Electrical Manufacturers Association Solid State Lighting 6 (NEMA SSL 6) dimming standard.
- Employ Marvell's unique primary side current control method, which eliminates the need for an opto-coupler and associated feedback circuit while delivering high

regulation accuracy over wide range AC input.

- Integrate a high voltage start-up circuit to supply energy to the chip during power up, eliminating an external field-effect transistor (FET) and associated power circuits.
- Monitor dimmer status and manage dimmer load to maintain proper operations through the internal digital core and analog circuit, eliminating external dimmer bleeder circuits required by existing solutions on the market.
- Deliver up to 90 percent efficiency, a power factor above 0.95 and lower than 20 percent total harmonics distortion via unique design techniques, enabling lighting OEMs and ODMs to exceed ENERGY STAR requirements.
- Support both fly-back and buck-boost topologies for isolated and non-isolated bulbs.

Related Links:

- Product Information: <http://www.marvell.com/led-lighting/drivers/88EM8183/>
- Marvell media materials: http://www.marvell.com/company/press_kit/

About Marvell

Marvell (NASDAQ: MRVL) is a global leader in providing complete silicon solutions enabling the digital connected lifestyle. From mobile communications to storage, cloud infrastructure, digital entertainment and in-home content delivery, Marvell's diverse product portfolio aligns complete platform designs with industry-leading performance, security, reliability and efficiency. At the core of the world's most powerful consumer, network and enterprise systems, Marvell empowers partners and their customers to always stand at the forefront of innovation, performance and mass appeal. By providing people around the world with mobility and ease of access to services adding value to their social, private and work lives, Marvell is committed to enhancing the human experience.

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For Further Information Contact:

Marvell Media Relations

Daniel Yoo

Tel: 408-222-2187

yoo@marvell.com

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