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Marvell's Industry-Leading Smart LED Controllers Continue to Drive the Wide Adoption of Smart Lighting

Marvell's new AC/DC 88EM8189 and DC/DC 88EM8803 LED controllers further expand the company's end-to-end smart lighting platform offerings for the "Smart Life and Smart Lifestyle"

SANTA CLARA, Calif., June 3, 2014 /PRNewswire/ -- [Marvell](#) (Nasdaq: MRVL) today announced adding two new smart digital LED driver integrated circuits (ICs) – 88EM8189 and 88EM8803 – further expanding its end-to-end smart lighting platform into LED lamps and fixtures.

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The Marvell 88EM8189 is the industry's first smart AC/DC LED controller that offers Inter-Integrated Circuit (I²C) control interface, integrated standby power supply for networking circuit and backward compatibility with legacy dimmers. Along with Marvell's industry-leading ZigBee controller 88MZ100, the 88EM8189 enables lowest bill of materials (BOM) for smart wireless LED bulbs, providing high-quality lighting experience at an affordable price point, accelerating consumer adoption of smart lighting around the world.

The Marvell 88EM8803 is the second generation chip based on the Marvell's intelligent DC/DC dual-channel LED controller, the Marvell 88EM8801. It offers a wide LED output range up to a maximum of 60V, 1A for each channel. The 88EM8803 integrates an I²C interface for wireless lighting control and low-side switches to provide low BOM cost, reducing design complexity for various lighting applications, including linear tubes, high color rendering index (CRI), warming dimming or color temper tunable lamps that require multi-string LEDs.

"With the introduction of the 88EM8189 and 88EM8803, Marvell is again raising the bar for the smart lighting industry," said Philip Poulidis, Vice President and General Manager of the Mobile and Internet of Things (IoT) Business Unit at Marvell. "Our continued innovation in this space with LED controllers along with industry-leading wireless technologies helps drive the cost of LED smart lighting down to an affordable price point for global consumers, while simultaneously delivering a great lighting experience. We are proud to lead the industry as a pioneer in LED adoption and look forward to bringing new offerings to our smart lighting platform in the future."

Based on smart digital LED driver ICs, industry-leading wireless microcontrollers (ZigBee, Wi-Fi and Bluetooth) and the Marvell Kinoma[®] software, Marvell offers one of the industry's broadest end-to-end, turn-key open platform including smart lamps, and gateway and

software solutions that support multiple industry standards including ZigBee Light Link (ZLL), ZigBee Home Automation (ZHA), Wi-Fi, Bluetooth and more. Through original device manufacturers (ODMs) and software partners, Marvell's smart lighting platform enables smart wireless bulbs and fixtures for both residential and commercial lighting.

The Marvell 88EM8189 driver chip enables the smallest driver footprint and lowest system cost to provide smart lighting for all form factor LED lighting applications, ranging from A, BR, PAR lamps to smaller GU10 and E17 bulbs. The 88EM8803 chip offers flexibility and quality for commercial and residential lighting applications where multiple string of LEDs are used, for example, linear tubes and troffers replacement, LED modules, warming dimming and color temperature tunable lamps. Both solutions provide ease of design, excellent dimming performance while significantly reducing cost of LED driver electronics, thanks to the innovations in chip architecture.

Key benefits of the Marvell 88EM8189 chip include:

- Single-stage primary side control fly-back or buck-boost topology
- Integrated digital interface I2C for connection to networking microcontroller to provide digital dimming through ZigBee, Wi-Fi, Bluetooth, PLC and other technologies
- Integrated AC-DC converter for bias power supply to networking microcontroller
- Enables meeting ENERGY STAR power consumption (< 500mW standby) when light is off
- Backward compatible with phase cut wall dimmers worldwide
- Reduced system BOM cost with two chip solution – 88EM8189 plus 88MZ100

Key benefits of the Marvell 88EM8803 chip include:

- Independent control of two LED strings with dual channel DC/DC buck converter with integrated low-side switches
- Up to 60V and 1000mA LED output current per string and
- 100% to 0.1% dimming with 10-bit PWM control resolution
- I2C interface for OTP memory programming and communication protocol support, such as ZigBee, Wi-Fi, Bluetooth and power line communication (PLC)

For more information on the Marvell 88EM8189 and the Marvell 88EM8803, please visit <http://www.marvell.com/led-lighting/drivers/88EM8189/> and <http://www.marvell.com/led-lighting/drivers/88EM8803/> respectively.

About Marvell

Marvell (NASDAQ: MRVL) is a global leader in providing complete silicon solutions and Kinoma® software enabling the "Smart Life and Smart Lifestyle." From mobile communications to storage, Internet of Things (IoT), 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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