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Marvell's 88EM8187 LED Controller Delivers Unparalleled Deep Dimming Performance and Industry's Highest Level of Integration

Innovative digital architecture, tested for dimmer compatibility with lighting control leader Lutron, delivers ultra deep, flicker-free, shimmer-less dimming performance and long bulb lifetime at lower component count

SANTA CLARA, Calif., Feb. 24, 2014 /PRNewswire/ -- Marvell (Nasdaq: MRVL) today announced the Marvell® 88EM8187 LED Controller Integrated Circuit (IC) Series, phase-cut, deep-dimming, single-stage AC/DC constant current controller for dimmable LED lamps and fixtures. This second generation LED driver IC builds on the industry-leading, 88EM8183 by using unique mixed-signal architecture with on-chip advanced digital algorithms. The 88EM8187 product line delivers unparalleled performance with full compatibility to more than 250 dimmers worldwide, shimmer-less and flicker-free dimming as low as 1 percent, longer bulb lifetime due to superior thermal management and power efficiency of 90 percent, while significantly reducing electronic component count and total solution cost. A key component of verifying this unparalleled dimming performance was the collaborative testing of pre-release versions of the IC with lighting control leader Lutron Electronics Co., Inc. The 88EM8187 is also part of Marvell's Internet of Things (IoT) Smart Home lighting portfolio, offering a total solution for connected smart lighting applications. Marvell is currently sampling 88EM8187 to major LED lighting OEMs and ODMs around the world. Customers are expected to ship products based on the 88EM8187 this year.

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

"The 88EM8187 raises the performance bar for the entire industry as consumers can now get the true incandescent experience that includes excellent dimming performance along with the energy savings provided by LEDs," said Philip Poulidis, Vice-President and GM of Internet of Things Business Unit. "Even the best of the available competing IC solutions require bulb manufacturers to make several trade-offs when developing a product. For example, manufacturers may need to limit the number of wall-box dimmers with which their LED bulbs are compatible, to sacrifice dimming level performance and avoid flicker or shimmer, as well as the need to choose higher reliability or efficiency at the expense of higher component cost. However, the 88EM8187 and its unique digital architecture deliver the best performance in the industry at the lowest system cost by excelling in compatibility, reliability, efficiency, deep-dimming level, and low component count without forcing OEMs to compromise their hardware designs."

"Working with Marvell to enable higher-performing, cost effective, dimmable LED driver solutions will help address the ongoing compatibility issue between LEDs and dimmers and provide an excellent customer experience," said Mark Jenner, Lutron's Director of New Business Alliances. "For example, pairing Marvell's new 88EM8187 design with any of our C•L dimmers provides a superior dimming experience from one lamp to the dimmer's full rated load without shimmer, flicker, or interaction with other dimmers. These types of reliable solutions provide consumers with the confidence to use more energy-efficient LED bulbs throughout their homes."

Marvell and Lutron Electronics
Marvell confirmed dimming compatibility with Lutron Electronics between a pre-release version of an 88EM8187 reference design and a variety of Lutron controls rated for LED loads. As a service to the lighting industry, the Lutron LED Center of Excellence continually tests LED lamps for compatibility with the Lutron C•L dimmer collection. With its industry leading C•L technology, the dimmer collection was designed specifically for LED lamps, but is also UL-listed for incandescent, halogen and CFL loads.

Key benefits of the Marvell 88EM8187 driver IC product line include:

- Premium dimming performance
  - 100 percent worldwide dimmer compatibility including leading-edge, trailing-edge and special (Smart) dimmers
  - Flicker-free, shimmer-less deep dimming as low as 1 percent
- Reduced system BOM cost with fewer and smaller components in EMI/damping/dimmer level control circuit
  - Up to 25 percent cost savings over competing single-stage driver solutions
- Integrated thermal fold back feature and optimized dimmer latch-up and hold-up current management
  - Removes heat from power components or "hot spots" dramatically improving reliability
  - Removes potting requirement for further cost reduction
- Highest driver electrical performance
  - Up to 90 percent driver efficiency
  - Industry-best line regulation over wide AC voltage range (< 2 percent)
  - > 0.95 Power Factor
- Two package options:
  - SOIC-8: phase-cut only, pin-to-pin compatible with first generation 88EM8183 chip
  - SOIC-14: phase-cut only, enables single-layer PCB

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, 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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About Lutron Electronics
Lutron Electronics, headquartered in Coopersburg, Pennsylvania, designs and manufactures energy-saving lighting controls, automated window treatments and sensors for both residential and commercial applications. Its innovative, intuitive products can be used to control everything from a single light, to every light, shade and even stand-by power in a home or commercial building. Lutron products make any space more versatile, while enhancing ambiance, comfort and productivity. They also save energy and make light bulbs last longer, making them an eco-friendly addition to the home and workplace. Founded in 1961, Lutron estimates that the installed base of its products saves the nation nearly 10 billion kWh of electricity, or approximately $1 billion in utility costs per year. Lutron manufactures more than 16,000 energy-saving products, sold in more than 100 countries around the world.
For more information, please visit www.lutron.com

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