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Marvell Launches Breakthrough Smart Energy Management Platforms for Appliances and LED Lighting Solutions

Fully-integrated hardware and software components deliver seamless connectivity at a cost-effective price point for devices with limited or no-computing ability

SANTA CLARA, Calif., and LAS VEGAS, Jan. 9, 2012 /PRNewswire/ -- [Marvell](#) (NASDAQ: MRVL), a worldwide leader in integrated silicon solutions, today announced two smart energy management platforms for smart appliance and LED lighting applications, which give consumers the ability to conveniently manage their smart appliances and lighting solutions from anywhere in the world, minimizing wasteful energy consumption and furthering the seamlessly connected lifestyle.

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

Both the Smart Energy and Smart LED Lighting Platforms are designed to provide highly cost-effective, fully-integrated, end-to-end silicon and software solutions that enable original equipment manufacturers (OEMs) to develop feature-rich smart appliances and smart LED lighting solutions. The Smart Energy Platform provides rich Wi-Fi connectivity enabling smart appliances to seamlessly integrate into consumers' home networks and devices, such as smart phones and tablets, as well as the broader Internet and cloud-based services. The Smart LED Lighting Platform is built around innovative LED driver ICs, along with low-power ZigBee networking, to provide a complete, wirelessly networked lighting control solution. A Wi-Fi/ZigBee gateway connects the lighting control networks to the premises networks, allowing control via smart phones and tablets. Both platforms are complemented by the Marvell® Kinoma® platform allowing rich user-interfaces (UIs) and new applications.

"As consumers increasingly expect their devices and interfaces to be continuously connected to the content and data they want - at anytime, from anywhere - Marvell is very proud to provide the technologies that enable a seamless Connected Lifestyle across a wide array of platforms and devices," said Kishore Manghnani, vice president of marketing for Green Energy Products at Marvell Semiconductor, Inc. "Currently, appliances and lighting systems do not have high-performance host processors to support connectivity and smart applications. In addition, these appliances and devices are also not mobile – they are in fixed locations and appliances are often surrounded by thick encasings – creating various radio frequency (RF) challenges. Marvell's new Smart Energy and LED Lighting Platforms address each of these areas by providing fully integrated, end-to-end solutions in small form factors that can be easily and affordably integrated into appliances and lighting products for the next-generation of energy-efficient smart homes and offices."

"Lighting and appliances are the next frontier for connected consumer electronics and smart energy homes and businesses. These new connected devices have strong value proposition in the home and business connectivity market while maintaining an affordable price point for consumers, which is the key to its widespread adoption and implementation," said Marijana Vukicevic, senior principal analyst at IHS iSuppli. "OEMs must keep both the manufacturing and installation costs low in order to succeed in the market. Integrated silicon solutions are critical to providing efficient connectivity at the needed price point."

Marvell Smart Energy Platform

Marvell's new Smart Energy Platform – driven by its new Wi-Fi enabled microcontroller, the 88MC200, and its second-generation Smart Energy Software Platform – provides a highly cost-effective, flexible and easy-to-use hardware/software solution for building a new generation of connected smart appliances, enabling the mass-market adoption of smart appliances and devices ranging from refrigerators to thermostats. These connected smart appliances enable device OEMs to deliver a broad range of services to consumers, beyond simply managing and controlling their device. These capabilities include energy-management, demand-response, home automation and remote access, which allows users to manage comfort and convenience, run diagnostics and receive alerts and notifications. Developers can leverage the rich connectivity features of these new smart devices to create a new generation of innovative applications and services.

The Smart Energy Platform delivers seamless connectivity by addressing challenges and complexities associated with RF designs, Wi-Fi networking and small-footprint rich communications software thus enabling manufacturers to quickly design and bring smart appliances to the market. The platform is comprised of three key components:

- Marvell's new 88MC200 microcontroller: With excellent performance, low-power operating efficiency and full input/output (I/O) capabilities, the new microcontroller further simplifies the design process, cutting the cost of implementation and lowering the price for consumers.
- Marvell's low-power, fully-featured Avastar™ 88W878x 802.11n Wi-Fi SoCs: Robust, reliable wireless solutions provide latest Wi-Fi technology with advanced features such as Micro-Access Point Technology, Wi-Fi Direct, Beamforming and Antenna-Diversity.
- Marvell's field-proven Smart Energy Software Platform: A rich set of software components that work together to support the development of smart energy devices and enable these devices to connect to mobile clients such as smart-phones and Internet-based Cloud and Smart-Grid services. Device implementations built on Marvell's Smart Energy Platform are also fully interoperable with the Smart-Energy Profile 2.0 (SEP 2) Draft Standard.

Marvell Smart LED Lighting Platform

The Marvell Smart LED Lighting Platform is an energy-saving lighting solution that includes light-emitting diode (LED) lighting fixtures based on Marvell's innovative LED drivers chips and ZigBee networking, a wireless ZigBee/Wi-Fi gateway and smart lighting software for a fully integrated design that enables energy efficient, high-quality LED lights, promoting an eco-friendly and convenient lifestyle.

In the past, lighting control systems have been notoriously expensive to integrate, install and maintain due to their high-level of complexity. Marvell's new lighting platform is intended to be the first complete turnkey hardware/software system that OEMs can easily integrate into

their product development at a very low cost, reducing time-to-market. Because the new Smart LED Lighting Platform from Marvell is a fully integrated LED electronics and wireless lighting control system that is designed for extreme ease-of-integration, installation costs are also greatly reduced. The ease of use and maintenance are greatly simplified, giving non-professionals the ability to operate the optimized lighting solution based.

Marvell's Smart LED Lighting Platform also allows end users to control lighting solutions from their mobile and personal computing devices, so they can conveniently manage, analyze and maintain a cost-saving digital lighting solution from anywhere in the world. The Smart LED Lighting Platform can result in significant energy savings for commercial and residential lighting. Users also will have the convenience of remote access for added safety or aesthetic benefits, along with new LED lighting applications, such as high quality light tuning, mood lighting and scene control.

The Marvell Smart LED Lighting Platform contains all of the technology required to build a smart lighting network, including:

- Connected components: Multiple LED drivers and occupancy and photo sensors equipped with integrated ZigBee wireless hardware and software.
- A turn-key Wi-Fi / ZigBee wireless gateway: The combination of Marvell's industry leading 88W8782 Wi-Fi chip, ARMADA® 88AP166 applications processors and its 88MZ100 ZigBee SoC solution provides an integrated, wireless control interface.
- Smart Lighting Control Software Package: Includes Linux Gateway software, making it easier than ever for OEMs to create a smart end-to-end LED lighting solution with a seamlessly connected, intuitive client UI application that leverages Kinoma for various controls, such as on/off, dimming, color tuning controls, zoning and scheduling.

Availability

Marvell will be showcasing its Smart Energy Platform and LED Lighting Platform at the 2012 Consumer Electronics Show (CES) in its booth, No. 30542, located in South Hall 3 on the upper level. CES will be held Tuesday, Jan. 10 – Friday, Jan. 13, 2012, at the Las Vegas Convention Center (150 Paradise Road, Las Vegas).

The Marvell Smart Energy Platform is immediately available. Marvell is currently sampling the Smart LED Lighting Platform to select customers.

Related Links:

- Smart Energy Platform: <http://www.marvell.com/green-technology/smart-energy/>
- Smart LED Lighting Platform: <http://www.marvell.com/green-technology/led/>
- Marvell media materials: http://www.marvell.com/company/press_kit/

About Marvell

Marvell (NASDAQ: MRVL) is a world leader in the development of storage, communications and consumer silicon solutions. Marvell's diverse product portfolio includes switching, transceiver, communications controller, wireless and storage solutions that power the entire communications infrastructure, including enterprise, metro, home and storage networking. As used in this release, the term "Marvell" refers to Marvell Technology Group Ltd. and its subsidiaries. For more information, visit Marvell.com.

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