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Marvell Introduces Consumable Security Chip Using Cryptography Research's CryptoFirewall Anti-counterfeiting Technology

Marvell's PA800 provides secure authentication and management tools for mass-market consumables and peripherals

BARCELONA, Spain and SANTA CLARA, Calif., Feb. 25, 2013 /PRNewswire/ -- Today at the Mobile World Congress 2013, Marvell (Nasdaq: MRVL) announced the Marvell® PA800 consumable security chip (PA800) that implements a complete, industry-leading solution to solve the challenges of robust system consumables security. The PA800 implements Cryptography Research's (CRI) latest Consumable CryptoFirewall (CCF) technology for use in systems that require secure authentication and/or secure usage tracking for consumable items or accessories.

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

Increasingly, today's connected products - such as mobile phones, medical devices, printers, batteries and automotive components - rely on advanced security mechanisms to verify system integrity. Many of these devices, however, must still allow system users to securely replace components, accessories or consumable items. The PA800 product is an ideal solution. It is a very low-cost, low-pin count chip that enables devices to cryptographically verify both authenticity and usage across components lifecycle.

"CRI is the leader in security solutions across multiple markets. Their CryptoFirewall solution offers our customers the most robust security solution for connected products. Marvell's PA800 with CryptoFirewall enables customers to authenticate and track usage for consumable parts or accessories with ease and confidence," said Greg Allen, vice president, Printer Business Unit, Marvell. "Now manufacturers building systems have a cost-effective and secure method to protect the integrity of their systems."

Using field-proven, integrated anti-tamper security technologies, the Cryptography Research CCF solution provides consumers and manufacturers with the assurance of authenticity. The CCF works in conjunction with the Verifier CryptoFirewall (VCF) within the SoC to provide cryptographic confirmation of validity. The VCF can be provided as either software or hardware to integrate into the SoC.

In the mobile phone and tablet market, the PA800 can be installed in various accessories - such as batteries, battery chargers, and docking hubs – where it is important to guarantee authenticity. The host, by utilizing the VCF, can securely determine the capabilities, authenticity, manufacturing date, life cycle and other attributes of the accessory. In the

printer market, the PA800 can be installed or manufactured into the ink/toner cartridges. A VCF security core on the printer securely confirms the cartridge authenticity, manufacturing parameters, fill level, and other lifecycle/status data. The PA800 can be quickly deployed into future or existing systems.

The Marvell PA800 security chip is a highly secure low-power chip featuring:

- CRI Component CryptoFirewall with integrated cryptographic security
- OTP secure memory storage
- A configurable I2C/SPI host interface
- Optional LED/GPIO
- Anti-cloning and anti-tampering technology

"Marvell is a global leader in providing complete silicon solutions enabling the digital Connected Lifestyle. Whenever devices are digitally connected security becomes a critical need and Marvell clearly understands that," said Paul Kocher, president and chief scientist at Cryptography Research. "We are delighted to be working with Marvell to provide customers with effective solutions for protecting their consumable items and accessories."

With the PA800, security is maintained through the entire supply via a unique multi-stage provisioning solution, beginning at the chip foundry through when the PA800 is installed. The PA800 will be available to original equipment manufacturers (OEMs) directly and from a secure programming service and distribution channel.

Marvell invites customers with potential interest to contact us for demonstrations and additional details on use in your application. Marvell will provide PA800 samples in July 2013.

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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