## Marvell Extends Lead in Android Set-top Box Segment with Launch of ARMADA 1500 Ultra Platform for 4K Entertainment

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New comprehensive multi-media SoC solution enables global set-top box manufacturers and PayTV operators to accelerate mass deployment of cost-effective Ultra HD devices

SANTA CLARA, Calif. and LONDON - (April 27, 2015) - Marvell (NASDAQ: MRVL) - a worldwide leader in providing complete silicon solutions from mobile communications to storage, Internet of Things (IoT), cloud infrastructure, digital entertainment, in-home content delivery and Kinoma® software enabling the "Smart Life and Smart Lifestyle" - today added the ARMADA® 1500 Ultra (88DE3218) system-on-chip (SoC) to its award-winning ARMADA 1500 family. The ARMADA 1500 Ultra's Quad Core 14K DMIPS ARM A53 CPU, 8-core GPU, carrier-grade security and state-of-the-art power management techniques are designed to PayTV operators and set-top box (STB) manufacturers to cost-effectively deliver small form factor devices with feature-rich 4K entertainment and gaming services to their subscribers. With its 64-bit ARM CPU, Marvell is the first silicon provider to bring the 64-bit ARM architecture both to the mobile and the payTV segments, thereby enabling the unification of the application developer ecosystem.

"I am very proud of our close collaboration with global leading service operators to bring Ultra HD, PayTV and over-the-top services to their subscribers," said Weili Dai, President and Co-Founder of Marvell. "As consumers increasingly demand cutting-edge home entertainment experiences that include access to high-quality, 4K digital content, it is critical that operators offer compelling entertainment services from multiple sources with uncompromised image quality at an affordable cost. At Marvell, it is our passion and commitment to deliver breakthrough technologies that enable our customers and partners to better the lives of all consumers."

"Through Marvell's and Verimatrix's collaboration, the ARMADA 1500 Ultra platform integrates VCAS Ultra, providing a proven revenue security solution for premium UHD services and advanced hybrid network deployments with innovative features such as integrated VideoMark forensic watermarking," said Petr Peterka, CTO at Verimatrix. "By integrating the hardware-based VideoMark watermark technology into the ARMADA 1500, Marvell has created an integrated multi-layer security architecture that will enhance the revenue security of premium content and ensure compliance with UHD premium service delivery requirements."

The ARMADA 1500 Ultra offers a complete platform solution for operators, providing support for video SoCs, Wi-Fi and Internet of Things services. Marvell's leading video processing IP includes an enhanced Qdeo® Video Processor that addresses the Ultra HD content services being launched by PayTV operators for an immersive TV experience. With its quad-core ARM A53 64-bit CPU and 51 GFLOP GPU, the ARMADA 1500 Ultra's innovative architecture combines impressive processing power in an astonishingly small package, which is four times smaller than other SoCs on the market, enabling powerful and aesthetically appealing compact STB designs. The SoC also features a sophisticated security processor supporting leading conditional access systems (CAS) solutions from Verimatrix to meet the strict standards of service operators and content partners, building on Marvell's legacy of supporting the first Android STB with CAS.

Key features of the ARMADA 1500 Ultra HD SoC include:

- 2160p60 10 bit HEVC & VP9 Video Decode, 1080p PiP and transcoding with patented scaling techniques for best-in-class video experience
- Up to 14K DMIPs (1.5 GHz) Quad Core ARM A53 64-bit CPU allows operators to deploy rich media/web-based TV applications and Android TV services for an enhanced viewing experience
- 8 core GPU, 8 shader Vivante GC7000XS with hardware tessellation and geometry shaders optimized for the Android gaming ecosystem enables
  operators to deploy compelling gaming services to TV subscribers
- Robust security engine, trusted rendering path with TrustZone, and hardware support for video watermarking technologies such as Verimatrix VideoMark and Civolution NexGuard
- Strong portfolio of SDKs including Android TV and RDK enables service providers to quickly deploy a wider library of content and applications across all screens. Marvell SDKs have been proven in multiple generations of Android set-top boxes deployed since 2012.
- Marvell's advanced Wi-Fi and Bluetooth solutions, the Avastar® 88W8897 (2x2 11ac) and 88W8864 (4x4 11ac)

Marvell will be demonstrating the ARMADA 1500 Ultra at TV Connect 2015 in Marvell's booth MR30. TV Connect is being held in London at ExCeL London from April 28–30, 2015.

## **About Marvel**

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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