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Marvell Open Sources KinomaJS to Accelerate Growth of the Internet of Things Industry

KinomaJS is the first application framework optimized for IoT that speaks the language of the web

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SANTA CLARA, Calif., March 2, 2015 /PRNewswire/ -- Marvell (NASDAQ: MRVL)—a worldwide leader in providing complete silicon solutions from mobile communications to storage, Internet of Things (IoT), cloud infrastructure, digital entertainment and in-home content delivery and Kinoma® software enabling the "Smart Life and Smart Lifestyle"—today announced it has open sourced the KinomaJS application framework which is uniquely designed to build the core applications of embedded devices using JavaScript. Over a decade of research and development has been invested in creating KinomaJS. Field-tested and proven by major consumer electronics brands, KinomaJS has long been a "secret ingredient" built into millions of world-class products. Now it is open to the world.

Customers of Marvell hardware platforms now benefit from the flexibility and stability that open source offers when using KinomaJS. Marvell continues to stand behind KinomaJS, offering support to customers in their design, development, deployment, and maintenance of the platform, as it always has, with its proprietary software solutions.

KinomaJS
IoT products are unlike previous generations of consumer electronics products because they are always connected—to services in the cloud, to each another, and to mobile devices. Deployment over a variety of communication technologies, portability to diverse operating systems, and use across multiple network protocols requires a more nimble way of building embedded applications. Building on the JavaScript programming language, KinomaJS brings to embedded application development the same benefits that have propelled web page and server development for years. By adopting JavaScript as its core language, KinomaJS natively communicates in JSON, the preferred data interchange format of today's Internet. Through its independent JavaScript implementation, the XS virtual machine, KinomaJS has a light memory footprint and CPU requirements compared to JavaScript implementations designed for use in web browsers, and therefore scales down to significantly more cost-effective hardware.

Open source benefits Marvell's customers
Using KinomaJS, Marvell's customers can create elegant, high-performance products across

a wide variety of hardware platforms, using relatively little code that's easier to test, maintain, and evolve. An open source solution provides customers the flexibility to customize and adapt software across their product ecosystems at a reduced engineering cost because skills and code can be reused. Customers can adopt KinomaJS with confidence, knowing the stability that open source brings to their long-term software investments.

"Marvell is pleased to offer the dynamic KinomaJS application framework through open source. We are doing this to create new opportunities for our customers, from Fortune 50 companies to the innovators creating the next wave of connected devices including smart surfaces and wearables. We hope that sharing our knowledge, experience, and code will help grow the overall Internet of Things industry more quickly," said Weili Dai, President and Co-Founder of Marvell. "As we look ahead to the next 20 years of Marvell excellence, we see the company increasingly providing our esteemed customers end-to-end solutions that combine our elegant KinomaJS software with our industry-leading hardware. We are excited to take this major step."

Availability
KinomaJS source code is available for immediate download from https://github.com/kinoma. The project includes:

- JavaScript 5th Edition virtual machine (XS)
- Kinoma Porting Layer (KPL)
- Core native modules (Fsk)
- Kinoma Platform Runtime (KPR) application framework
- Networking modules for http/https, WebSockets, SSDP, and Zeroconf/mDNS
- Independent JavaScript implementation of TLS/SSL
- Graphics rendering in pure software and OpenGL accelerated
- Digital media playback extensions

The KinomaJS source code is provided under the Apache License, Version 2.0, the same open source license used by many popular open source projects including Android.

KinomaJS includes support for Linux, Mac OS X, Windows, Android, and iOS. Support for additional platforms can be integrated through KPL.

Media Resources
Screenshots, icons and other related media are available for download: kinoma.com/media

About Kinoma
The Kinoma group creates consumer electronics products, and helps others to rapidly prototype and create products themselves. The tightly integrated design and engineering team resides at global semiconductor leader Marvell. Marvell acquired Kinoma in 2010 for the team's proven heritage in software architected for high performance on everything from phones and tablets, to the "Internet of Things" (IoT). For more information, visit kinoma.com.

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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