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Marvell's Kinoma Create - the JavaScript-powered IoT construction kit - gives developers a connected device prototyping platform for the modern era, because an inspiring developer experience leads to a great user experience

Kinoma Create is the first prototyping platform to transform making, with a fully scriptable device and integrated color touchscreen, all enclosed in a case that makes projects mobile; ships in November

To tweet this news, copy: Kinoma Create, the JavaScript-powered IoT kit, brings making into the modern era. Ships Nov @marvellsemi @Kinoma <http://kinoma.com/media/2014/create>

SANTA CLARA, Calif., Oct. 21, 2014 /PRNewswire/ -- [Marvell](#) (NASDAQ: MRVL) today publicly launched Kinoma® Create, the JavaScript-powered Internet of Things construction kit. Kinoma Create's mission is to power the next wave of connected device prototyping. Kinoma Create is a pro-developer experience that integrates hardware, software, and tools conceived expressly to be powerful, approachable, and fast.



"Prototyping digital devices today is still done the way it was 25 years ago—bare green single board computers sitting on a lab bench, tethered to a computer, operated by typing obscure commands into terminal windows. This is not the way to invent the future. With better tools, the future can arrive sooner. This is why we made Kinoma Create," said Peter Hoddie, Kinoma VP at Marvell Semiconductor.

Developers, designers and makers need to be able to explore ideas and iterate fast. The crowdfunding community recognized the potential to transform prototyping, with contributions to Kinoma Create's Indiegogo campaign from 26 countries exceeding the fundraising target by more than 500 percent. Marvell took to crowdfunding to build the kind of community that can realize the fullest potential of its innovations. Thanks to their support and input, all aspects of Kinoma Create have been designed to give developers the time, inspiration and flexibility to make truly great products through prototyping:

- **A Touchscreen**

Touchscreens are common in consumer products, but not developer devices. Kinoma Create bucks the status quo, arriving ready to go with an integrated touchscreen. The screen is a powerful debugging tool, allowing developers to see and change what's going on inside their prototype. The screen is a canvas where developers can quickly mock up buttons, lights, and other controls without the time needed to build the hardware. And the screen is essential for prototypes of products that require a screen or interactive interface.

- **JavaScript: Scripting the Future of Device Development**

JavaScript has the most momentum of any programming language in the last 20 years because it is a high-level professional language that is easy to get started with, fast, and forgiving. Meanwhile, makers are still working in low-level languages and obscure scripting environments. JavaScript is the programming language for prototyping with Kinoma Create. Kinoma Create supports the JavaScript 5th Edition standard, which is optimized for use on IoT devices by the XS virtual machine.

KinomaJS is the new JavaScript framework for building apps for connected devices and the mobile devices they work with. With KinomaJS, developers quickly connect the fundamental building blocks of any IoT device: user experience, network communication, digital media, and hardware. The unique pins service in KinomaJS allows scripts to manage, interpret, and filter data from hardware on digital, analog, I2C, and serial interfaces.

"Already established as the lingua franca of web development and making a strong play on the server-side, JavaScript is also already emerging as a key IoT development platform," said James Governor, RedMonk co-founder. "Kinoma is looking to tap that interest with its hardware kit and IDE."

- **Just Make Apps, Forget About Firmware**

Apps fueled the personal computer and mobile revolutions. Now, Kinoma Create adopts apps as the building block for hardware projects—replacing firmware, file systems, drivers and daemons. Built-in touch apps deliver the functionality of command line tools, making common development tasks more accessible including configuring hardware pins, viewing and managing files, installing apps, and scanning for network services.

- **Fast, Web-like Development**

Kinoma Studio is the integrated development environment for building KinomaJS apps. Kinoma Studio is architected to speed and simplify the development process so programmers have more time to experiment. Edits made to code in Kinoma Studio are deployed and launched on Kinoma Create in as few as two seconds. The integrated debugger automatically discovers Kinoma Create devices using Wi-Fi, making it possible to debug devices without having immediate access to them. When designing, implementing, debugging, and testing an application for a mobile or embedded device, it can be more convenient to work on a computer rather than on the target device. Kinoma Studio includes a built-in simulator, to quickly run and debug KinomaJS using just a computer.

- **Show & Go with a Case and Battery**

The distinctive green and white case of Kinoma Create protects the electronics of a project, something makers have been clamoring for. Projects are more polished because Kinoma Create starts off looking like a consumer product, not a bare circuit board. The built-in battery and the case combine to liberate projects from the lab, to sense, interact with, and be tested in the real world.

- **Very well connected**

By definition, IoT devices are connected. KinomaJS enables devices to communicate using several established and emerging protocols simultaneously. SSDP and Zeroconf are available to both discover other devices and broadcast KinomaJS authored services on the local network. HTTP, HTTPS, WebSockets, MQTT, and CoAP clients and servers are available to communicate data between Kinoma Create, other devices, and the cloud.

"You develop *with* Kinoma Create, not *for* it. Great hardware and thoughtful UI create a magical experience that exceeds the parts and pieces," said Chris Krueger, Kinoma creative director at Marvell Semiconductor.

Cloud services for data rich apps

wot.io, a data service exchange for connected device platforms, today announced an agreement with Marvell to provide Kinoma Create customers free access to a rapidly growing set of data services. The wot.io open operating platform brings together all players in the IoT ecosystem to connect and share data regardless of device, standards, or connectivity.

Early adoption of Kinoma Create

The Association for Computing Machinery's User Interface Software and Technology Symposium selected Kinoma Create as the development platform for its prestigious 2014 Student Innovation Contest. More than 30 student teams used Kinoma Create to build projects that included a hands-free gesture and voice recognition-based recipe organizer, a location-based reminder system for the home, and assistive technology that tells visually impaired users if appliances are on.

Pricing & Availability

Kinoma Create is available as a pre-order through SparkFun for the suggested retail price of US\$149. Go to kinoma.com/sparkfun for more. SparkFun is an online retail store that sells the bits and pieces to make your electronics projects possible. SparkFun's ever-growing product catalog boasts over 3,500 components and widgets designed to help you unleash your inner inventor.

Kinoma Studio is available as a free download for Windows and Macintosh computers at kinoma.com/studio.

Connect with Kinoma at Gigaom Structure Connect

Kinoma Create is featured at Gigaom Structure Connect. Demos of Kinoma Create are provided at Marvell's table at the Mission Bay Conference Center of San Francisco. Additionally, the Kinoma team is participating in the event's How We Built It program, addressing the topic of prototyping on the General Session Stage today Tuesday October 21 at 10:20 AM, and on Wednesday October 22 at 3:15 PM. For more information: events.gigaom.com/structureconnect-2014/session/how-we-built-it-prototyping.

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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