

Foundries.io Launches microPlatforms for an Always-Secure Internet of Things

Open, continuously updated distributions for Linux® and Zephyr™ designed to mitigate and reverse fragmentation of IoT, Edge device ecosystems

CAMBRIDGE UK -- Aug. 21, 2018 -- Emerging from two years in stealth mode, [Foundries.io](https://foundries.io)™ today announced the world's first commercially available, continuously updated Linux® and Zephyr™ microPlatform™ distributions for the embedded, IoT, edge and automotive markets. Supported by a newly announced partner program, these microPlatforms™ enable devices from light bulbs to connected cars to always be secure and updated to the latest available firmware, operating system and application(s).

The Foundries.io™ microPlatforms™ are designed to mitigate and reverse the fragmentation across the Internet of Things, leading to a truly secure, interconnected global network. According to Gartner, roughly \$235 billion was spent on the Internet of Things in 2016, with 6.4 billion devices in the field. By 2020, Gartner forecasts that there will be nearly 21 billion devices deployed in a wide array of industries from agriculture to utilities. Without the ability to update to the most current software, these networked devices face risks of failure and of cyberattacks.

microPlatforms™ are minimal, secure, over-the-air (OTA) updatable software platforms including firmware, kernel, services and applications, delivered continuously from initial product design to end-of-life. Benefits include faster time-to-market for products across a wide range of IoT connected devices, built-in support for software and hardware security solutions, updates for security fixes and new features, and dramatically lower product development and lifetime support costs.

'Unifying, Open, Secure'

"Over the past two years we have used open source software to build a unifying, open, secure, continuously updated product platform for the fragmented IoT and embedded markets," said George Grey, CEO of Foundries.io. "We started Foundries.io to fundamentally change the industry. Today's connected devices require modern software and secure update techniques. Rather than legacy software builds being maintained for product lifetimes that can reach 10 years or more, the microPlatforms™ are built from the ground up to enable product manufacturers to always and immediately deploy the latest security updates, bug fixes and new features to their customers, ensuring the safety of the Internet of Things and the security of data throughout the network."

Foundries.io microPlatforms™ have been developed using best-in-class, enterprise software development practices, coupled with end-to-end, sensor-to-cloud, continuous integration testing on every code change, ensuring consistent product quality for connected devices in markets including smart sensor, industrial, consumer and automotive products.

Product lifetime maintenance for security updates, bug fixes and new features - from firmware to the end application - is built into the microPlatform™ products, meaning device makers no longer need to create and support a custom software build for every product. The Foundries.io business model is subscription-based and does not include per unit fees, meaning device makers are not "penalized" by the success of their products.

microPlatform Features

The Linux microPlatform™ includes updatable firmware, kernel and a minimal distribution built using Open Embedded/Yocto, running customer-specific services and applications natively or in Containers. This enables remote management of the product software from private or public cloud device management platforms on Edge devices, using standard enterprise tools such as Ansible and Kubernetes.

The [Zephyr](#) microPlatform™ is the first downstream distribution for the Zephyr Project, and uses the Zephyr RTOS, MCUboot software, services and reference applications to provide a continuously tested, secure, updatable, cross-architecture solution for microcontroller-based products.

Applications include upgradable smart devices for industry and home, gateways and edge computing devices reconfigurable OTA for newly attached hardware and/or services, and securely updatable software platforms for the automotive, robot and drone industries.

Cross-architecture Linux microPlatform™ builds support Arm, Intel and RISC-V. Popular development board support includes:

- Toradex Colibri i.MX7 SoM
- Raspberry Pi 3 (using 64 bit Linux and supporting Docker containers)
- Qualcomm DragonBoard 410C and 820C
- TI BeagleBone Black Wireless
- Intel NUC 7
- SiFive Unleashed

Zephyr RTOS microPlatform™ builds are also available now, supporting hardware listed by the Zephyr Project, including products from Nordic Semiconductor, NXP and STMicroelectronics.

Downloads of microPlatform™ source code, binaries and documentation are available at [Foundries.io](#)

Foundries.io has established a Partner Program to enable SoC/MCU/SoM vendors, distributors, Cloud and Device Management providers, Service Providers and others to work with and support the microPlatform™ distribution ecosystem.

Toradex and Linaro are launch partners. Toradex is using the Linux microPlatform™ as a secure and updateable base for its upcoming software offering, further simplifying the use of its products and allowing customers to focus on their applications. Linaro is using the microPlatforms™ to provide software solutions for the 96Boards open hardware ecosystem.

Foundries.io changes the IoT landscape by delivering continuously-updated software platforms for a secure, connected world. Sensor, smart device, Edge, Fog, automotive and other connected device

product developers benefit from continuously integrated and tested RTOS and Linux microPlatforms™ on microcontrollers to advanced SoCs, for global industrial and consumer markets.

For more information visit <https://Foundries.io> or on Twitter, [@Foundriesio](https://twitter.com/Foundriesio)

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Partner and Customer Quotes

Toradex® AG is a leading System on Module (SoM) vendor providing Arm based SoM products to a wide range of industrial and medical customers.

“We are pleased to partner with Foundries.io who is offering a secure, updatable, OE/Yocto® Project based on the latest Linux technologies. The Foundries.io Linux microPlatform™ aligns well with Toradex’s commitment to stable and secure products, which allow customers a smooth development phase and a very short time to market. We expect to extend the support for the LmP to a wide range of our System on Modules. Toradex will be announcing exciting news about our upcoming software offerings for our SoMs, based on the Foundries.io Linux microPlatform™ soon,” Toradex CTO Roman Schnarwiler

Linaro Limited is the company leading collaboration on open source projects in the Arm ecosystem.

“Linaro welcomes Foundries.io as an upstream-aligned resource for the 96boards ecosystem. The combination of 96Boards™ hardware and Foundries.io microPlatforms™ provides a complete reference for product development and delivery for IoT, Edge and Enterprise products,” said Dr. Yang Zhang, director of the Linaro 96Boards open hardware initiative.

Vitalacy is an innovative company delivering hygiene compliance solutions for hospitals and healthcare facilities. The Vitalacy solution uses washroom sensors, bracelets, gateways and cloud services which combine to show aggregated and individual hand-washing compliance over time.

“We expect that the microPlatforms™ for our sensor and gateway products will significantly reduce time to market, increase data security, reduce TCO of our products, and enable us to deliver security updates and new customer features over the air. By working with Foundries.io we are not only benefiting from an innovative, secure product platform, but our customers will benefit from knowing that we are able to deliver the latest security updates and new features through the product lifetime,” Vitalacy CEO Dr. Bahram Amid-Nour

"Foundries.io has been the leader in making Zephyr available as a continuously updated microPlatform distribution," said Kate Stewart, Senior Director of Strategic Programs at the Linux Foundation. "In the embedded and IoT markets, being able to deploy security fixes efficiently and effectively is key, and the Zephyr ecosystem is much stronger with this capability available and commercially supported."

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