

"The Internet of Disconnected Things": A Game-Changing Approach to IoT Security from RIoT Secure

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RIoT Secure's game-changing approach to IoT Security and raise awareness of the benefits that it offers and the vision of creating and maintaining a secure IoT ecosystem.

Stockholm, Sweden--(Newsfile Corp. - April 24, 2023) - In today's fast-paced technological landscape, the Internet of Things (IoT) has become an essential part of everyday life, seamlessly connecting billions of devices and enabling innovation across various enterprise and consumer industries. However, the current state of IoT security is plagued with security vulnerabilities and risks, as IoT devices often lack security safeguards, leaving devices exposed to cyberattacks and potential exploitation.

Creating and deploying IoT devices typically demands a diverse set of skills and expertise, including hardware and software engineers, data scientists, and domain experts, particularly as edge computing and artificial intelligence gain traction. This presents numerous challenges in ensuring IoT device security, as not every developer may possess the required knowledge or abilities to put strong security measures in place. There is an immediate need for a straightforward, developer-centric security solution that can be effortlessly incorporated into IoT devices.

RIoT Secure has pioneered a game-changing approach to IoT security, called the "Internet of Disconnect Things" - leveraging the power of separate microcontrollers and a hardware sandbox environment, offering unprecedented levels of security and customization for IoT devices.

The first microcontroller is dedicated to handling communication, security, and lifecycle management (firmware over-the-air) tasks. This microcontroller is specifically chosen to ensure a root of trust and that data transmitted between IoT devices and the cloud is encrypted and protected from unauthorized access. The approach utilizes an additional microcontroller for the IoT device's specific use case and application. This separation enables device manufacturers and developers to choose the best microcontroller for their requirements, without being limited by the constraints of a single, integrated solution.

RIoT Secure's approach offers unparalleled flexibility by allowing developers to choose not only the most suitable microcontroller for their application, but also the operating system, runtime environment, and programming language that best suits their needs and available skill sets of their team. This freedom of choice enables developers to quickly develop their solutions while still benefiting from the robust security provided by the dedicated communications and security microcontroller.

One key advantage of this approach is to allow developers to concentrate on their specific areas of expertise, such as sensors, actuators, data science, or AI models for edge environments. By eliminating the need for developers to become security or encryption experts, it enables them to dedicate their time and resources to creating innovative and effective IoT applications, with a quicker time to market at a lower cost, while the approach ensures that these devices remain secure and protected from cyber threats.

A key component of RIoT Secure's approach to IoT security is the utilization of a hardware sandbox, an environment in which the microcontroller is completely isolated from the outside world - ensuring that there are no potential attack vectors that could compromise the security of the IoT device, virtually eliminating the possibility of cyberattacks or exploitation as part of a botnet.

The separation of the dedicated communication and security microcontroller with the application microcontroller allows for better resource optimization. Device manufacturers can choose cost-effective components for their specific needs without sacrificing security. This cost-effectiveness can lead to more affordable IoT devices, expanding their potential reach and accessibility to a broader range of users and markets.

RIoT Secure has integrated this approach into its secure lifecycle management platform - which is designed to support developers throughout the entire IoT development process, from proof of concept to full-scale commercial deployment. By providing a consistent and unified environment, it enables developers to quickly and easily migrate their projects from development stages to commercial deployment, without having to re-engineer security solutions or adapt to new hardware and software requirements, especially deployments that can easily be retro-fitted with minor adjustments.

The robust security features provided by the RIoT Secure platform help to alleviate concerns about the safety and reliability of IoT devices, fostering greater trust among end-users and encouraging the adoption of IoT technologies. As more organizations and consumers adopt IoT devices with confidence in their security, the potential for these technologies to transform industries and improve the daily lives of individuals becomes even more significant.

RIoT Secure's platform gives flexibility and adaptability and also means that it is well-positioned to accommodate the rapidly evolving IoT landscape. As new technologies, standards, and protocols emerge, it can be easily updated and adapted to incorporate these advancements, ensuring that IoT devices remain secure and relevant in the face of constant change. This scalability and future-proofing make it a smart investment for organizations looking to deploy IoT devices over the long term.