

LEVL'S NORDIC SEMICONDUCTOR SOLUTION

Cloud Connected nrf52833 Based Platform

LEVL offers a platform for wireless device identity management. Using a full-stack approach to security, LEVL's patented technology leverages Radio Fingerprinting to create a unique ID for every wireless device. This ID is used to manage and validate the device's identity and to solve security vulnerabilities in wireless communications that could not be addressed previously. LEVL's solution does not require agents on devices, does not require hardware add-ons and works out-of-band of encrypted communications. As a result, the solution provides strong, continuous, passive authentication and works with any BLE device including legacy devices.

RADIO FINGERPRINTING

The most basic premise of radio fingerprinting is that small differences among the hardware structures of devices result in a different radio behavior in each device. Hence, once these unique differences are learnt, they can be used as the means to authenticate the identity of a device, to independently confirm the device type (e.g. make/model) and even to confirm it is operating normally. It quickly defeats a variety of well known BLE attacks without the need for additional chips and antennas.

OUR NORDIC SOLUTION

LEVL's radio fingerprinting technology is available for evaluation on the Nordic nrf52833 BLE development kit. The kit allows a user to evaluate a virtual smart lock application to better understand how the LEVL technology works and how it can be integrated into a system. Users can create Radio Fingerprints for phones and evaluate the identification and authorization process. A cloud portal provides summary information. The kit consists of a Nordic development board, a phone app, and a Raspberry Pi for cloud connectivity via ethernet. The solution requires less than 16K in peak RAM, about 16K of code space and each device fingerprint requires less than 2K of flash.



ABOUT LEVL

Founded in 2017 and backed by Silicon Valley VCs, LEVL currently has offices in Palo Alto, Denver and Tel Aviv.