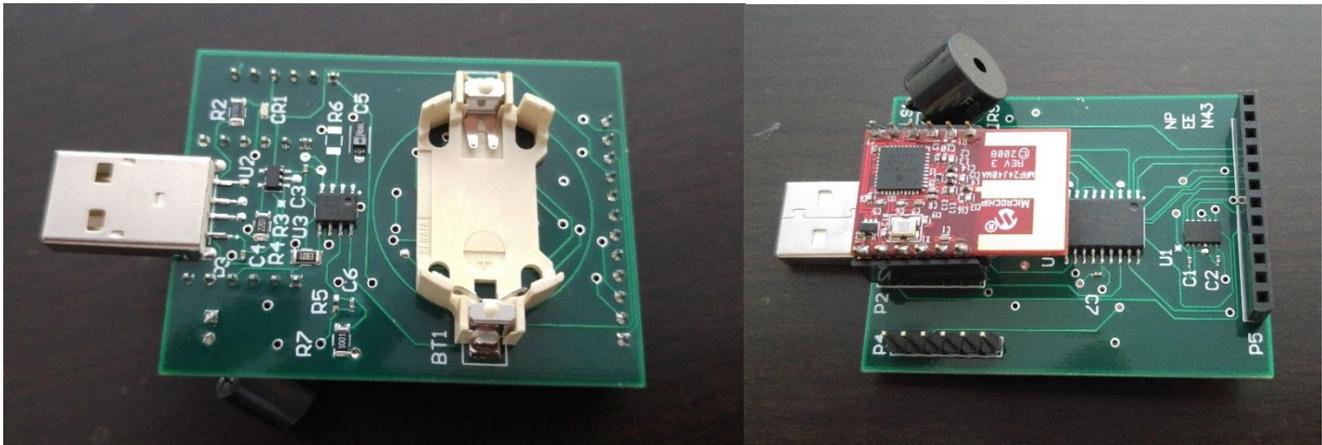


E-Chain, A Personal Possession Anti-theft Security Dongle



Technology Overview

Have you encountered this experience, where you left your personal items and only after a while you realized it or someone has secretly removed your personal item within your vicinity? Like a physical link-chain securing an asset to an anchor, E-Chain uses the IEEE 802.15.4 technology to track and keep close the user's personal items. E-Chain tracks the user's personal items within a defined distance. If the user moves out of the vicinity, E-Chain will alert the user that you have left behind your personal items. E-Chain also acts as an anti-theft device which alerts the user if the tagged asset has been removed from the vicinity.

Technology Features & Specifications

The E-Chain uses the IEEE 802.15.4 as the technology to transfer data between the reader and the tag. Both tag and reader use the received signal strength index (RSSI) technique to determine if the user or the tracked items are within the desired vicinity. Beside the RSSI, E-Chain transmits a MAC frame to the tag to indicate a theft alert.

The E-Chain also utilized the digital accelerometer to determine if the tracked items are in motion or stationary. And based on the algorithms, E-Chain will be able to determine if the motion is a legal or illegal move to alert the user.

Potential Applications

As this technology use wireless communication and it keeps track of the items that are in the vicinity of the user. There are many opportunities for the system to be implied in other areas besides security. This technology is applicable in the following industries:

Consumer Electronics

- security devices
- matchmaking devices
- monitoring items devices
- attendance tracking devices
- movement of items tracking

Customer Benefits

As this technology use wireless communication and it tracks items that are in the vicinity of the user. E-Chain allows the user to track their personal items within their vicinity to guard against theft. E-Chain acts as a helper to remind user if they have left behind their personal items. This application gives ease of mind that their personal belongings are safe, no more leaving behind something or running back to the location to retrieve things left behind.

OVERVIEW

- Technology Category Electronics - Radio Frequency
Electronics - Sensors & Instrumentation
Infocomm - Wireless Technology
- Technology Status Available
- Technology Readiness Level [TRL8](#)



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