

Digital Locks

Brief introduction:

To source for a vendor that is able to OEM a digital lock with functions that includes Biometric, Bluetooth, RFID, NFC, etc

This is a preliminary step in deciding if the business model will be feasible.

Currently, there are 2 possible approaches to get the actual prototype to be ready

1. A company with existing capability in digital lock design, that is able to cater for customized design from the core to aesthetics of the product.
2. To source for various reliable major components that is required for the end product. I will be working on the board design, programming, initial layout of the entire product.

Approach 1 is preferred ideally, we can definitely find out what will be the initial cost to have a custom prototype designed for us

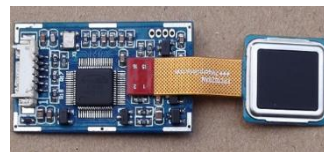
Approach 2 will be considered if we are not able to settle with 1. I have compiled all the components needed for the “core” of the digital lock. (Not including mechanical portion)

Capacitive Fingerprint Module

Based on my understanding, capacitive fingerprint modules are currently the most robust compared to optical and other fingerprint identification technology. This is one of the many modules available that I found online. CAMA and Fingerprint.com are 2 of the common modules that I’ve seen online so far.

However, there are very limited information in terms of chipset used and communication protocols available online. Will need to get more info from vendors

http://www.fingerprints.com/products/touch_sensor/

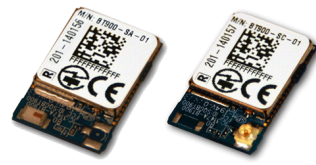
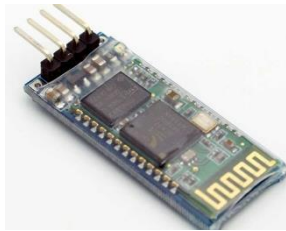


Main Microcontroller

This part will be quite straightforward, any microcontroller with sufficient digital / analog interface will be able to fulfill our requirement. Exact number of input/output to be determined.

Bluetooth Module

This would be a possible feature to be integrated to the digital lock – power consumption will be a consideration



smartBASIC

Electronic Solenoid

Electronic solenoid/motor will be the major constraint as the unit runs on battery. I have yet to find a good vendor for this part.

Example:

https://electriclock.net/index.php?_route_=ELS-EL410-ABLOY-ELECTRIC-SOLENOID-LOCK

<http://www.hobbyist.co.nz/?q=solenoid-lock>

NFC Module + Tags

This could be one of the most critical selling point as NFC feature could be used with smartphone, or using a small NFC tag as small as few millimeters.

Some of the ideas:



End product

Eventually all the modules should be integrated into a single multi-layer PCB to achieve smallest footprint. This would be the last part. Right now my focus is on getting all features together for a test run for further evaluation.