Problem Statement

Project: Mail Gobbler 9000 (MG9K - Smart Mailbox/Dropbox)

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Package security is a large concurrent issue that has been further bolstered by our increasing reliance on the postal service. Through the ongoing years, retail giants (i.e. JcPenney and Sears) have continuously closed and became scarce, being usurped by commercial sites such as Amazon and Ebay. The advent of the COVID Pandemic has pushed us into quarantine, and further bolstered the importance of online shopping as both a means of avoiding the spread of disease, as well as simply a more convenient means of merchandise reception. Thus, this growing dependency on postal packages directly correlates to a greater demand in safe package reception and security. This call is answered by our project, the Mail Gobbler 9000 (MG9K).

The MG9K is a smart dropbox that fortifies postal security through authentication of received packages. Barcodes for expected packages are preloaded by the user via a mobile application, as to validate received packages, which upon successful scan and validation unlocks the locked dropbox. Various quality of life features are included, such as an additional smart mail slot, real time notifications for both mail and package deliveries, and a dedicated mobile application for communication, unlocking mechanisms, and to display historic logs. Whereas solutions towards this means exist, the MG9K offers a low power system that solely relies on rechargeable batteries, to avoid the hassles of in-home wiring and electrical demand.