

Abstract

Heba Ahmed Fayed

Smartphone Payment via Flashlight: Utilizing The Built-in Flashlight of Smartphones as Replacement for Magnetic Cards

Since society nowadays depends deeply on technology, smartphones, smart payments and credit cards in most daily tasks, it is a necessity to provide a secure, easy and inexpensive way of communication between the smartphone and automatic teller machines (ATM) card readers. In this paper, we have practically implemented a system which replaces the magnetic strip to a small, inexpensive module on the ATM. The feasibility of the system is tested using two different common types of smartphone flashlights: the light brightness, low speed Xenon flashlight and the comparably low brightness but faster light emitting diode (LED) flashlight.