

Abstract

The purpose of this study was to design a remote access control system, which can be accessed by entering fingerprint or password. Unlike the traditional door locks, keys are not necessary while using this system, eliminate the risk of forgetting them. To reduce the chance of intruders try to breach the door, pressure sensor and alarm device were installed, further increase the level of safety.

The design of this remote access control system includes microcontroller board, Bluetooth module, optical fingerprint sensor, IP camera, buzzer, and electric strike. While user enter a signed fingerprint, or enter the password on smartphone through Bluetooth, the microcontroller will drive the relay to unlock the door.

If the door is entered by brute force, while pressure exceed the set point value, alarm will be triggered by the microcontroller, and a notification will be sent through Bluetooth, notify user to check the camera. The camera can also be checked round the clock, if user really wants ensure the safety of their property.