

FINGER PRINT BASED BIO-AUTOMATIC BANK LOCKER SYSTEM

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ABSTRSCT

To increase the efficiency and accuracy of bank locker system, large number of computerized keypad locking systems were developed to help the opening and closing door system. Door locking based can Optical Mark-Sense Scanners and Direct Recording Electronic (DRE) systems. Even though if we are having many technologies, each and every advance technology having some disadvantages. Such as the electronic biometric machine. which we are using nowadays also has few disadvantages. Hacker can hack the bank lockers password. And also the man power is required to identify the person's who hacked. This may create some errors.

Keywords: Fingerprint sensor, Keypad, Arm7, Relay.

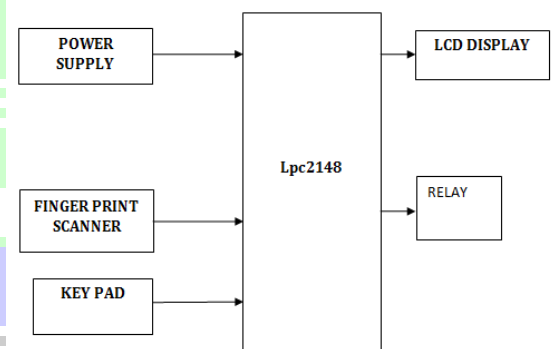
INTRODUCTION:

Security is of primary concern and in this busy, competitive world, human cannot find ways to provide security to his confidential belongings manually. Instead, he finds an alternative which can provide a full fledged security as well as atomized. In the ubiquitous network society, where individuals can easily access their information anytime and anywhere, people are also faced with the risk that others can easily access the same information anytime and anywhere. Because of this risk, personal identification technology, which can distinguish between registered legitimate users and imposters, is now generating interest.

Currently, passwords, Personal Identification Numbers (4-digit PIN numbers) or identification cards are used for personal identification. However, cards can be stolen. To solve these problems, biometric authentication technology which identifies people by their unique biological information is attracting attention. include fingerprint, face, iris, voice, signature, and hand geometry recognition and verification. Many other modalities are in various stages of development and assessment. Among these available biometric traits fingerprint proves to be one of the best traits providing good mismatch ratio, high accurate in terms of security and also reliable. The

present scenario to operate a bank locker is with locks which are having keys. By this we can't say that we are going to provide good security to our lockers. To provide perfect security and to make our work easier, we are taking the help of two different technologies viz. embedded systems and biometrics.

BLOCK DIAGRAM:



LPC2148:

The LPC2141/2/4/6/8 microcontrollers are based on a 32/16 bit ARM7TDMI-S CPU with real-time emulation and embedded trace support, that combines the microcontroller with embedded high speed flash memory ranging from 32 kB to 512 kB. A 128-bit wide memory interface and unique

accelerator architecture enable 32-bit code execution at the maximum clock rate.

FEATURES OF ARM PROCESSOR:

- 16/32-bit ARM7TDMI-S microcontroller in a tiny LQFP64 package.

- 8 to 40 kB of on-chip static RAM and 32 to 512 kB of on-chip flash program memory.

128 bit wide interface/accelerator enables high speed 60 MHz operation.

- In-System/In-Application Programming (ISP/IAP) via on-chip boot-loader software.

Single flash sector or full chip erase in 400 ms and programming of 256 bytes in 1 ms.

- Embedded ICE RT and Embedded Trace interfaces offer real-time debugging with the

on-chip Real Monitor software and high speed tracing of instruction execution.

- Single 10-bit D/A converter provides variable analog output.

- Two 32-bit timers/external event counters (with four capture and four compare

channels each), PWM unit (six outputs) and watchdog.

- Low power real-time clock with independent power and dedicated 32 kHz clock input.

FINGERPRINT SENSOR:

The ARA-EM01 is high performance fingerprint module developed by Aratek Biometrics Technology Co, Ltd .it has many features : easy restructure, powerful functions, compatible with PC, and multiple-functions in one module: Fingerprint enrollment, image process, characters acquisition, fingerprint template creation, fingerprint template storage, fingerprint compare (1: 1, 1: N), fingerprint delete. This module can work with

different devices based on UAWRT such as PC, SCM and so on. Only easy circuits and fingerprint module can enhance your product into fingerprint authentication power. It is widely used by electronics business, information security, access control, identity authentication and other security industry.

KEYPAD:

A numeric keypad, or numberpad for short, is the small, palm-sized, seventeen key section of a computer keyboard, usually on the very far right. The numeric keypad features digits 0 to 9, addition (+), subtraction (-), multiplication (*) and division (/) symbols, a decimal point (.) and Num Lock and Enter keys. Laptop keyboards often do not have a number pad , but may provide number pad input by holding a modifier key (typically labelled "Fn") and operating keys on the standard keyboard. Particularly large laptops (typically those with a 17 inch screen or larger) may have space for a real number ad , and many companies sell separate number pad and Num Lock and Enter keys. Laptop keyboards often do not have a number pad , but may provide number pad and Num Lock and Enter keys. Laptop keyboards often do not have a number pad , but may provide number pad and Num Lock and Enter keys. Laptop keyboards often do not have a number pad , but may provide number pad which connect to the host laptop by a USB connection.

RELAY:

Relay is an **electrically operated switch**. Current flowing through the coil of the relay creates a magnetic field which attracts a lever and changes the switch contacts. The coil current can be on or off so relays have two switch positions and they are **double throw (changeover)** switches.

Relays allow one circuit to switch a second circuit which can be completely separate from the first. For example a low voltage battery circuit can use a relay to switch a 230V AC mains circuit. There is no electrical connection inside the relay between the two circuits; the link is magnetic and mechanical. There is no electrical connection inside the relay between the two circuits; the link is magnetic and mechanical.

RESULT:



CONCLUSION:

We have implemented a locker security system using FINGERPRINT, PASSWORD. It is a low cost, low in power conception, compact in size and standalone system. The microcontroller compares the passwords entered by keyboard. If these passwords are correct, the microcontroller provides necessary control signal to open the locker. Future work of this paper is planned to develop a security system based on Iris scanner for visual identification of the person.

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