
FINGER PRINT RECOGNIZED ATM SYSTEM

According to ancient Greek scripts BIOMETRICS means study of life. Biometrics studies commonly 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, Finger Print proves to be one of the best traits providing good mismatch ratio and also reliable. To provide perfect security and to make our work easier, we are taking the help of two different technologies viz. EMBEDDED SYSTEMS and BIOMETRICS.

Firstly discussing about Biometrics we are concentrating on Fingerprint scanning. For this, we are using FIM 3030N high voltage module as a scanner. This module has in-built ROM, DSP and RAM. In this, we can store the fingerprints of up to 100 users. This module can operate in 2 modes i.e., Master mode and User mode. We will be using Master mode to register the fingerprints which will be stored in the ROM present on the scanner with a unique id.

This project consist microcontroller, finger print scanner, 4X4 keypad and 16X2 LCD display. In general ATMs along with access card it needs password. But there is a chance to manipulate ATM card and Password. But here instead of password we use finger print scanner. After swipe the card system asks image for scanning. If image is valid process go to next step, otherwise it gives alerting message with beep sound. It is very useful for public and no matter of manipulations. We use RFID reader for card swiping (optional).

Here we use 8051 as a microcontroller with 5v DC Power supply. Serial (UART) protocol is primary concern here. The heart of this project is Bio metric module which works on serial (UART) protocol. 16X2 LCD display is connected to microcontroller through digital I/O pins.

TECHNICAL SPECIFICATIONS:

HARDWARE SPECIFICATIONS

- Micro controller : AT89S52
- Crystal : 11.0592 MHz
- LCD : HD44780
- LED : 5mm Red LED
- Bio-Metric Module
- RFID Reader (Optional)
- Basic GPIOs
- Buzzer

POWER SUPPLY

- Transformer : 12V step down
- Filter : 1000uf/25V
- Voltage Regulator : 7805 / 7812

SOFTWARE SPECIFICATIONS

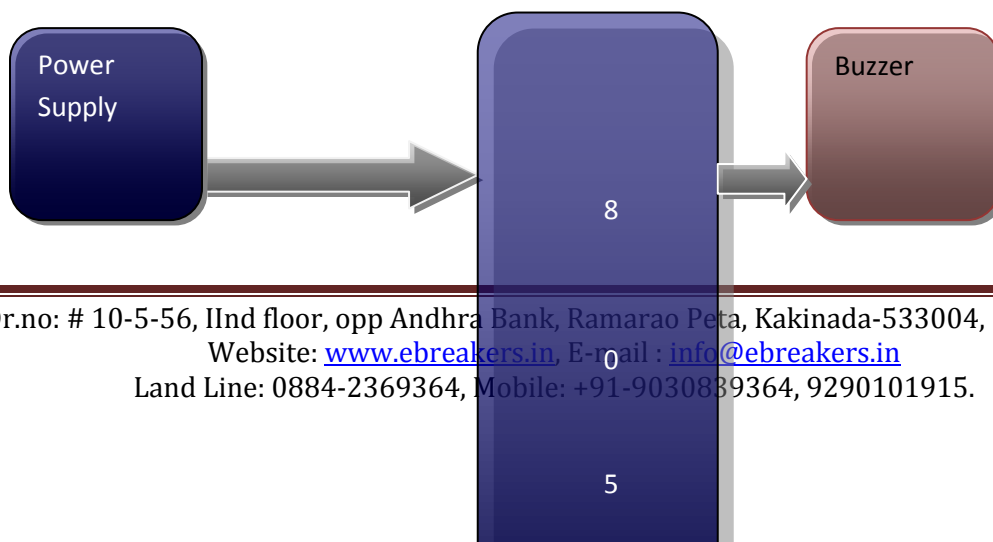
- Keil IDE
- Proteus VSM
- UC flash

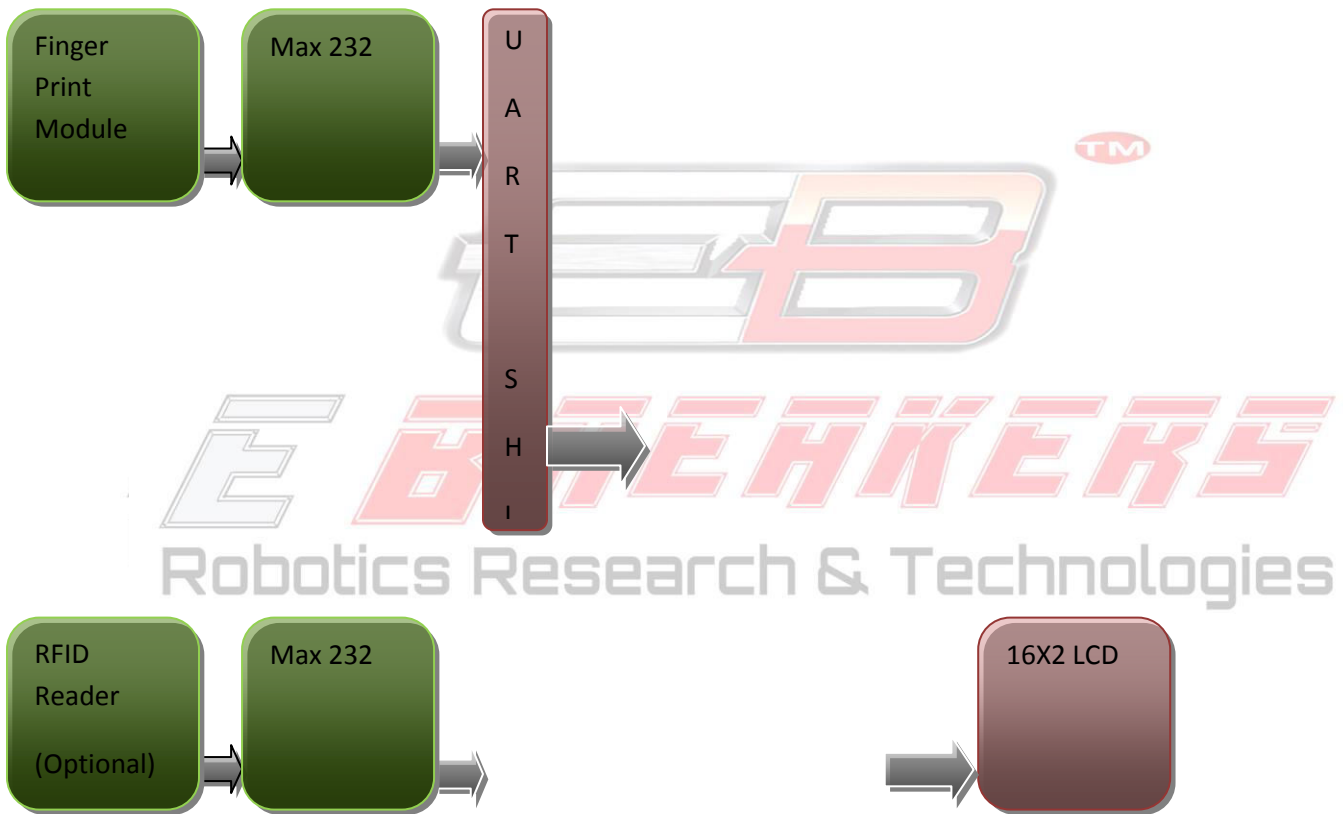
APPLICATIONS

- Automobiles
- OEMs
- Transport companies



BLOCK DIAGRAM:





POWER SUPPLY BLOCK DIAGRAM

