RFID BASED RATION CARD

ABSTRACT

Radio Frequency Identification (RFID) Card Readers provide a low-cost solution to read passive RFID transponder tags up to 2 inches away. The RFID Card Readers can be used in a wide variety of hobbyist and commercial applications, including access control, automatic identification, robotics navigation, inventory tracking, payment systems, and car immobilization. The RFID card reader read the RFID tag in range and outputs unique identification code of the tag at baud rate of 9600. The data from RFID reader can be interfaced to be read by microcontroller or PC.
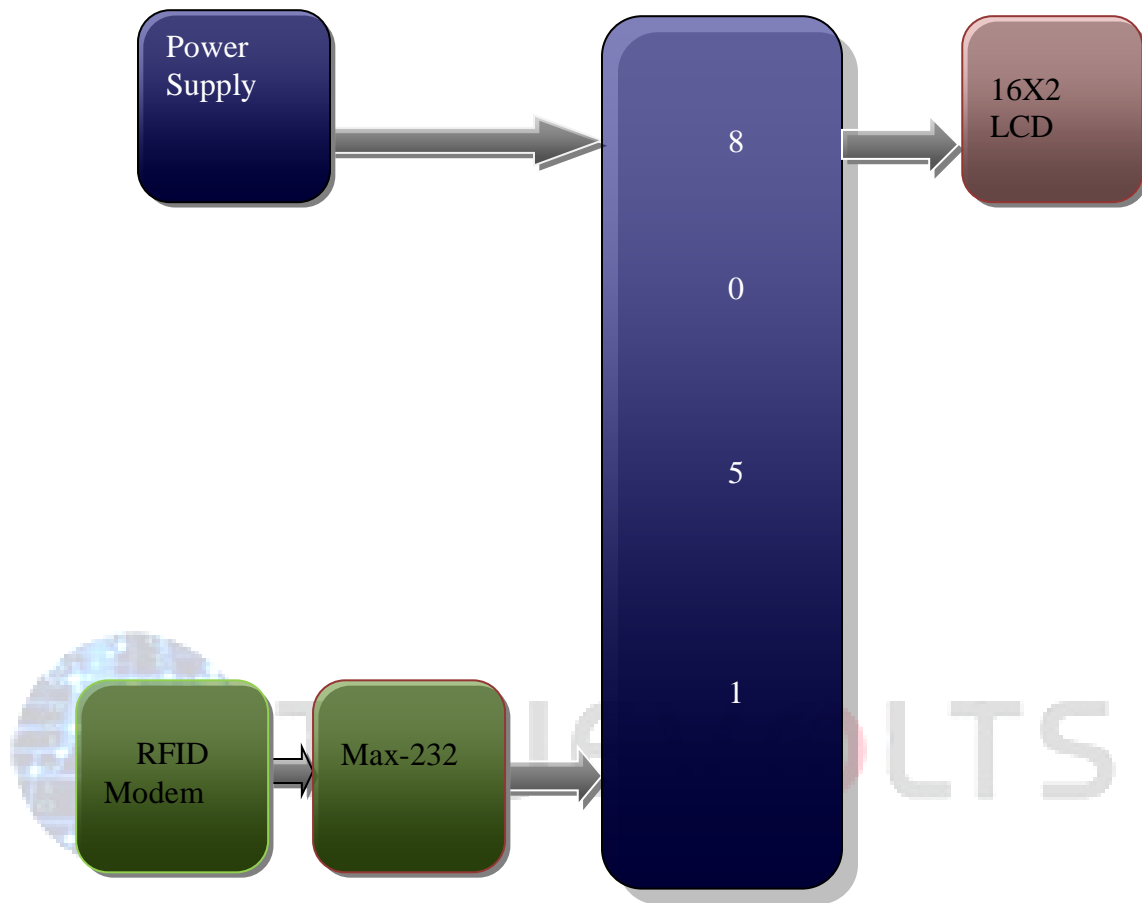
The project is built on 8051 micro controller; the project consists of an RFID reader, RFID cards, an LCD, each user is issued with an RFID card which carries a unique code, when the user needs grocery, he/she needs to show the card to the RFID reader housed at the ration shop, then the name and the allocated grocery information is displayed on the LCD. The stock agent has to render that much of ration to the user, Once the user has used his/her allocated grocery, he /she is not allowed again until the next session of allocation from the governing authority.

In this project 7805 is a regulator and it avoids noise spikes in power supply. RFID modem is connected microcontroller through serial port. These RFID modem works under 9600 or 4800 baud rates. 16X2 LCD connected to microcontroller through digital I/O lines.

APPLICATIONS:

- ➢ Ration card system
- ➢ Security systems

BLOCK DIAGRAM:

Power Supply → 8051 → 16X2 LCD

RFID Modem → Max-232 → 8051

POWER SUPPLY BLOCK DIAGRAM:

Step down Transformer → Bridge Rectifier → Filter → Regulator → Output