



One – Wire Interface based Access Control System using I-Button

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This paper appears in: **Multimedia and Expo, 2009. ICME 2009. 2009 IEEE International Conference on**

Publication Date: 2009

Volume: 1, On page(s): 537-540 vol.1

Meeting Date: 07/30/2009 - 08/02/2009

Location: New York, NY, USA

ISBN: 0-7803-6536-4

References Cited: 17

INSPEC Accession Number: 6697500

Digital Object Identifier: 10.1109/ICME.2009.869657

Current Version Published: 2009-08-06



I-BUTTON BASED ACCESS CONTROL SECURITY SYSTEM

Title of the project	:	Barcode Based Access Control System.
Domain	:	Advanced Embedded Systems Design
Software	:	Embedded C, Keil, Proload
Microcontroller	:	AT89S52
Power Supply	:	+5V, 750mA Regulated Power Supply
Display	:	LED 5mm, 16 X 2 LCD
Crystal	:	11.0592MHz
Data Communication	:	Through Serial Communication
Applications	:	Colleges, Companies , Banks ,Industries etc
Developed By	:	M/S Wine Yard Technologies
Phone	:	040-6464 6363
Website	:	www.WineYardProjects.com

I-BUTTON ACCESS CONTROL SECURITY SYSTEM

ABSTRACT

The iButton is a computer chip enclosed in a 16mm thick stainless steel can. Because of this unique and durable container, up-to-date information can travel with a person or object anywhere they go. The steel iButton can be mounted virtually anywhere because it is rugged enough to withstand harsh environments, indoors or outdoors. It is small and portable enough to attach to a key fob, ring, watch, or other personal items, and be used daily for applications such as access control to buildings and computers, asset management, and various data logging tasks.

By simply touching the iButton to the two contacts described above, you can communicate with it through our 1-Wire protocol. The 1-Wire interface has two communication speeds: standard mode at 16kbps, and overdrive mode at 142kbps. For more information, please see our application note, Reading and Writing 1-Wire® Devices through Serial Interfaces.

This iButton is interfaced to 8051 microcontroller. By using this controller we will be controlling the locker access. The user should bring the iButton near to the can, and has to enter the unique id which is given to him to open his locker with the help of a keypad. Immediately the locker will be opened. After the work has been completed if a switch is pressed the locker will be closed again. If an unauthorized person tries to operate the locker, then an indication will be given by a buzzer which is interfaced to the controller.

This project uses regulated 5v, 500mA power supply. 7805, a three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12v step down transformer. The RFID module requires a separate +5v power supply.

