



# DEVELOPMENT OF FPGA AND GSM BASED ADVANCED DIGITAL LOCKER SYSTEM

**P. K. Gaikwad**

*Department of Electronics, Willingdon College, Sangli, (M.S.), INDIA*

*pawangaikwad2003@yahoo.co.in*

---

## Abstract

This paper shows development of a highly secured system for digital lockers. In these days, door locks are technologically advanced and the password based digital lockers are available in the market. But still, it is possible to hack the lock-code and unlock the door system by any unauthorised person. That's why; the present research work has a focus to develop a more advanced system, which communicates the owner of the office or house, when any unauthorised person tries to open the code, by giving correct code as well. While closing the door of office/house, the owner has to press the key '0' available on the hex keypad and leave the system. On arrival of unexpected person and trying to open the lock using the even the known unlock code, the Global System for Mobile communication (GSM) module activates and send the short message service (SMS) to the owner; immediately after pressing any key other than the key '0'. A Field Programmable Gate Array (FPGA) based MicroBlaze processor was designed and configured to work as Universal Asynchronous Receiver/Transmitter (UART) Soft Intellectual Proprietary (IP) Core using Xilinx Core Generator.

**Keywords:** Digital lock; FPGA; GSM; key '0'; SMS

---

Full Text: [www.ijcsma.com/publications/september2013/V1I306.pdf](http://www.ijcsma.com/publications/september2013/V1I306.pdf)