

Department of Electronics & communication Engineering

1.Modern Home (AC/DC) Automation Using GSM Module

Abstract

GSM (Global System for Mobile Communication) is an open digital cellular technology used for transmitting for mobile voice and data services. Here we are using it only for transmitting and receiving the messages. GSM wireless data module is used for remote wireless applications, machine to machine or user to machine and user data communication in many applications. The communication used in this project is the mobile communication GSM modem is connected to the microcontroller through a max 232 which is a TTL level converter.

The them of the project is to control the home appliances remotely through GSM. To interface the GSM we use a microcontroller with serial communication using MAX 232. Initially we need to interface the home appliances that we need to control remotely to the microcontroller. If we want to control the appliances with out present in the region we need the predefined message to the GSM which is included into the program. The message that we sent is collected serially by the microcontroller. When a message is received from the GSM the microcontroller display the message on LCD and will do the corresponding operation for that number like switching the devices on or off. The microcontroller a reply message to the user number with is also a predefined one stating which appliance got activated and simultaneously displays it on the LCD. We can connect as many appliances as many we want and control that using GSM.

IR and RF communication are limited to a certain area where GSM can be operated from any where in the world to control the appliances. So this GSM communication is better, secure and user friendly. This complete process depends only one factor i.e signal for GSM. If this GSM is placed in a place where it gets the maximum signal, the process goes on.

Applications for this are, industries with heavy parameters, complicated area, where we cannot monitor the conditions manually. These are now a days used in all kinds of industries and commercial complexes.



2.RFID BASED OFFICE ATTENDANCE LOGGER

Abstract

Radio Frequency Identification (RFID) is a general term that is used to describe a system that transmits the identity (in the form of a unique serial number) of an object wirelessly, using radio waves. RFID is evolving as a major technology enabler for tracking goods and assets around the world.

RFID is the reading of physical tags on single products, cases, pallets, or re-usable containers that emit radio signals to be picked up by reader devices. The complete RFID picture combines the technology of the tags and readers with access to global standardized databases, ensuring real time access to up-to-date information about relevant products at any point in the supply chain.

Tags contain a unique identification number called an Electronic Product Code (EPC), and potentially additional information of interest to manufacturers, healthcare organizations, military organizations, logistics providers, and retailers, or others that need to track the physical location of goods or equipment. All information stored on RFID tags, can be scanned wirelessly by a reader at high speed and from a distance of several meters.

In this project we are going to implement an office attendance logger by using rfid reader. Every employee has a specific rfid card with unique employ ID. When ever he enters into the office the reader reads that id and stores the in time of the employee and if he leaves the office the system store the out time of the id.

Since the no. of employs in an office is having their own rfid tags, all the tag holders' office timings are recorded in a memory device. This data can be uploaded into the PC by using serial communication. Now the memory device can be free for recording the new attendance log.

APPLICATIONS:

- Item visibility and status
- Location tracking
- Access control
- Traceability

