ABSTRACT

Microcontrollers would be best described as “small size device with very wide functionalities”. And it is being proved by its usefulness nowadays. Microcontrollers have different sizes, ranging from mini to mega. The differences in usage are decided by the devices that needed the microcontroller, whereas devices which need less ports or registers could use mini-sized microcontroller with 2 ports and 8 bits in each of them. In other case, we might need mega-sized microcontroller in bigger devices, with no less than 4 ports and 8 bits in each.

Due to the vast functions of microcontroller, author would like to create an application project based on microcontrollers. In this final project, author would like to discuss one of the mega-sized type AVR microcontroller, namely AVR ATMega 8535 microcontroller. The application in this final project would be “Automatic Sliding Door using Infrared Detector as Application of AVR ATMega 8535 Microcontroller”

Automatic sliding doors are nothing new to us and are widely used everywhere such as in banks, shopping centers and company’s offices. Basically, automatic sliding doors are opened when it detected someone or something in a predicted and designated range. In other side, it also slowed down and closing when the object is leaving the designated range. This is what the author would discuss in the final project, which is how a microcontroller receives, organises, and processes data received from infrared detector, continued with opening and closing of doors, as well as the slowing down of the speed in the process of either opening and closing.

Keyword :
AVR ATMega8535
Infrared detector
12 Volt DC Motor