

ABSTRACT

Clock is the important thing for people to know the time. In industries time is the one of parameter for employee attendance rule. The employee has a duty to work on time. In the same way that apply to the factories which have many employee. The factories usually have some gates and every gate there is has the clock is used to know the employee who present and go home on time. However, the clocks in every gate that sometimes have no compatible time. Therefore, the digital clock that contained GPS system is created, in order that the time in this clock always display the true time. This design is also created for Final Project entitled "*Design and Realization of Digital Clock with GPS System Based on Microcontroller ATmega 8535*".

There are three Minimum System in Final Project. This Final Project benefitted the *Global Positioning System* (GPS) which gives the information of time accurately base on the located of the clock than it is sent to the "Mikrokontroler Master" and it will be processed that data or information of time. The type of data has been taken from GPS is GPRMC, where there is time of data in GPRMC type which it will be processed and changed in WIB time, after that the "Mikrokontroler Master" send the data to "Mikrokontroler 1" and "Mikrokontroler 1" will send too the data to "Mikrokontroler 2" with TTL communication. Digital Clock with GPS system has been displayed at 3 LCD in 3 Minimum System of Microcontroller ATmega 8535.

The result of this Final Project is the digital clock with GPS system which have input voltage about 4,9-5,03 volt in every Minimum Systems, otherwise this digital clock have loss signal 3-11 times in every minutes if this digital clock in a room and 3-4 times in every minutes if the digital clock in outside.

Keywords: *Microcontroller, digital clock, GPS.*