

## ABSTRACT

*Telemetry derived from the word “Tele” meaning far and “metry” means the measurements, there by telemetry is a communication system for data transfer distance measurements using the transmission medium as the carrier data. Telemetry function to measure an object from a distance and measurement result are transmitted to the operator. But the telemetry system which is currently still be monitoring it. It may be more useful if used as a detector of natural disaster. In design this tool SHT11 sensor will measure temperature and humidity in the environment and enter data into ATMEGA8535 measurement result to be processed. After the temperature and humidity values obtained then the data will be transmitted via Radio Frequency Modem YS 1020UB to be accepted, processed, and displayed on a computer based on the setpoint value. After that data is sent back to the circuit indicator using Radio Frequency Modem YS 1020UB. Testing is done by comparing the sensor output comparator SHT11 with tools and perform data transmission within and outside the room has a range of 100 – 800 meter. The result of testing the sensor output is different SHT11 1 – 2 °C by means of comparison, the transmission and reception using Radio Frequency Modem YS 1020UB data inside and outside the room is sent has a range of 100 – 500 meters.*

*Keywords : SHT11, ATMEGA8535, Radio Frequency Modem YS 1020UB*