ABSTRACT

Air has a very important function and role in the lives of humans and other living things. Every living thing needs clean air to support its life optimally, its quality needs to be maintained and maintained. A good and healthy level of air quality is one of the main factors in creating a healthy and comfortable environment.

In this study a system that utilizes the Internet of Things (IoT) technology can monitor the condition of air quality such as temperature, air humidity, CO and CO_2 gas levels. The system uses ATmega328P-AU as a controller, DHT22 sensor for temperature and air humidity, MQ-7 sensor for gas CO, MQ-135 sensor for CO_2 gas, LPWAN LoRa for data transmission communication, and Antares as a cloud service for storing data to be displayed on Android.

From the test results obtained the average error value for temperatures ± 0.8 ^{o}C, humidity ± 3.1% RH, CO ± 10 ppm, and CO_2 ± 16 ppm. The results of sensor data are stored in the Antares cloud and displayed on Android.

Keywords : *Internet of Things (IoT), LPWAN LoRa, Antares, Cloud, Android.*