

ABSTRACT

Air pollution can arise anywhere including in campus areas such as Telkom University. Research on air pollution monitoring has been conducted previously by ^[19] ^[19] ^[20]. In Bandung, Indonesia, AQMS - Air Quality Monitoring System has been built since 1999 by Bandung city government. Implementation of AQMS systems in urban areas can be different when applied in the campus area because it depends on the location of the occurrence of pollution sources and the type of air pollution that often appears. In Telkom University, there is no AQMS system that can detect air pollution in some campus areas that are susceptible to air pollution, so this research presents the development of building *Campus Air Pollution Monitoring System* that can detect air pollution at Telkom University. The development of building this system as a form to support the *Green Campus* program at Telkom University.

Campus Air Pollution Monitoring Station system can automate without any human intervention in monitoring air pollution. The station will connect with Gateway via radio signal with Wireless Module NRF24L01 which is capable of transmitting data as far as 100m to 1km. In the Gateway will use raspberry microcontroller pi 3 with NRF24L01 Receiver so that data sent automatically received by Gateway.

This Final Project is to facilitate the detection of air pollution easily at several points in the campus area such as study buildings, canteen and parking lot. With the automation of stations and gateways with no human intervention can facilitate the process of monitoring air pollution and also supported by Wireless Module so that the monitoring process can be done remotely.

Keywords : *Air Pollution, Campus Air Pollution Monitoring System, Gateway, Wireless Module*