

ABSTRACT

Weather station is a system needed to monitor weather conditions. This system is used in agriculture and plantations, tourism, and others. Weather station monitoring is carried out in real time using the LoRa (Long Range).

The communication built on the Weather station is in the form of sending sensor data. The sensors used include; temperature, humidity, light intensity, air pressure, rainfall, wind direction, and wind speed. All sensor data will be sent from the node to the gateway to be forwarded to the server Internet of Things. Communication utilizes LoRa which is installed in 2 nodes and 1 gateway in topology star and half-duplex.

In this system, distance testing is carried out on LoS and NLoS against RSSI, SNR, delay, throughput, and packet loss. The data was successfully obtained at LoS as far as 1 km and NLoS 500 m. Data received by the gateway is successfully monitored on Thingspeak in real time.

Keywords: *Weather Station, LoRa, RSSI, Internet of Things, Thingspeak.*