

Desain dan evaluasi kinerja internet of things berbasis teknologi dragino LoRa shield, dan arduino uno = Design and performance evaluation of internet of things based on dragino LoRa shield and arduino uno technology

Akhdan Hilmy Taufiqurrahman, author

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Abstrak

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Skripsi ini menganalisa bagaimana range, power consumption pada Dragino LoRa Shield. Pada tahap pertama, dibuat desain embedded system LoRa yang bersangkutan menggunakan aplikasi Node-red. Pada percobaan, diukur power consumption pada berbagai jarak antara client dan server. Jarak yang diuji adalah jarak dimana konektivitas antara client dan server masih terjaga/terhubung. Aplikasi Node-Red yang digunakan untuk menyajikan hasil pengujian menunjukkan bahwa konektivitas tetap terjaga hingga 1700 cm indoor, dan 1.980 km outdoor. Selain itu, melalui pengukuran yang dilakukan diketahui bahwa daya yang dikonsumsi adalah 0.103 watt untuk indoor, dan 0.103 watt untuk outdoor.

ABSTRACT

This final project explains the implement of sensor and humidity sensor namely DHT11 on LoRa Client and LoRa Server, in using application of IoT. The implement of how to connect using range, Power Consumption with Dragino LoRa Shield. In this work, the design of embedded of LoRa system connected can be served by Node red application. The result of the measured range between LoRa Client and LoRa Server. The range which is measured, is the connectivity between client and server is still connected. Node Red application is used to present the result research which is presenting that the indoor connectivity is still exist to 1700 cm, and the outdoor reaches 1.980 km. Besides that, the result of power consumption in indoor and outdoor are 0.103 watt.