

BAB V

KESIMPULAN

Bab ini membahas kesimpulan dari bab-bab sebelumnya dan hasil dari LoRaWAN IoT *Trainer Kit* yang telah dibangun.

5.1 Kesimpulan

Berdasarkan hasil pembahasan yang telah diuraikan dari pembuatan LoRaWAN IoT *Trainer Kit*, dapat disimpulkan beberapa hal sebagai berikut.

1. LoRaWAN IoT *Trainer Kit* dapat dimanfaatkan sebagai salah satu media pembelajaran mengenai penggunaan jaringan LoRaWAN dan IoT sebagai sarana transmisi data jarak jauh.
2. LoRaWAN IoT *Trainer Kit* tersusun atas:
 - a. dua buah mikrokontroler, yaitu *Seeed Studio XIAO SAMD21*;
 - b. dua buah modul LoRa, yaitu *Grove Wio-E5*;
 - c. satu buah *gateway* LoRaWAN, yaitu *Dragino-LG308*;
 - d. lima jenis sensor, yaitu *Grove Touch Sensor*, *Grove Soil Moisture Sensor*, *Grove Temperature&Humidity*, *Pulse Oximeter Sensor MAX30102*, dan *Infrared Thermometer Sensor MLX90614*; dan
 - e. dua jenis aktuator, yaitu *Grove Relay* dan *Passive Buzzer*.
3. Uji coba setiap komponen dalam LoRaWAN IoT *Trainer Kit* telah menunjukkan hasil yang sesuai dengan sumber pustaka yang dipelajari.

5.2 Saran

Berikut ini adalah beberapa saran untuk pengembangan lebih lanjut pada LoRaWAN IoT *Trainer Kit*.

1. Jumlah dan variasi komponen mikrokontroler, sensor, serta aktuator pada *trainer kit* dapat ditingkatkan untuk memperluas wawasan dan meningkatkan pengalaman pengguna mengenai jenis-jenis komponen yang memungkinkan untuk digunakan pada *trainer kit*.
2. Perangkat *gateway* LoRaWAN, *Platform* IoT pihak ketiga (contoh: *Datacake*) dapat digantikan dengan *gateway* dan *platform* IoT buatan sendiri untuk mengurangi biaya produksi *trainer kit*.

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