Deploying an End-to-End LoRaWAN Platform

Starting from September 2016, Saint-Joseph University of Beirut (USJ) will be deploying the first academic LoRa network in Lebanon. The network will support monitoring of micro-climate conditions in vineyards. Here below you can find a detailed description of the experimental platform implementing an end-to-end LoRaWAN solution.

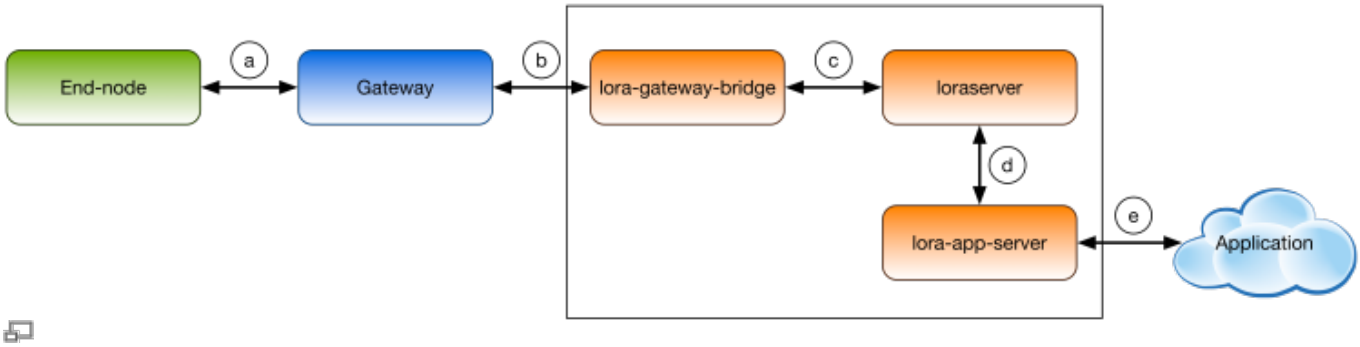

Figure 2. Architecture of the LoRaWAN Platform

-. End-nodes

-. Autonomo with LoRaBee

-. Arduino with Dragino Shield

-. Gateways

-. Single Channel Gateway

The single channel gateway includes a LoRa transmission module (the Dragino Shield) connected to a Raspberry Pi (2 or 3). The connection pins are identified in Figures 2 and 3. Communication is done on an SPI communication interface.

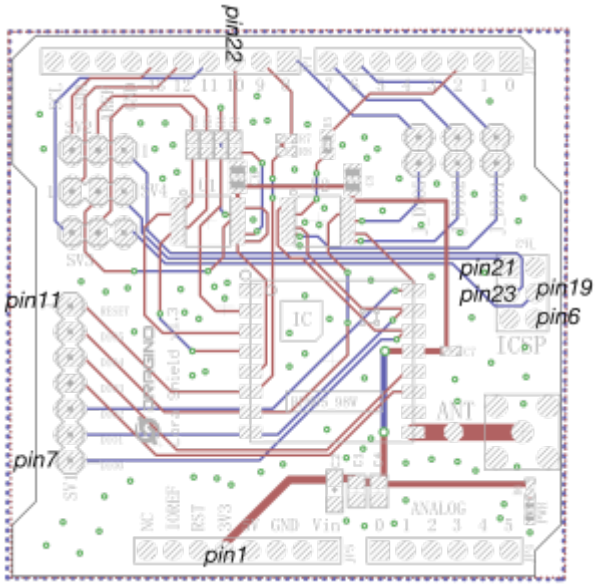

Figure 2. Dragino pin mapping

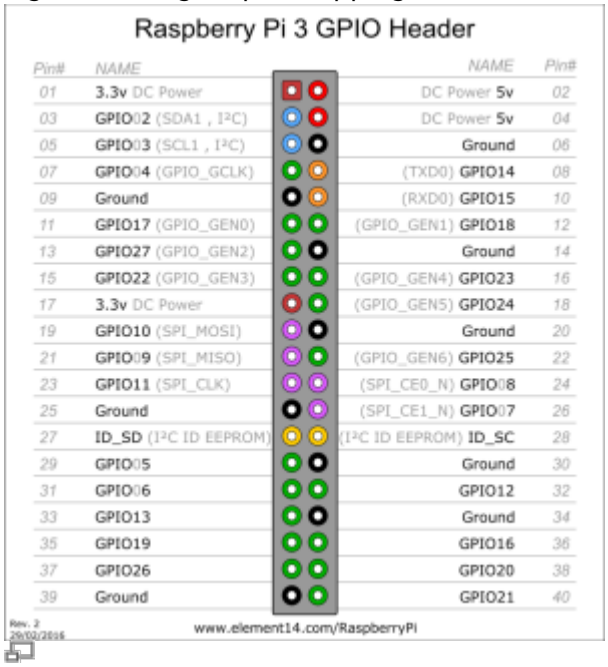

Figure 3. Raspberry pi 3 pins

-. Kerlink IoT Station

-. Backend

-. Loraserver

-. The Things Network

-. Applications

-. MQTT spy

-. Emoncms