Wastebins (100 nos)
Each waste bin has a control box on the inside of the lid

Outside each control box
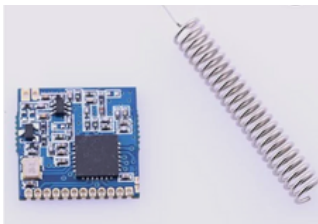

Ultrasonic sensor

Inside each control box
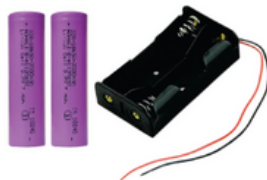
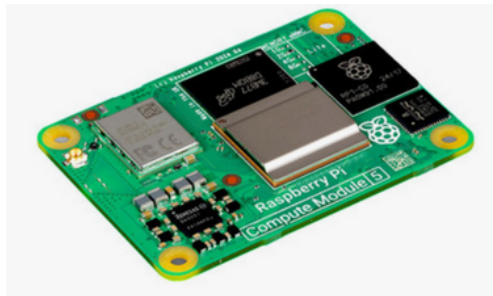ESP32 S3   LoRa   18650 Li-ion

Gateway

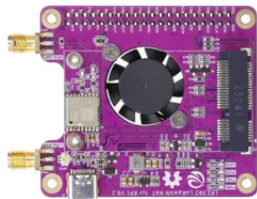Gateway for 100 nodes on top of electricity pole

In the Gateway control box

Raspberry Pi 4 Model B

SX1302 LoRaWAN hat for Raspberry Pi

4G LTE USB dongle