checkBin - Technology

# General Architecture

# Bin - Overview



STM LoRa board

Ultrasonic

Servo motor

LCD Display

Load Cell

Indifferenziato

# Bin - Circuit Detail

Servo Motor

Load Cell

HX711 Load Cell
Amplifier

www.st.com/stm32nucleo

LCD Monitor

Ultrasonic Sensor

fritzing
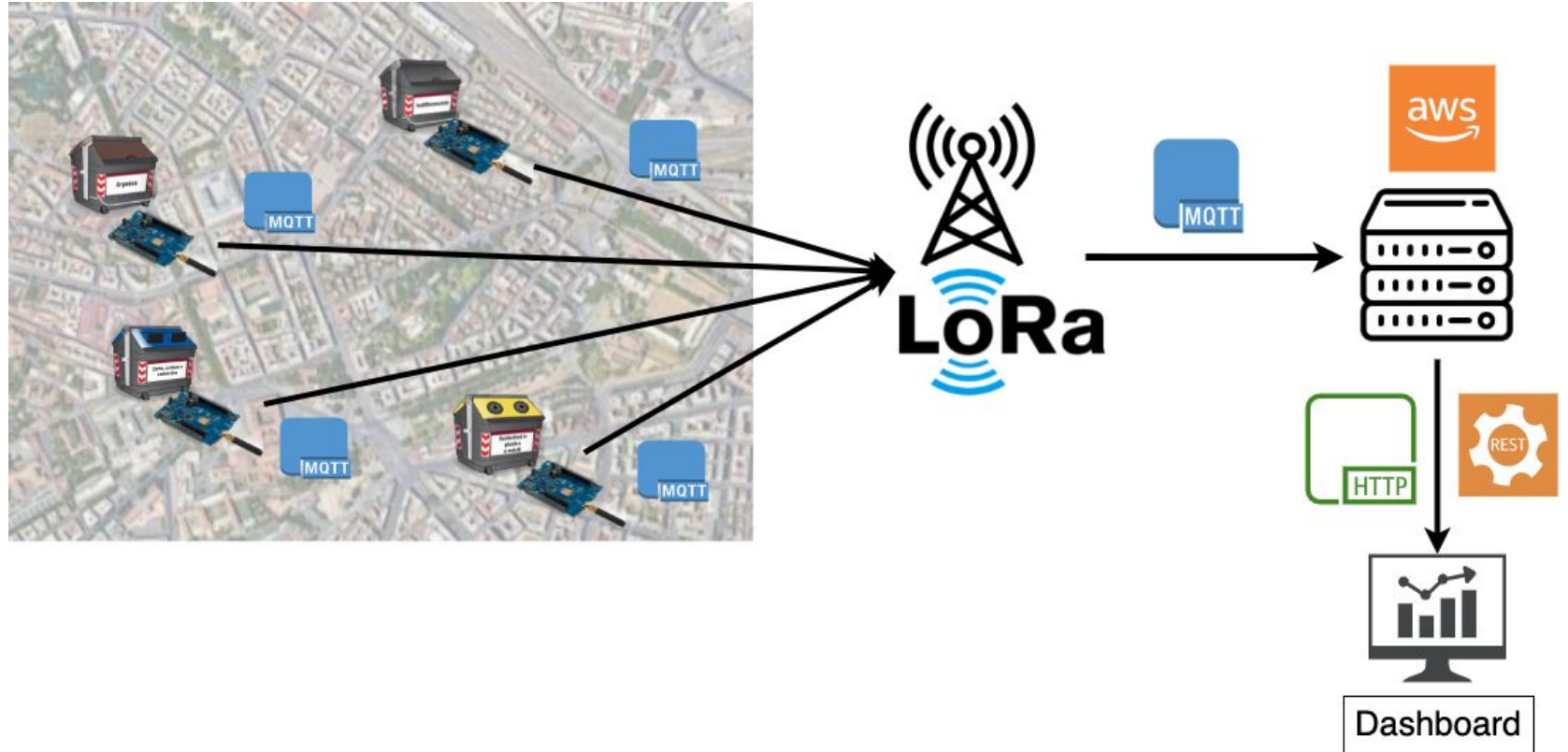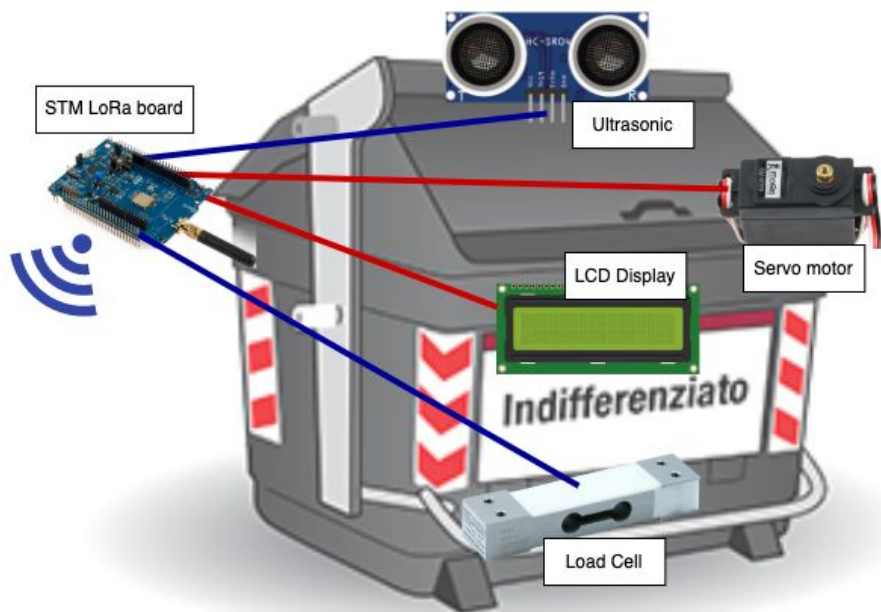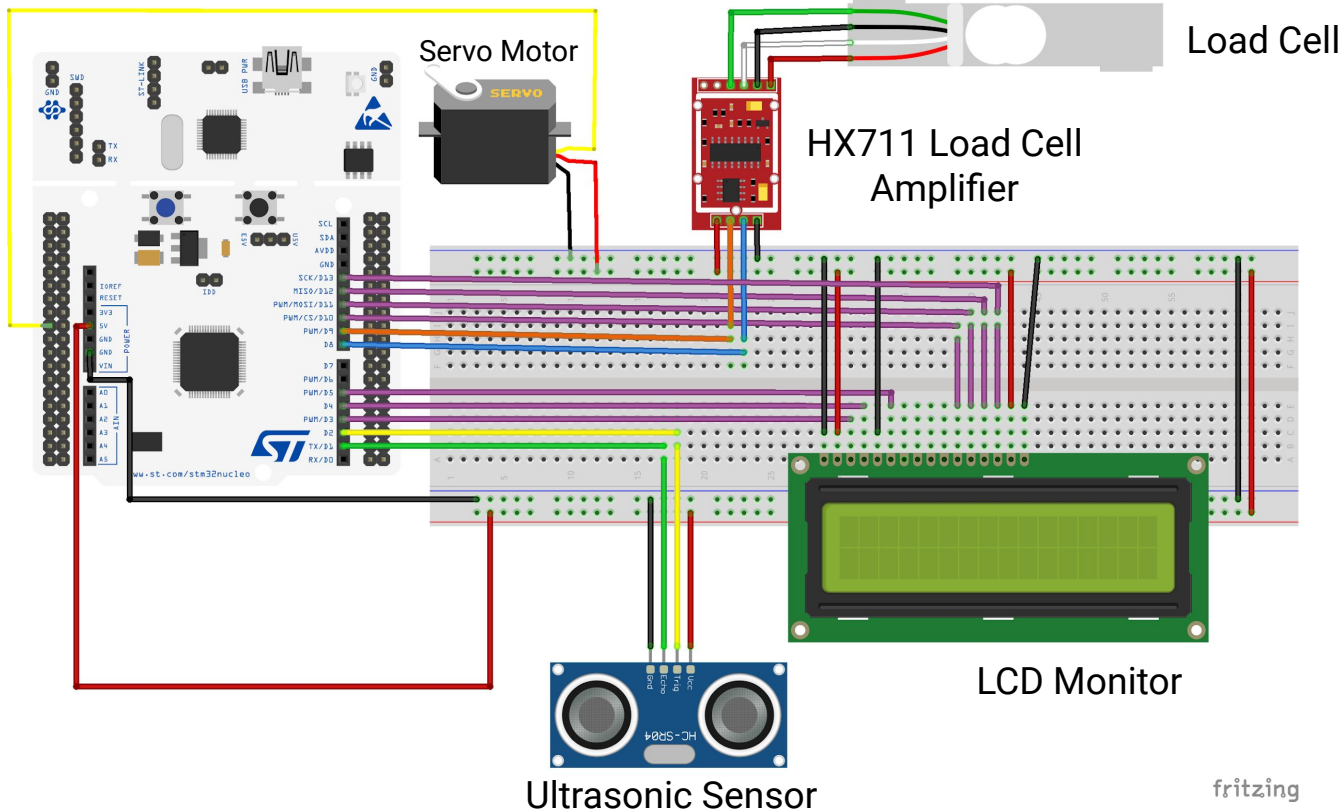
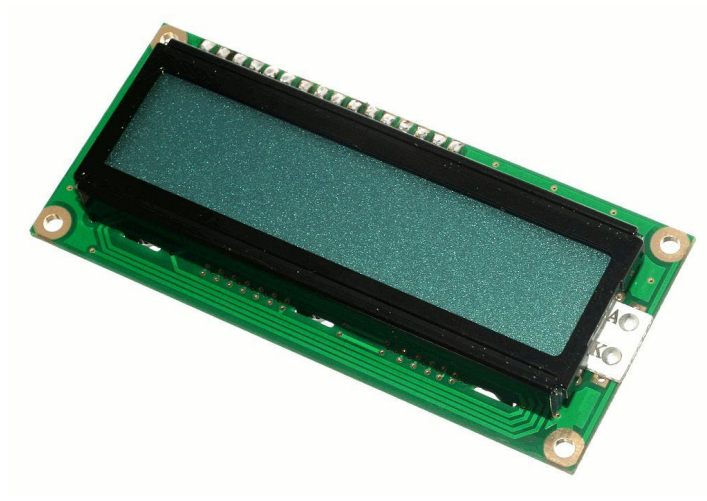# Components Details - STM LoRa Board



used to provide local computation
and communications

# Components Details - Servo Motor



used to lock the bin once it is full

# Components Details - LCD Screen



used to show the bin's status
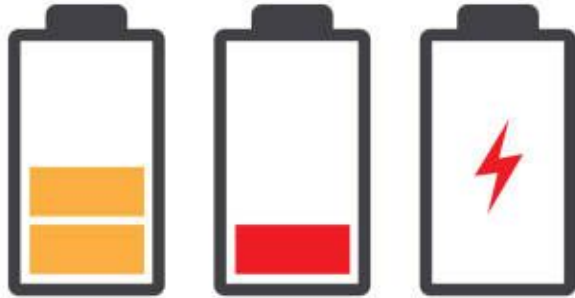
# Components Details - Ultrasonic Sensor



used to measure the fill level
of the bin

# Components Details - Load Cell and HX711

used to weight the trash
inside the bin

# Energy constraints

- Low consumption

- Charge few times as possible

- Tailor duty cycle on the needs