coffee-bin-mqtt Documentation

Release mongoose-os

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MQTT sensor project for CoffeeBin.

CHAPTER 1

Features

- It uses deep sleep ,ode to save energy.
- It messures the volatage on bootup an send the result as MQTT message to the broker.
- It has an external status LED
- It has an switch to broadcast an MQTT message, that the coffe machine is in maintenance mode.

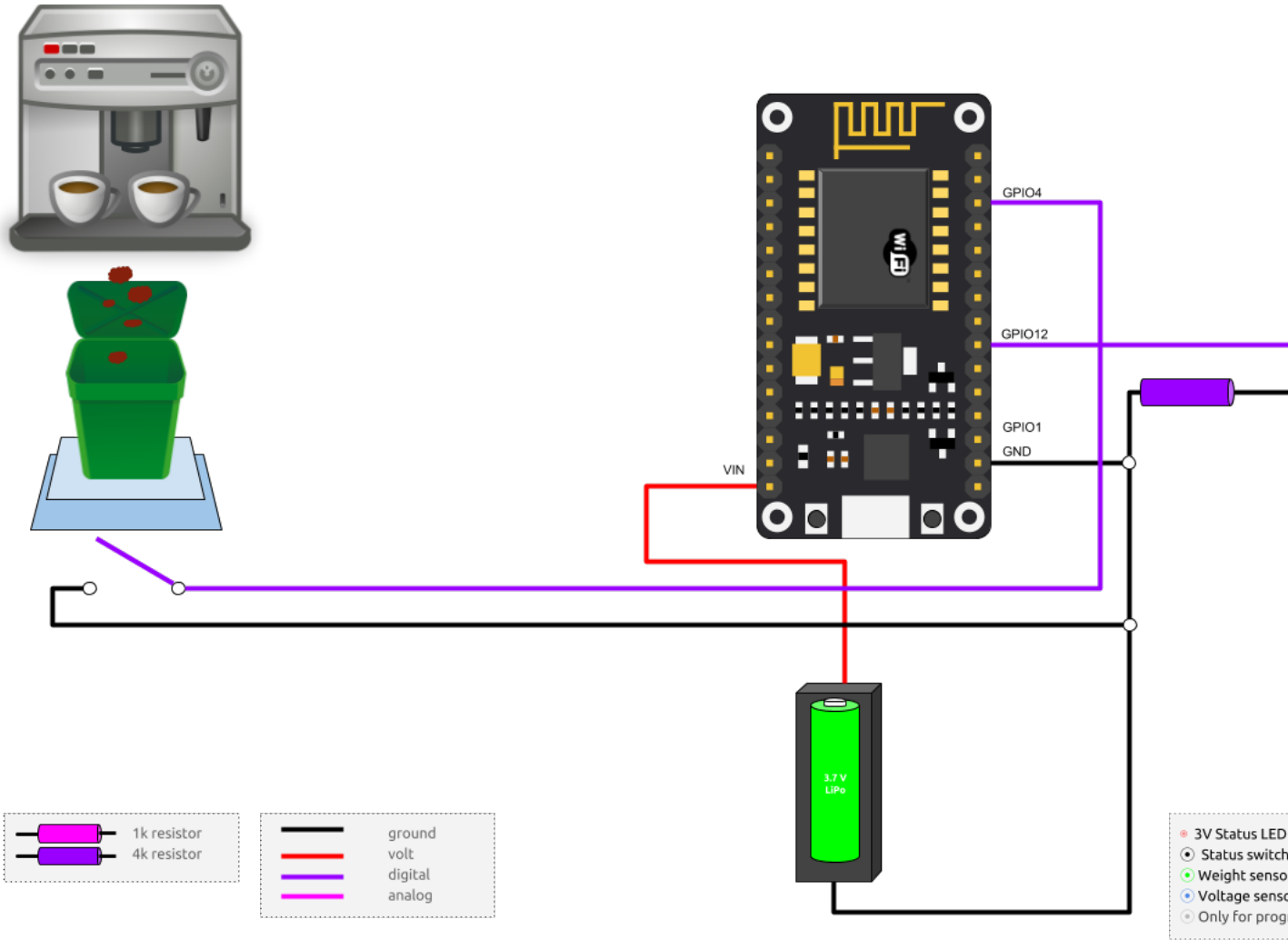
CHAPTER 2

Hardware

- **ESP8266 ESP12F**
  - Flash Size: 32 Mbit
  - Flash Mode: DIO
  - Flash Speed: 40 MHz
- LED
- Switch
- Voltage sensor

CHAPTER 3

Wiring



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CHAPTER 4

Development

4.1 Preparation

Install the USB driver for your ESP8266 and find out on which port your device is avaible. For convinience you can save that information in your *~/.bashrc* or *~/.bash_profile* file.

If you don't wanna do that, you have to add the port to each command.

```
mos --port /dev/cu.SLAB_USBtoUART COMMAND
```

4.2 Build

You need to install Docker to build it locally.

```
git clone https://github.com/vergissberlin/coffee-bin-mqtt
cd coffee-bin-mqtt
mos build --platform ESP8266 --local --verbose
mos flash --esp-erase-chip --esp-baud-rate 115200 --esp-flash-params "dio,4m,40m"
```

4.3 Debugging and configuration

```
mos wifi --port /dev/cu.SLAB_USBtoUART WIFI-SSID WIFI-PASSWORD
mos console --port /dev/cu.SLAB_USBtoUART
```

4.4 Upload files

```
mos put --port /dev/cu.SLAB_USBtoUART fs/init.js
```

4.4.1 Requirements

Hardware

- ESP8266 ES12F
- Switch
- USB adapter
- Voltage sensor
- Red LED
- 18650 Li-ion battery case
- 18650 Li-ion protected battery
- Step down voltage regulator

Software

- Web browser on Linux, MacOS or Windows
- USB adapter driver (/dev/cu.wchusbserial14610)
- MongooseOS

4.4.2 Configuration

Tip: You can enable RPC to configure and controll your device over WiFi.

config9.json

```
{
"device": {
    "id": "esp8266_XXXXX"
},
"mqtt": {
    "enable": false,
    "server": "io.adafruit.com:1883",
    "user": "USERNAME",
    "pass": "PASSWORD"
},
"aws": {
    "thing_name": "esp8266_XXXXX"
},
"wifi": {
```

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```
    "ap": {
        "enable": false
    },
    "sta": {
        "enable": true,
        "ssid": "WIFI_SSID",
        "pass": "WIFI_PASSWORD"
        }
    }
}
```

4.4.3 Contribute

Pull requests

If you are interested to improve the code, fee free to 1. Make a fork 2. make your changes 3. Create a pull request.

Bug reports

If you find a bug and don't know how to fix it, than your bug report is also welcome! Try to describe the problem very detailed.