Adafruit LoRa FeatherM0
Rain and Soil Schematic
v2024-05-01

Adafruit OLED 128x32
Display SSD1306
I2C 7-bit address 0x3C

BMP280
Barometic Pressure
Altitude Sensor
Temperature

I2C 7-bit address
Default = 0x77
SD0 to GND = 0x76

BMP388
Barometic Pressure
Altitude Sensor
Temperature

I2C 7-bit address
Default = 0x77
SD0 to GND = 0x76

BME288
Barometic Pressure
Altitude Sensor
Temperature
Humidity
I2C 7-bit address
Default = 0x76
SD0 to GND = 0x77

Soil Moisture Sensor 2
DF Robot SEN0193
Pin 1 GND
Pin 2 3.3V
Pin 3 Sens

DS18B20 Onewire
Temperature 2
Pin 1 GND
Pin 2 DQ
Pin 3 3.3V

Pinouts
RST
3v3
ARef
GND
A0 Soil Moisture Sensor 1
A1 Dallas Sensor 1wire 1
A2 Soil Moisture Sensor 2
A3 Dallas Sensor 1wire 2
A4 Enable Serial Console - Gound Pin
A5 OLED Reset
24 SCK SPI0 Clock- SD/LoRA
24 MOS SPI0 MOSI - SD/LoRA
22 MIS SPI0 MISO - SD/LoRA
0 RX
1 TX
io1

BAT VBAT
En - Connect to ground to disable the 3.3v regulator
USB VBUS
13 LED
12 Not in Use
11 Enable Soil Moisture 2n2222 or 2N3904
10 SD CS
9 Does not behave - not using
6 Not in Use
5 Rain Gauge Interrupt (put 10k-50k resistor to gnd, when not using)
21 SCL i2c - RTC/BMX
20 SDA i2c - RTC/BMX

Console Enable Jumper
Jump Pin A4 to Ground

Optional Soil Moisture Power Control
Pin D11
Transistor 2N2222
Pin 1 Collector - load placed before
Pin 2 Base - with 1K resistor
Pin 3 Emitter - tied to ground

Feather Adalogger Shield
Pin - D10 SD CS
Pin - SPI MOSI
Pin - SPI MISO
Pin - SPI CLK
Pin - SDA
Pin - SCL

Rain Gauge (D5)
SS451A Omnipolar
Digital Hall-effect Sensor

Soil Moisture Sensor 1
DF Robot SEN0193
Pin 1 GND
Pin 2 3.3V
Pin 3 Sens

DS18B20 Onewire
Temperature 1
Pin 1 GND
Pin 2 DQ
Pin 3 3.3V