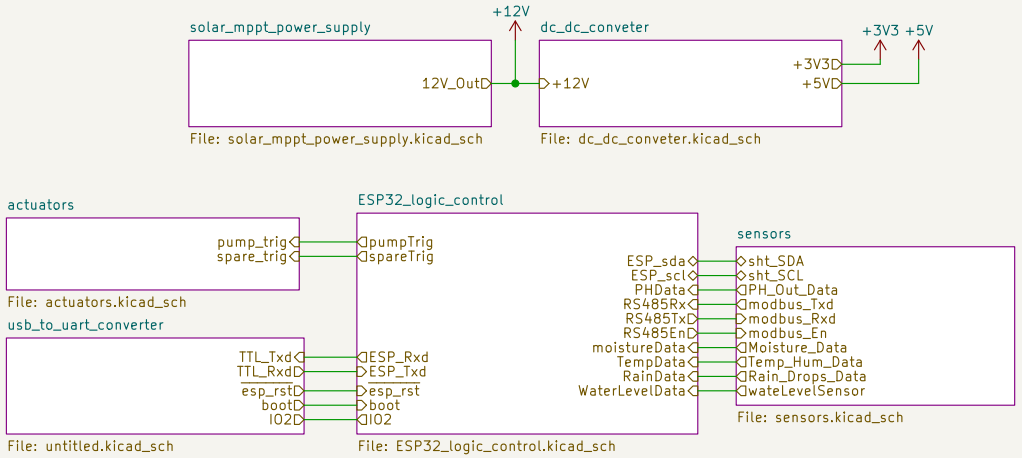


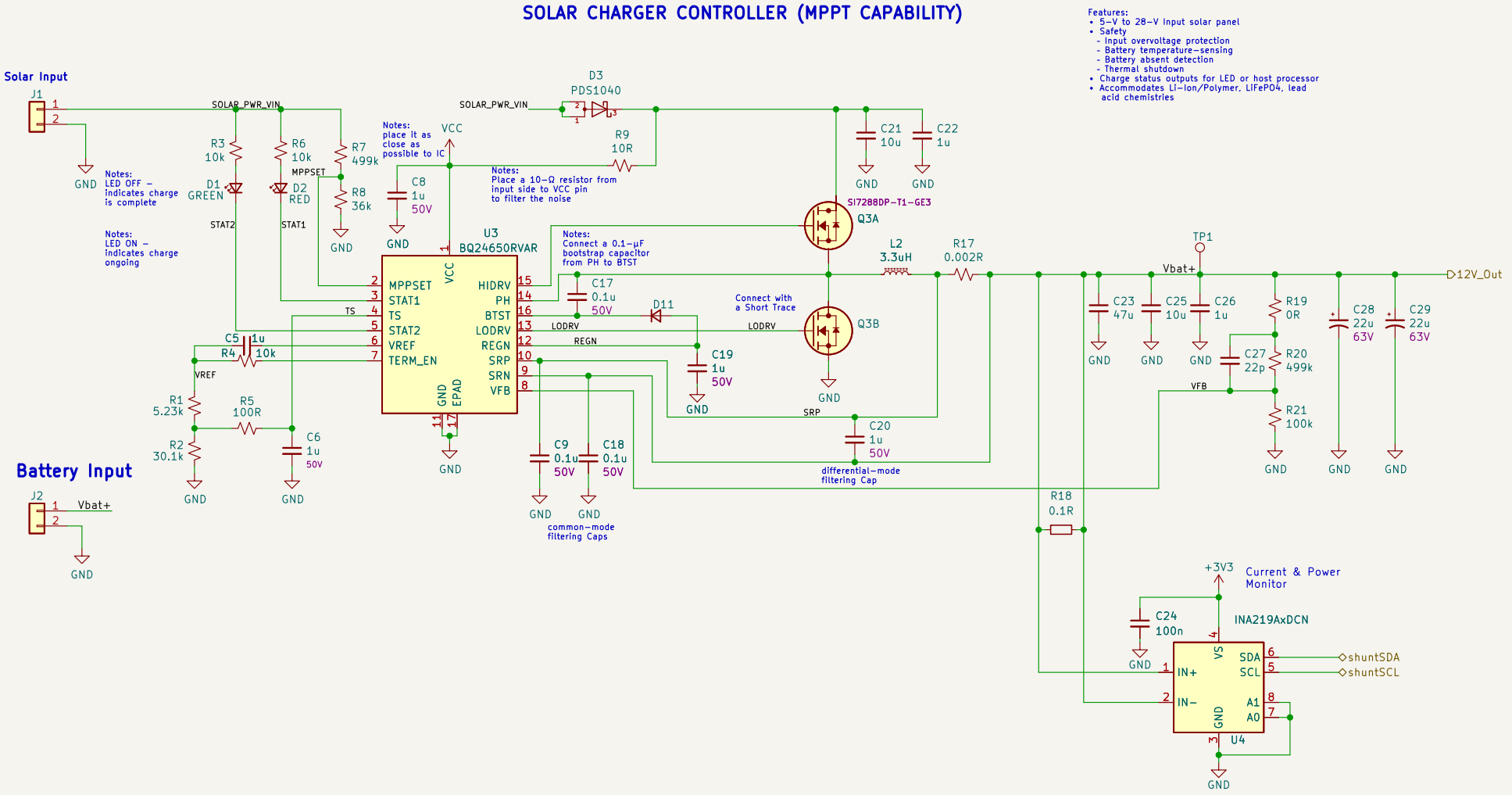
MKULIMA IOT DEVICE
Project Lead: Peter Kirumba
Designed By:
Checked By:

Sheet: /
File: mkulima_hardware.kicad_sch

Title: MKULIMA IOT DEVICE

Size: A4	Date: 2022-10-26	**Rev: v01**
KiCad E.D.A. kicad (6.0.7-1)-1		Id: 1/7

SOLAR CHARGER CONTROLLER (MPPT CAPABILITY)



MKULIMA IOT DEVICE		
Project Lead: Peter Kirumba		
Designed By:		
Checked By:		
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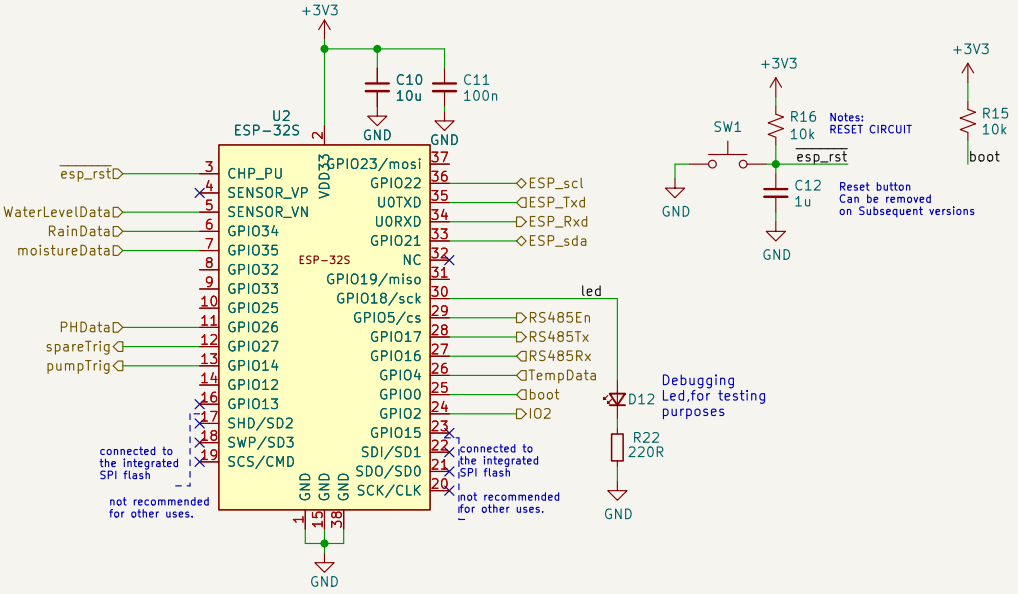
Title: MKULIMA IOT DEVICE		
Size: A4	Date: 2022–10–26	**Rev: v01**
KiCad E.D.A. kicad (6.0.7–1)–1		Id: 2/7

Controller Logic Section Enhanced Over WiFi & Bluetooth SoC (ESP-32S)



DESIGN NOTES / USE GUIDE

DERIVED FROM VERIFIED SCHEMATIC SRC: Datasheet reference/SparkFun & Adafruit Modules

DESCRIPTION:
ESP32 Basic Interface Circuit

RECOMMENDED FOR: All devices that Need a Power MCU with WiFi Capabilities

HIRACHICAL SHEET STATUS: "ADD THE NEW STATUS OF THE THE DESIGN I.E verified, in testing etc"

STATUS_1:VERIFIED **STATUS_2:YES OK!**

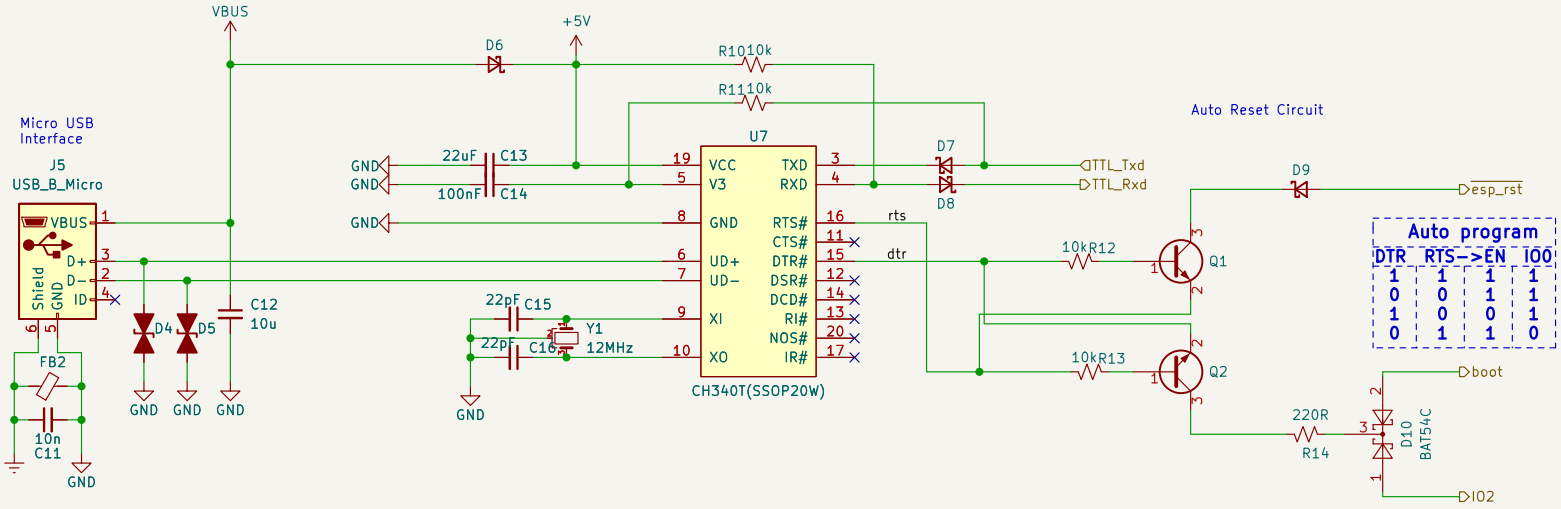
MKULIMA IOT DEVICE
Project Lead: Peter Kirumba
Designed By:
Checked By:

Sheet: /ESP32_logic_control/
File: ESP32_logic_control.kicad_sch

Title: MKULIMA IOT DEVICE

Size: A4	Date: 2022-10-26	**Rev: v01**
KiCad E.D.A. kicad (6.0.7-1)-1		Id: 3/7

USB To TTL Conveter Section



MKULIMA IOT DEVICE	
Project Lead: Peter Kirumba	
Designed By:	
Checked By:	
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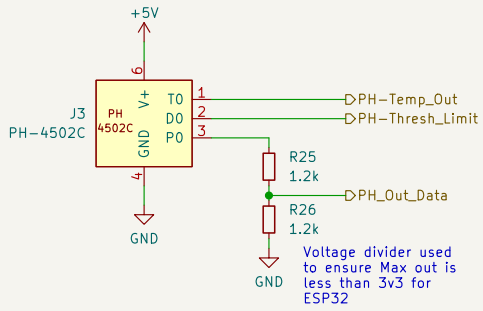
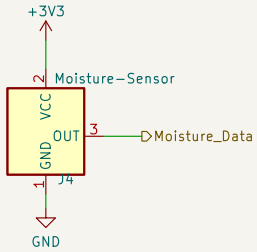
Title: MKULIMA IOT DEVICE	
Size: A4	Date: 2022-10-26
KiCad E.D.A. kicad (6.0.7-1)-1	Id: 4/7

Rev: v01

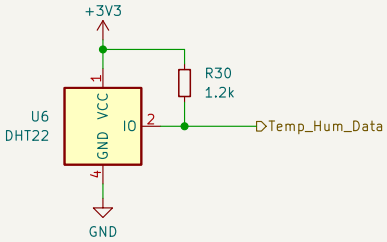
PH Meter (PH-4502C)



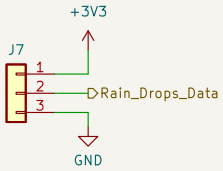
Soil Moisture Sensor



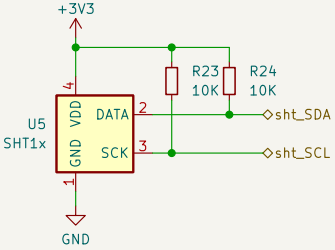
Ambient Temperature and Humidity Sensor



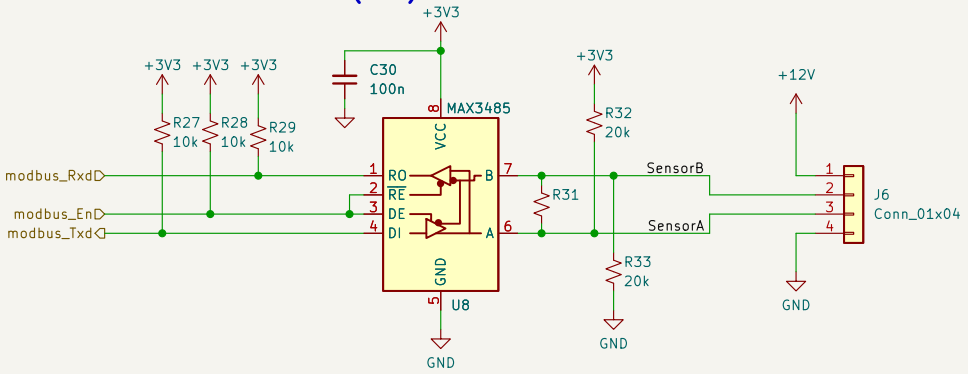
Rainfall Sensor



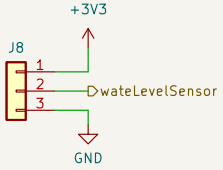
Soil Temperature and Humidity Sensor



Soil Nutrients Sensor(NPK) or Other Modbus Based sensor



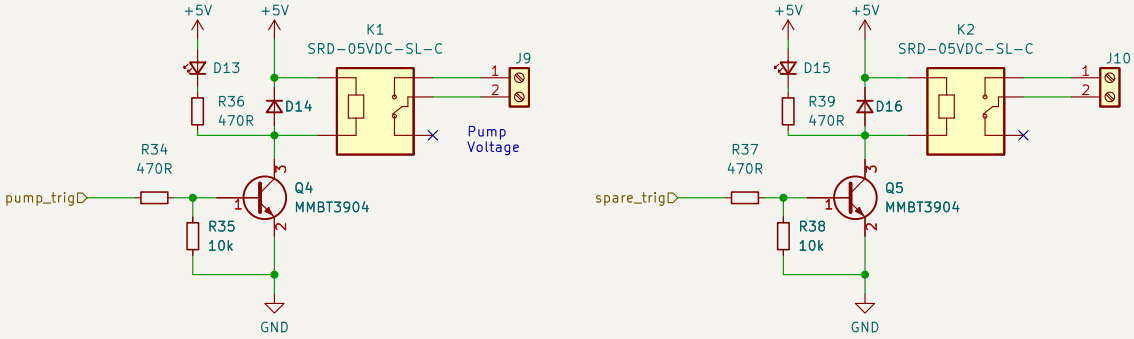
Water Level Sensor



MKULIMA IOT DEVICE	
Project Lead: Peter Kirumba	
Designed By:	
Checked By:	
Sheet: /sensors/	
File: sensors.kicad_sch	
Title: MKULIMA IOT DEVICE	
Size: A4	Date: 2022-10-26
KiCad E.D.A. kicad (6.0.7-1)-1	Id: 5/7

Rev: v01

Relay Triggers for some other Devices



MKULIMA IOT DEVICE	
Project Lead: Peter Kirumba	
Designed By:	
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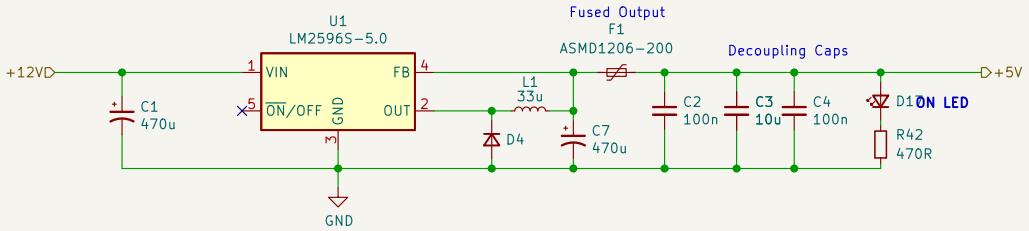
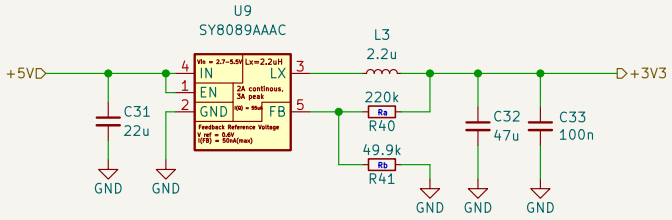
Title: MKULIMA IOT DEVICE	
Size: A4	Date: 2022-10-26
KiCad E.D.A. kicad (6.0.7-1)-1	Id: 6/7

Rev: v01

DC To DC Regulation 12 To 5V



DC to DC Regulator from 5V to 3v3 Logic for the MCU and Lan



MKULIMA IOT DEVICE	
Project Lead: Peter Kirumba	
Designed By:	
Checked By:	
Sheet: /dc_dc_conveter/	
File: dc_dc_conveter.kicad_sch	
Title: MKULIMA IOT DEVICE	
Size: A4	Date: 2022-10-26 — **Rev: v01**
KiCad E.D.A. kicad (6.0.7-1)-1	Id: 7/7