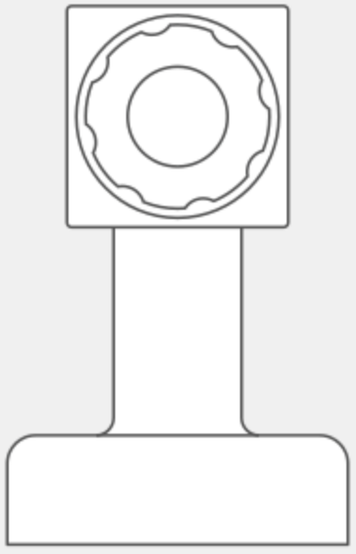
Camera-1

PINOUT DIAGRAM

OV2640 Camera Pin Assignment



PWDN	-1	Y9	38
RESET	-1	Y8	37
XCLK	0	Y7	36
SIOD	19	Y6	25
SIOC	18	Y5	34
VSYNC	5	Y4	13
HREF	39	Y3	12
PCLK	26	Y2	35

The onboard SD card slot is connected to SD_CLK, SD_CMD, and SD_DATA0 in SDMMC 1-bit mode with pull-up resistors. When not using an SD card, each pin can be used as a GPIO.

- Power Output
- GND
- GPIO Number
- RTC IO Number
- Analog Pin
- Serial Pin
- SDMMC Pin

5V *5V output from regulator ABSOLUTE Max 500mA*

3V3 *3V3 output from regulator ABSOLUTE Max 500mA*

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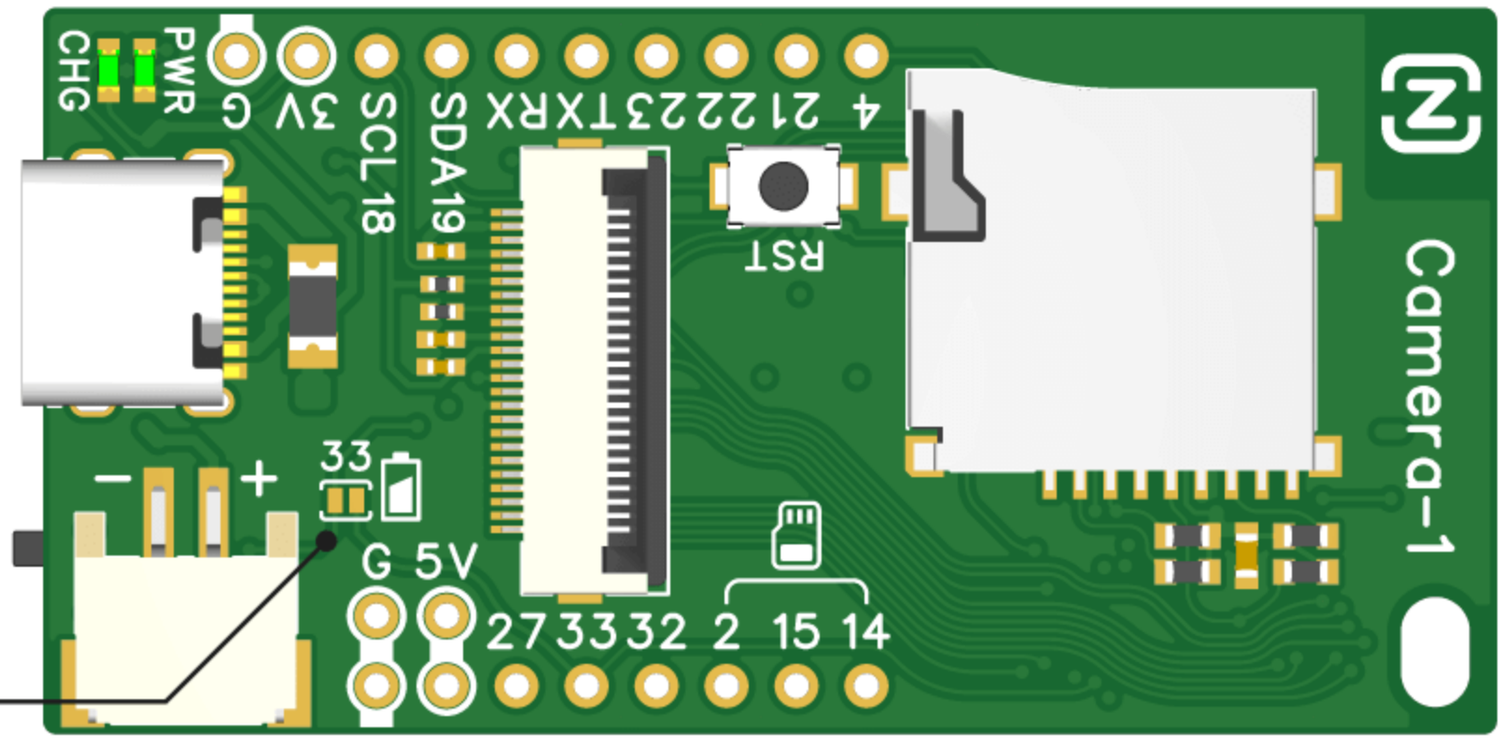
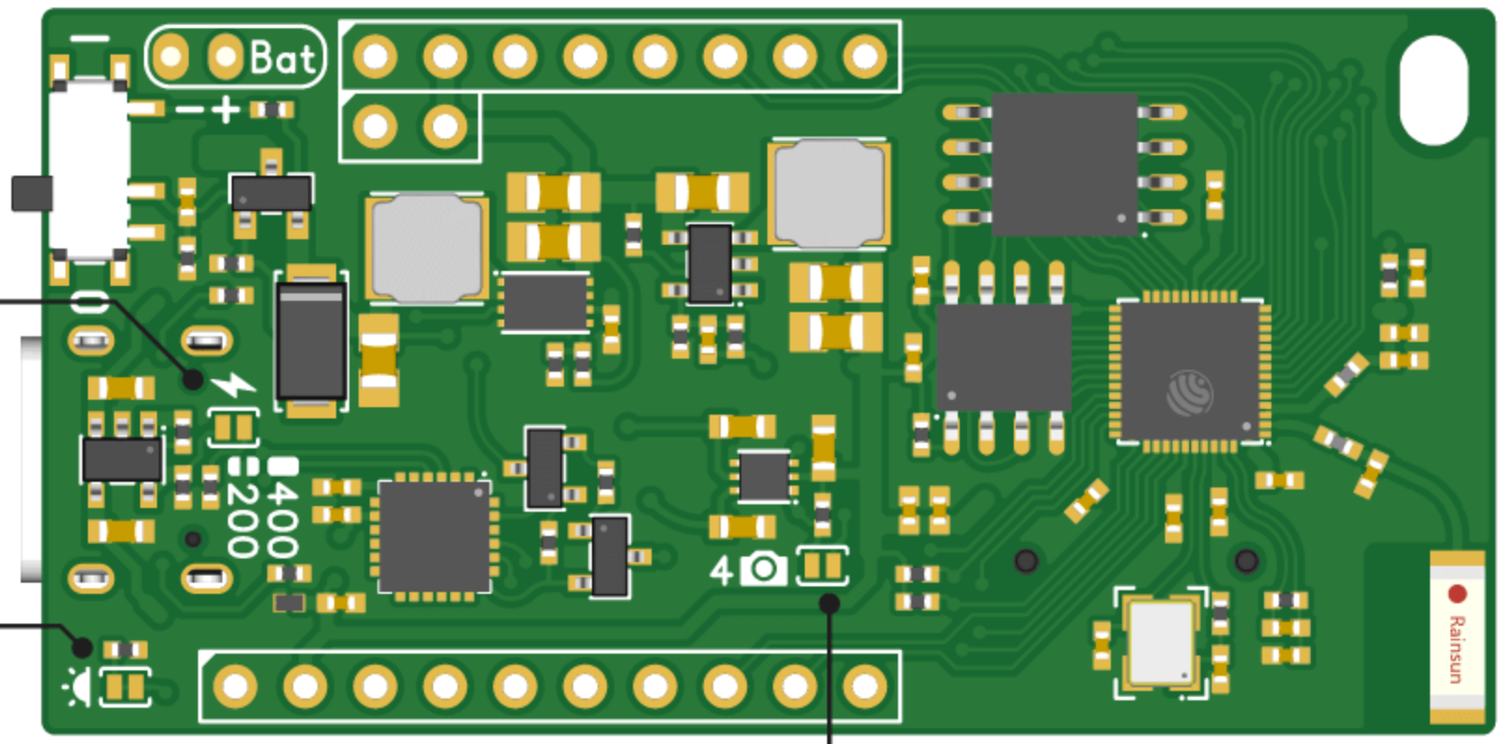
SOLDER JUMPERS



Battery Monitor

There is a 100kΩ-100kΩ resistor divider connected to the battery input. Solder the jumper to connect GPIO33 (ADC1_CH5) with the voltage divider, which will allow your firmware to determine the battery state.



Charging Current Selection

To change the charging current, solder the jumper to connect the included resistor.

UNCONNECTED - 200mA current limit

CONNECTED - 400mA current limit

Power-On Indication

To disable the power-on LED, disconnect the jumper.

Camera Power Control

Solder the jumper to connect GPIO4 with the EN pin of the camera regulator. This allows your firmware to control the camera power ON (H) and OFF (L), reducing power consumption.

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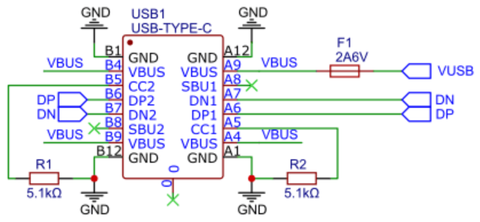
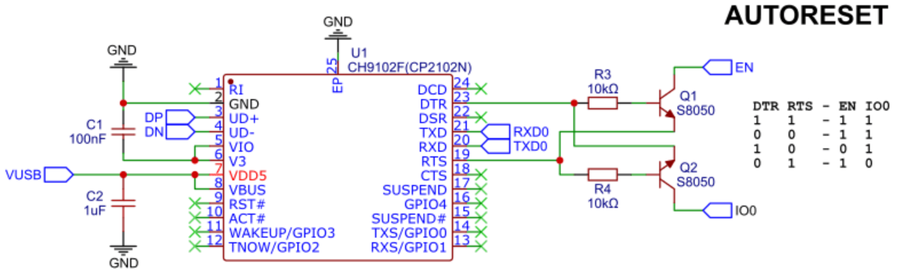
USB TO SERIAL



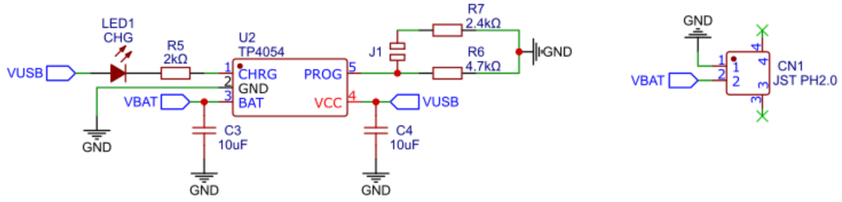
AUTORESET



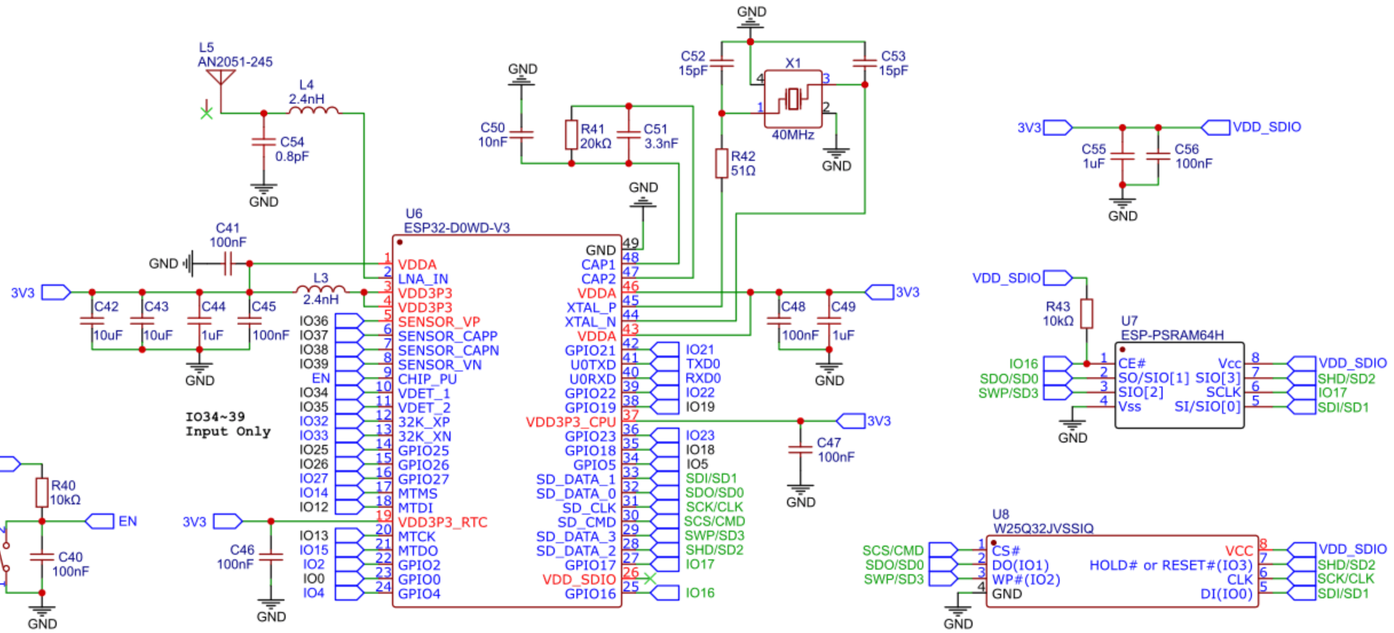
DTR	RTS	-	EN	IO0
1	1	-	1	1
0	0	-	1	1
1	0	-	0	1
0	1	-	1	0

LIPO CHARGER

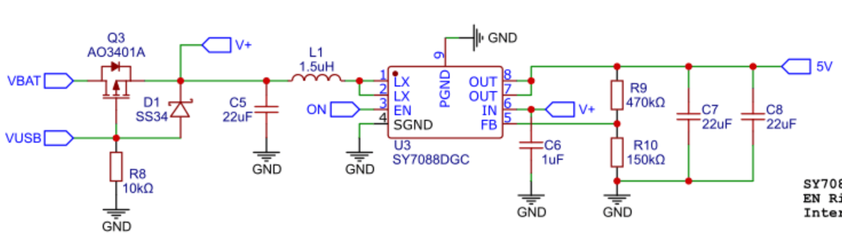
Charging Current Selector J1
Disconnected ≈ 200mA
Connected ≈ 400mA



ESP32-D0WD

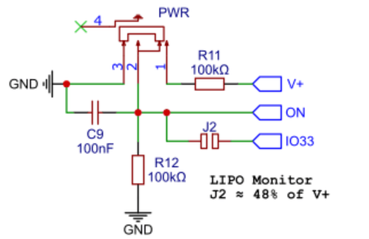


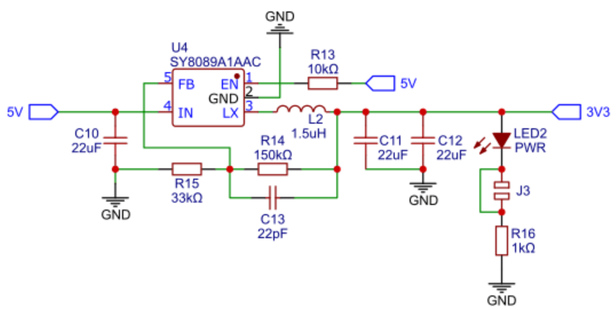
VOLTAGE REGULATOR

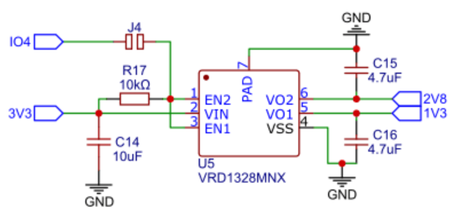


POWER SWITCH

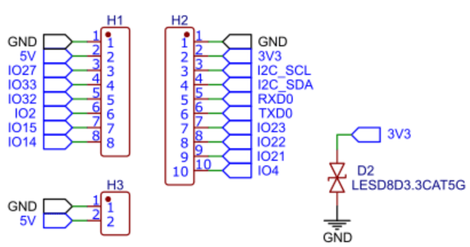
SY7088DGC
EN Rising Threshold 1.2V Min
Internal integrated 1MΩ pull-down resistor

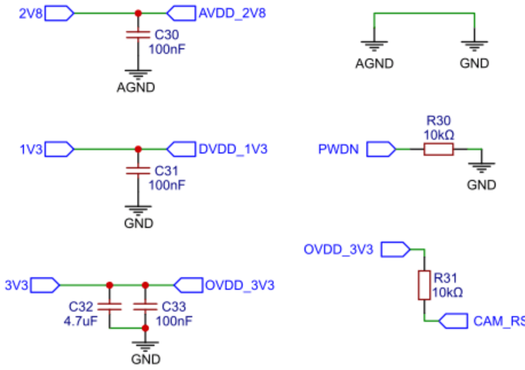




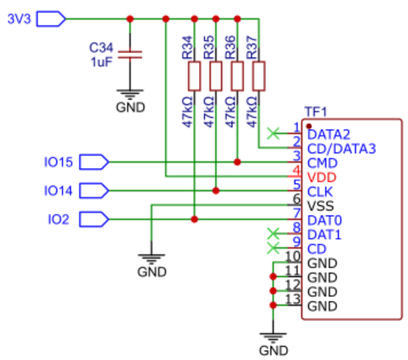


HEADERS

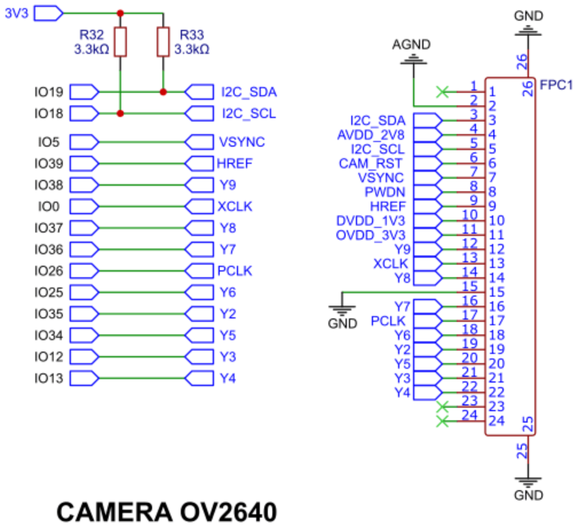




SD CARD



CAMERA OV2640



TITLE: **Camera-1**		REV: 1.0
	Company: Node-Matrix	Sheet: 1/1
	Date: 2023-8-8	Drawn By: Jason Yang