

# Arribada PMP

Arribada Penguin Monitoring Platform (APMP) is a standalone device featuring a Raspberry Pi and a Raspberry Pi Camera Module with a number of additional features.

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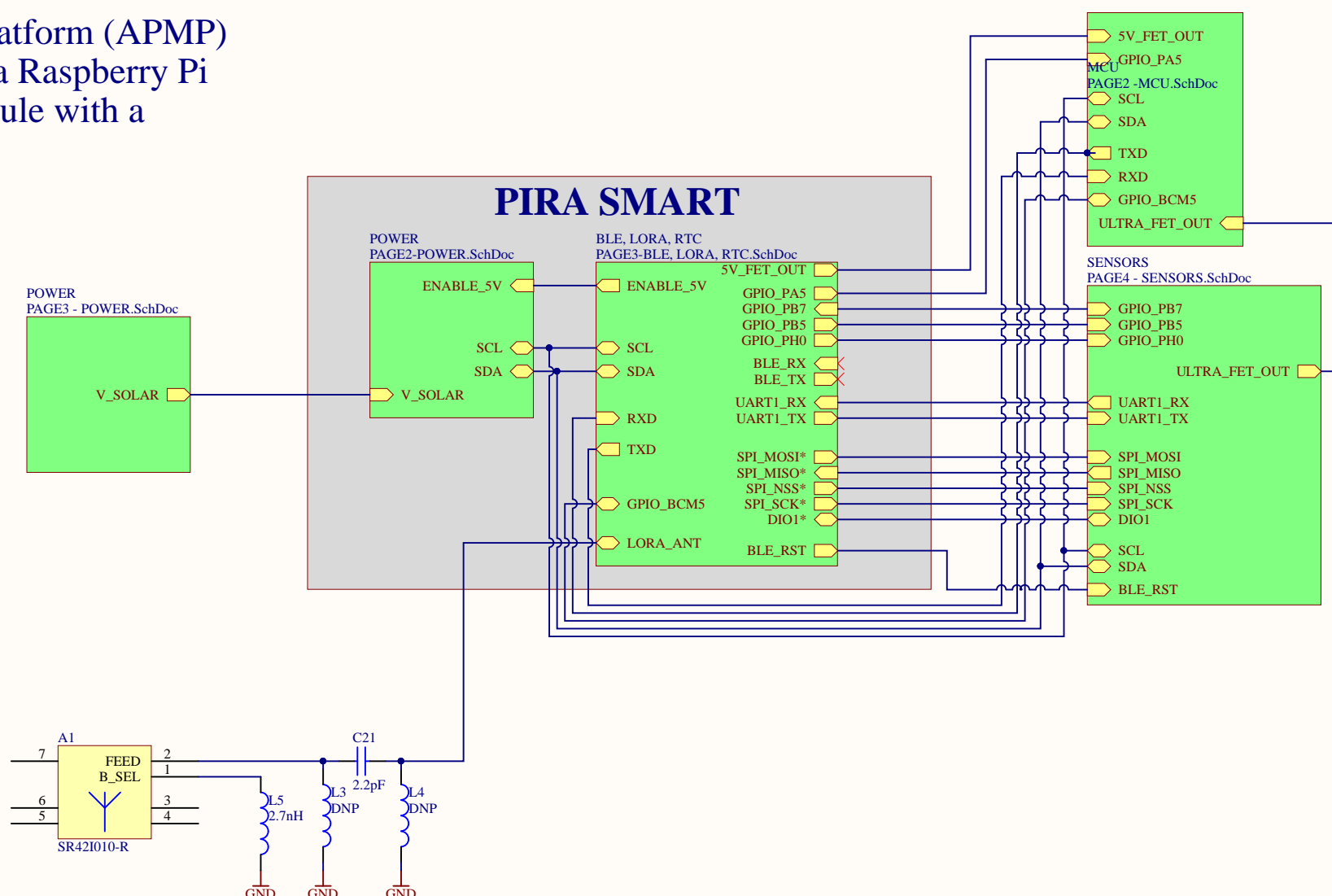
PAGE4 - SENSORS

## Version Revision:

v0.1 - dd.mm.yyyy

v0.2 - dd.mm.yyyy

## DIAGRAM



## DESIGN CONSIDERATIONS

DESIGN NOTE:  
Example text for informational  
design notes.

DESIGN NOTE:  
Example text for critical  
design notes.

LAYOUT NOTE:  
Example text for critical  
layout guidelines.

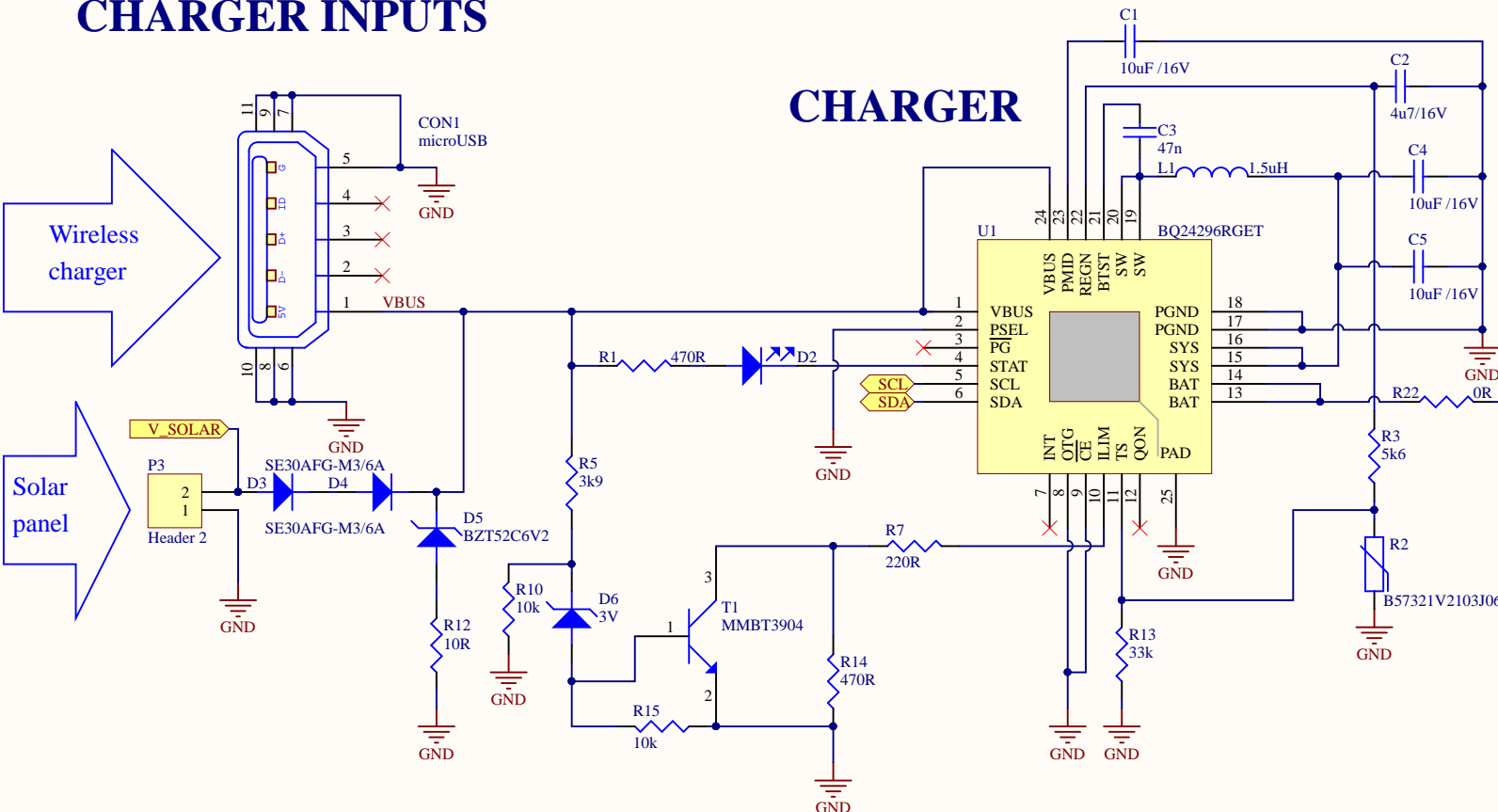
DESIGN NOTE:  
Size of components in antenna circuit is  
0402.

Serial number:  
(example: 01 0xxx)

SERIAL NUMBER

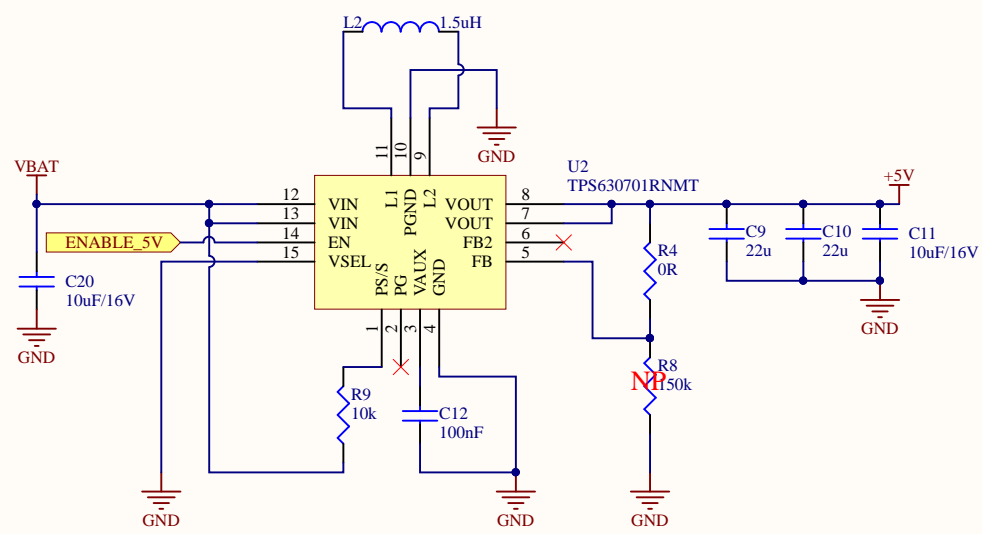
# POWER SHEET

## CHARGER INPUTS

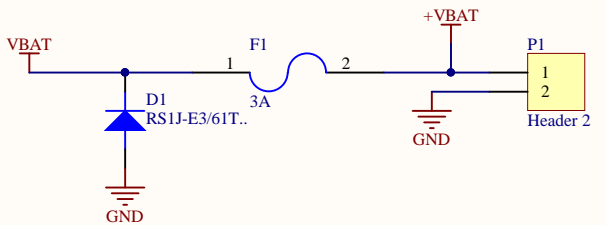


## CHARGER

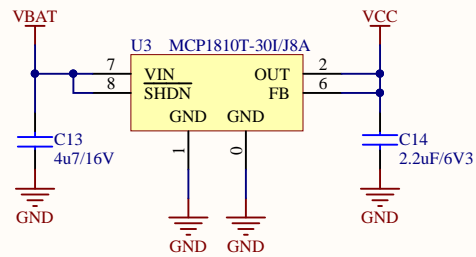
## BOOST CONVERTER



## BATTERY CONNECTOR



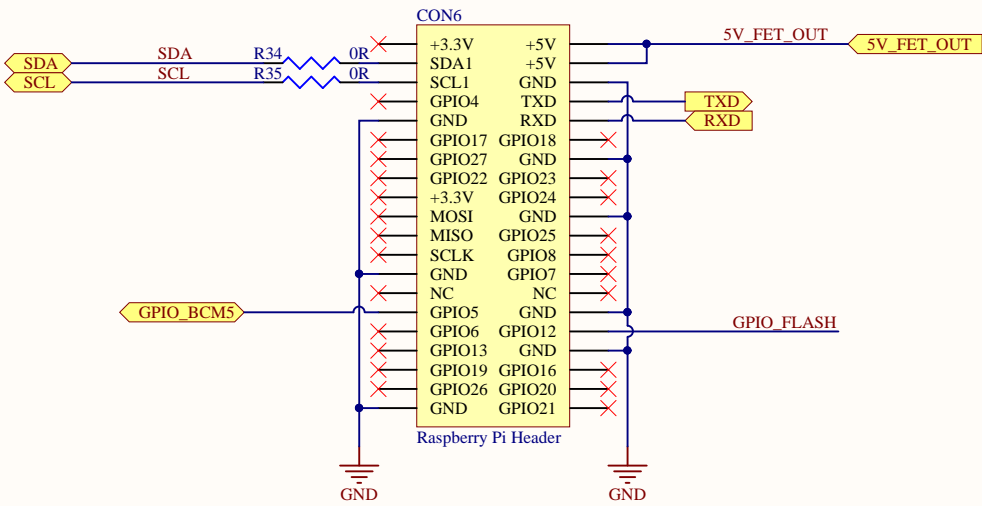
## LDO REGULATOR



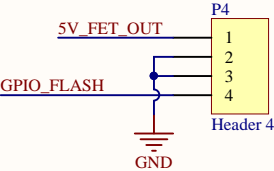
DESIGN NOTE:  
VCC = +3 V  
Iq = 20nA

IRNAS		URL	
Title: Arribada-PMP.PrjPCB			
Page Contents: PAGE2-POWER.SchDoc			
Size:	DWG NO		Revision: V1.1
Date: *	Sheet 2 of 6		

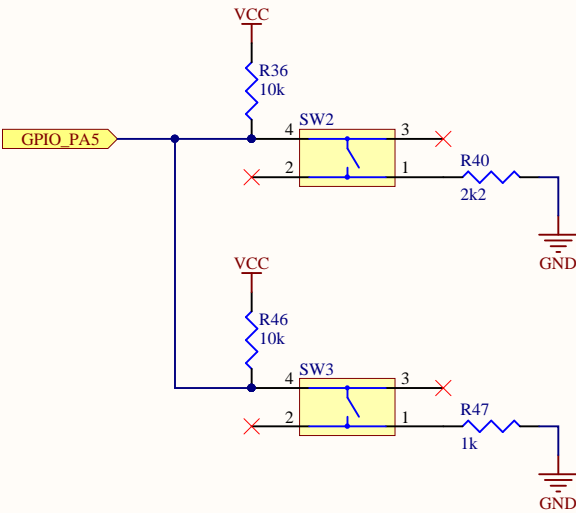
Raspberry Pi Zero



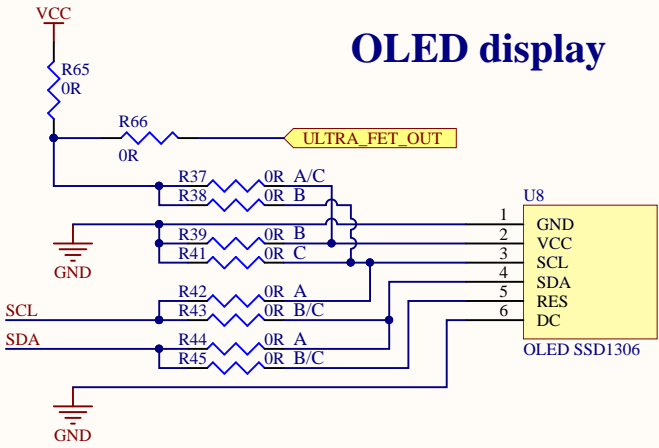
RPi camera LED ring



GPIO buttons



OLED display



Design note:  
Check pinout on oled display, determine if it is A, B or C. Solder 0 ohm resistors on marked positions, leave other ones disconnected.

PIN	A	B	C
1	GND	NC	NC
2	VCC	GND	VCC
3	SCL	VCC	GND
4	SDA	SCL	SCL
5	RES	SDA	SDA
6	DC	NC	NC

IRNAS URL

Arribada PMP

Size: A3

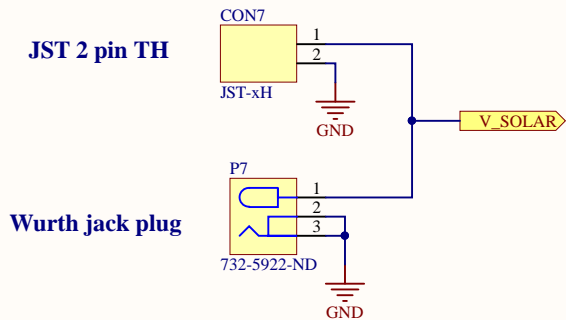
Revision: V1.1

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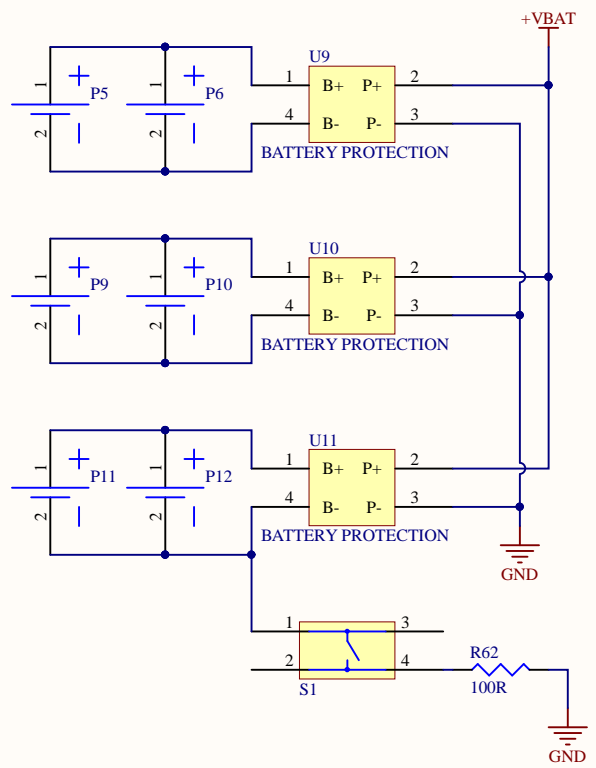
Sheet 2 of 6



Solar connectors

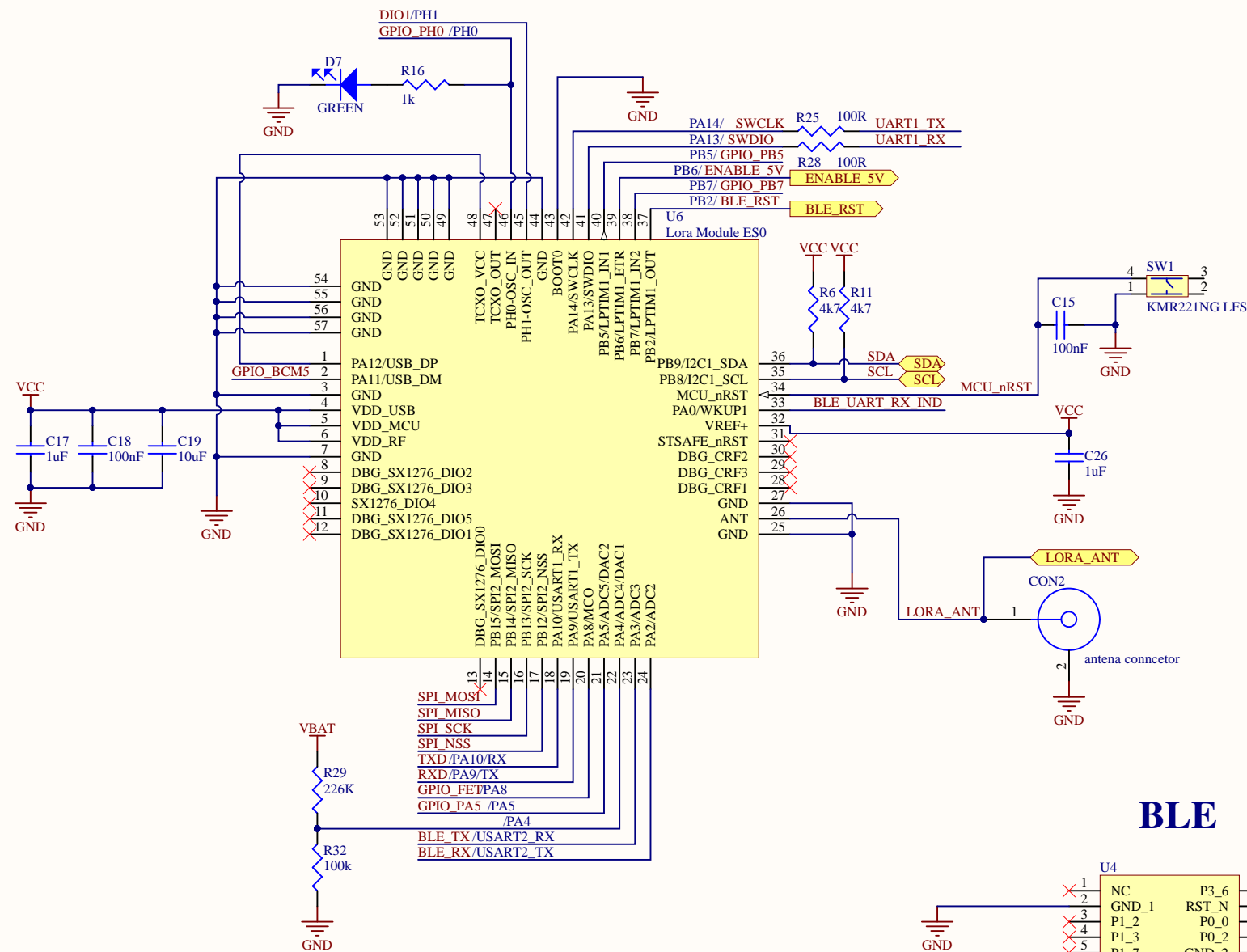


Battery protection

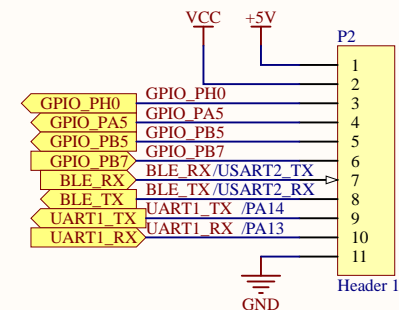


IRNAS		URL	
Arribada PMP			
Size: A3			Revision: V1.1
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# LORA

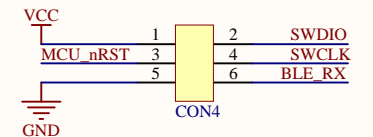


## GPIO header

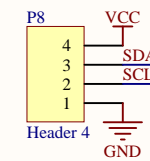


# PROGRAMMER

## TC2030

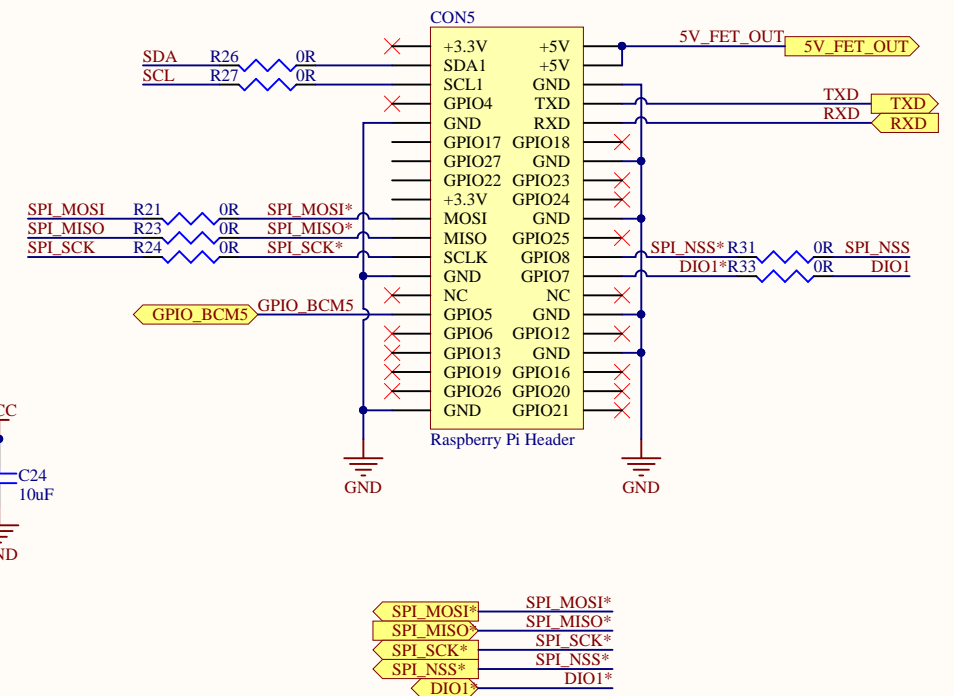


# I2C

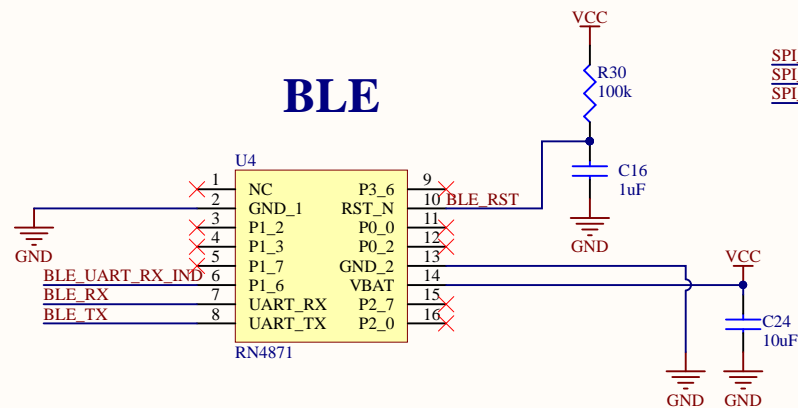


DESIGN NOTE:  
PB5 - GPS FET OUT  
PB7 - ULTRASONIC FET OUT  
PH0 - LED status +Rock block  
PA5 - GPIO buttons (voltage divider)

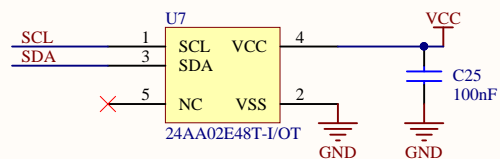
## RPI CONNECTOR



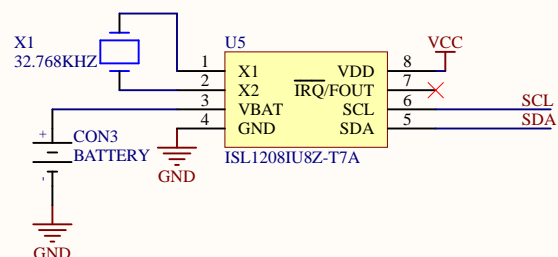
# BLE



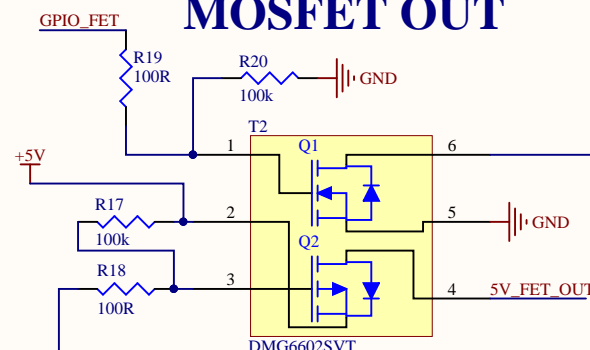
## EEPROM WITH EUI



**RTC**

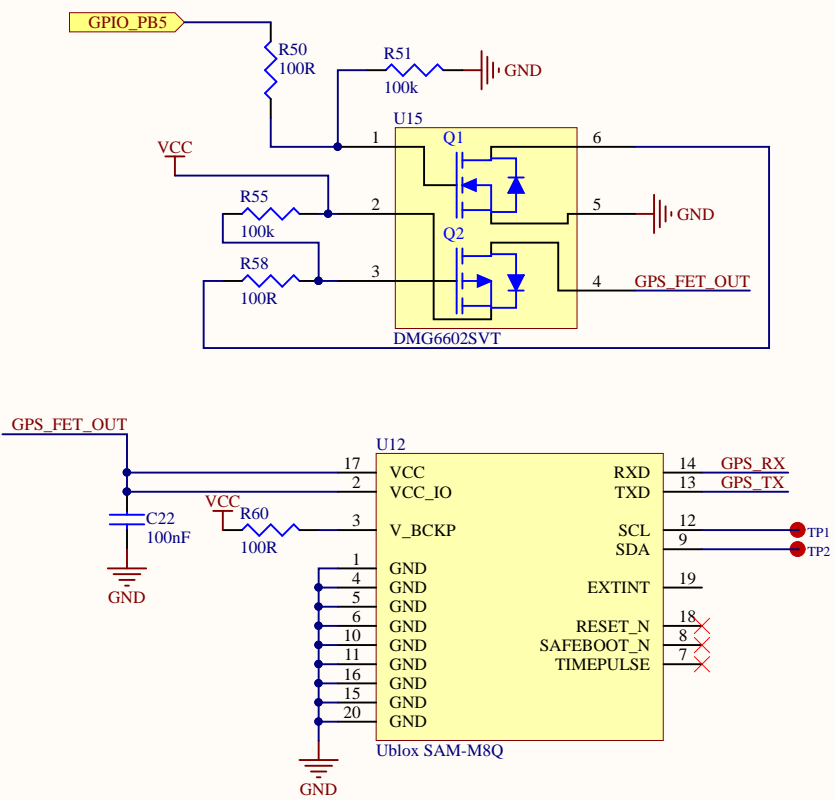


## MOSFET OUT

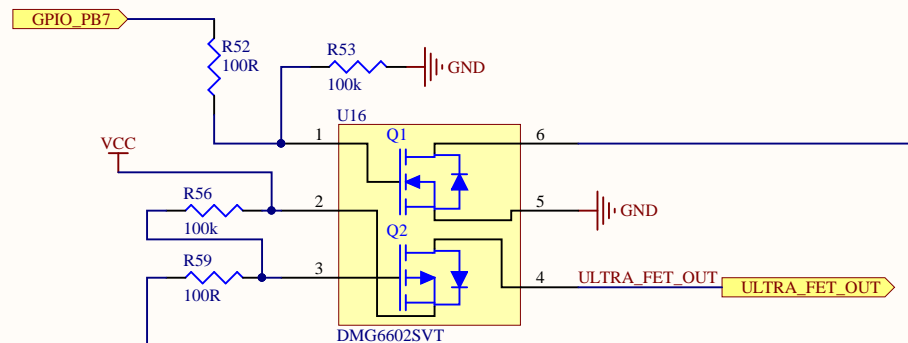


IRNAS		URL	
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Page Contents: PAGE3-BLE, LORA, RTC.SchDoc			
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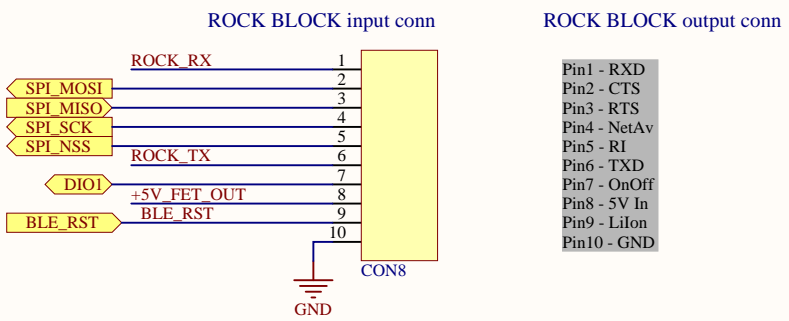
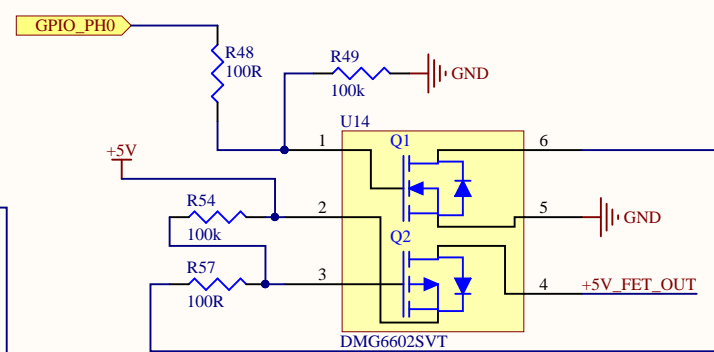
GPS sensor



ULTRASONIC sensor

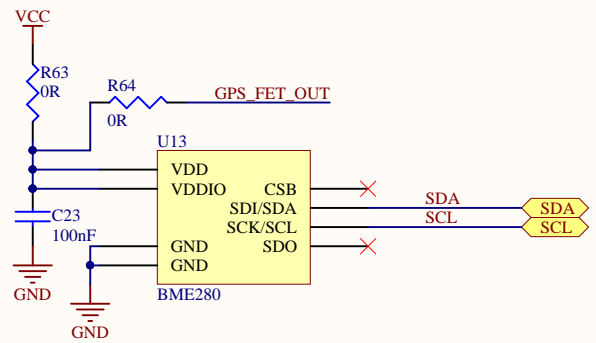


ROCK BLOCK Lacuna space

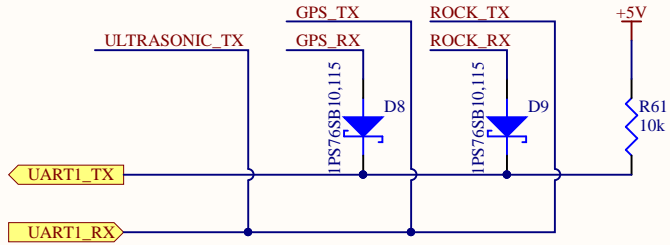


DESIGN NOTE:  
ROCK BLOCK or LACUNA module is optional.

Microclimate sensor



UART diode switch



IRNAS		URL	
Arribada PMP			
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