



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.

CONTENTS:

PAGE1 - MAIN

PAGE2 - MCU

PAGE3 - POWER

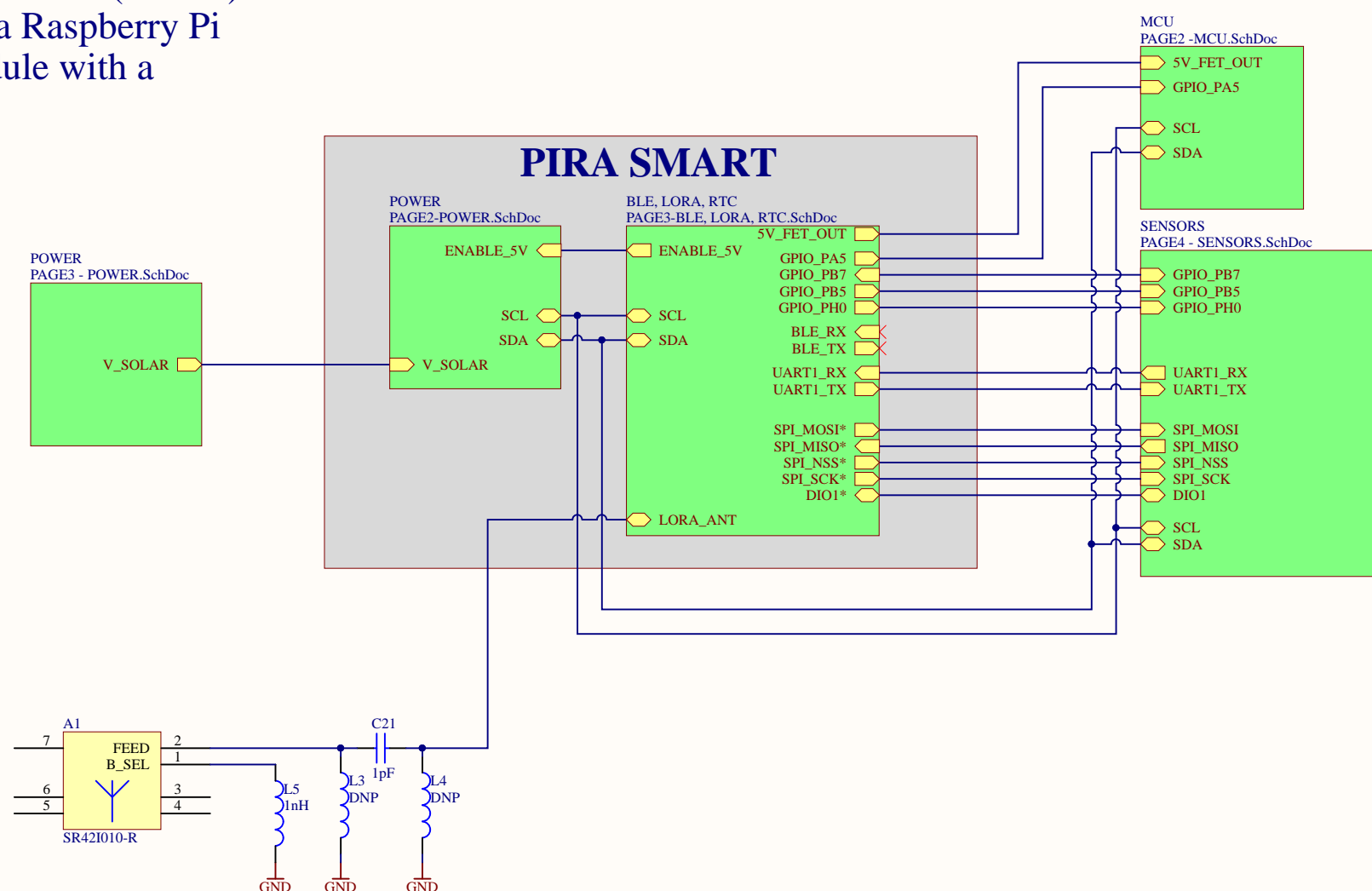
PAGE4 - SENSORS

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.

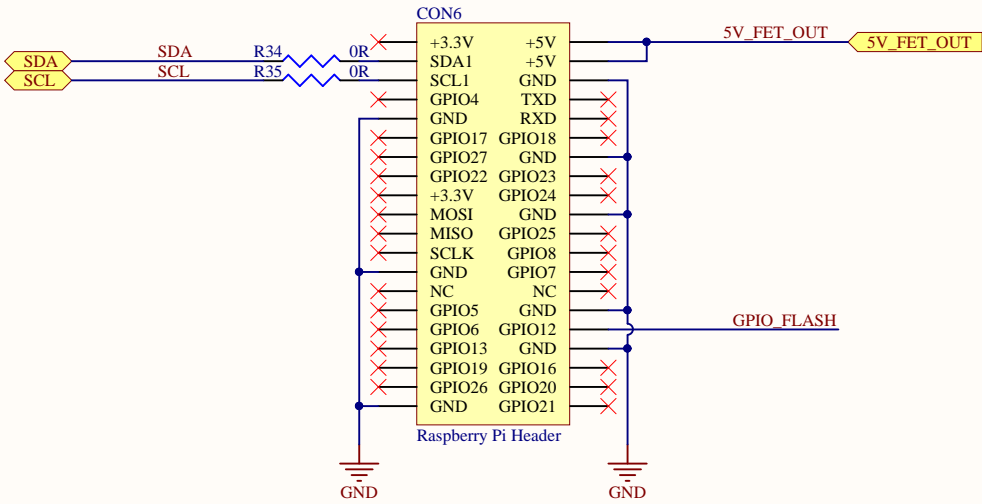
Serial number:
(example: 01 0xxx)

SERIAL NUMBER

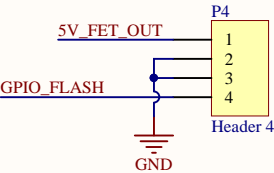


IRNAS		URL	
Arribada PMP			
Size: A3			Revision: V0.1
*			Sheet 1 of 6

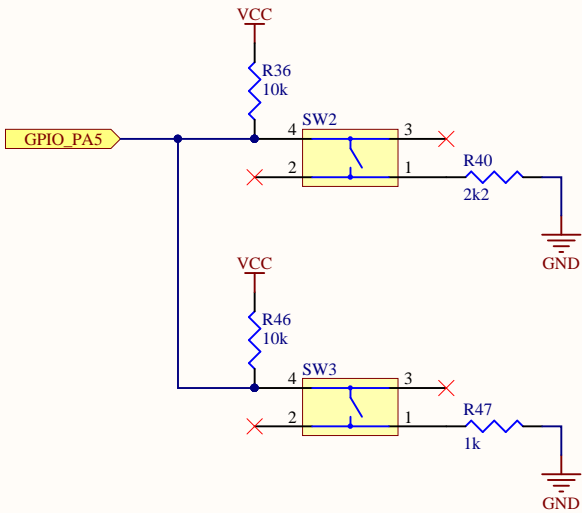
Raspberry Pi Zero



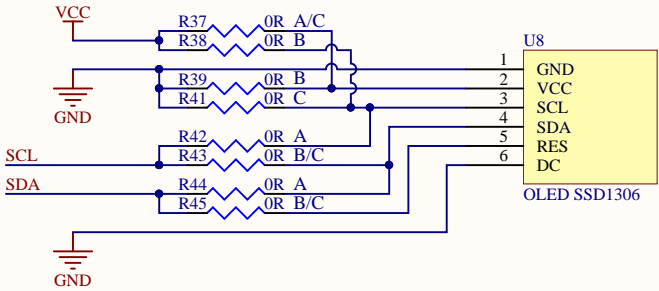
RPi camera LED ring



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

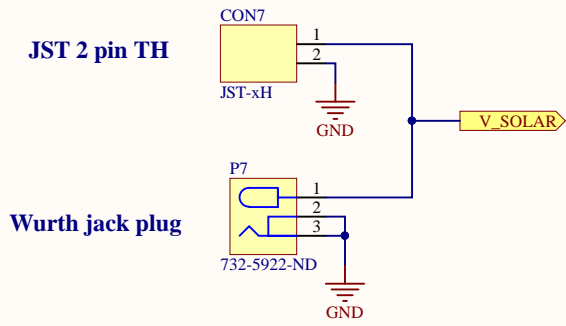
Revision: V0.1

*

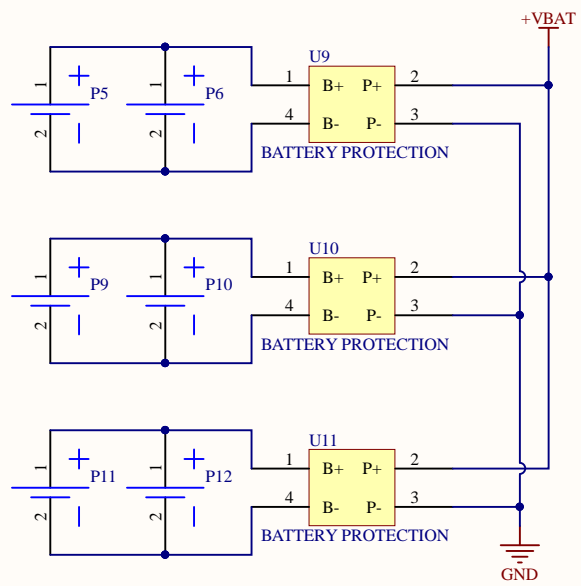
Sheet 2 of 6



Solar connectors

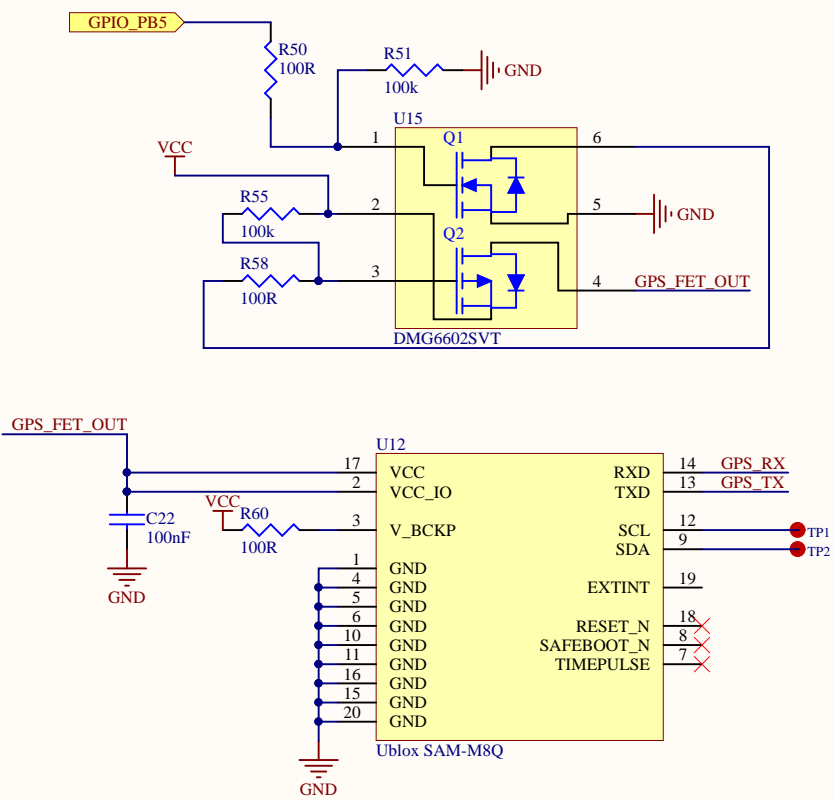


Battery protection

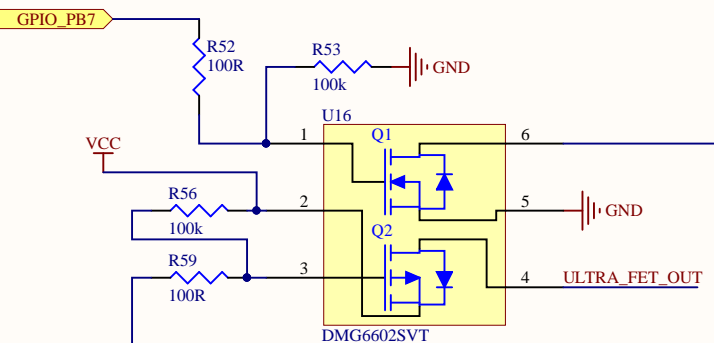


IRNAS		URL	
Arribada PMP			
Size: A3			Revision: V0.1
*			Sheet 3 of 6

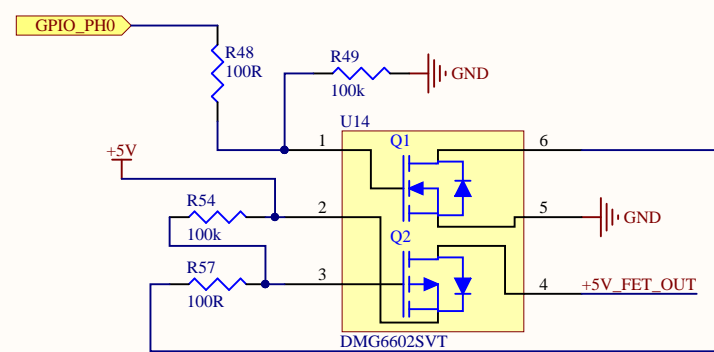
GPS sensor



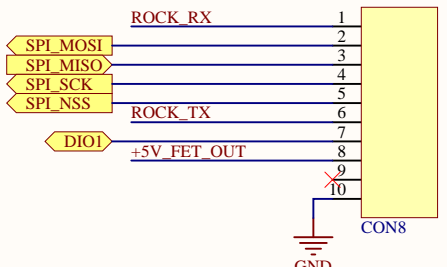
ULTRASONIC sensor



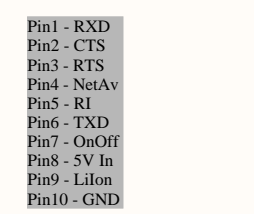
ROCK BLOCK Lacuna space



ROCK BLOCK input conn

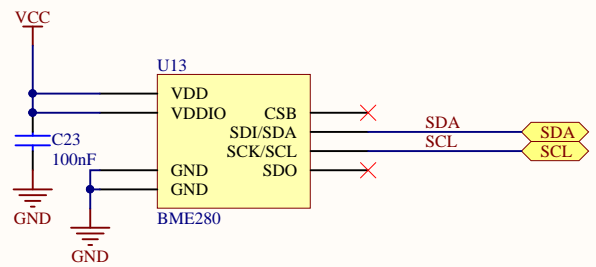


ROCK BLOCK output conn

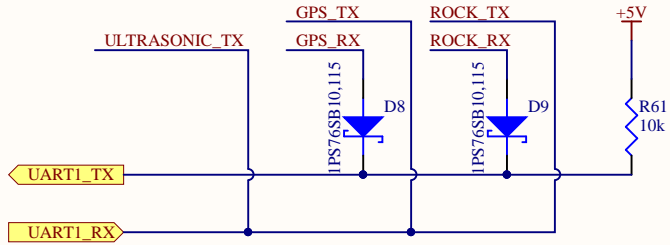


DESIGN NOTE:
ROCK BLOCK or LACUNA module is optional.

Microclimate sensor

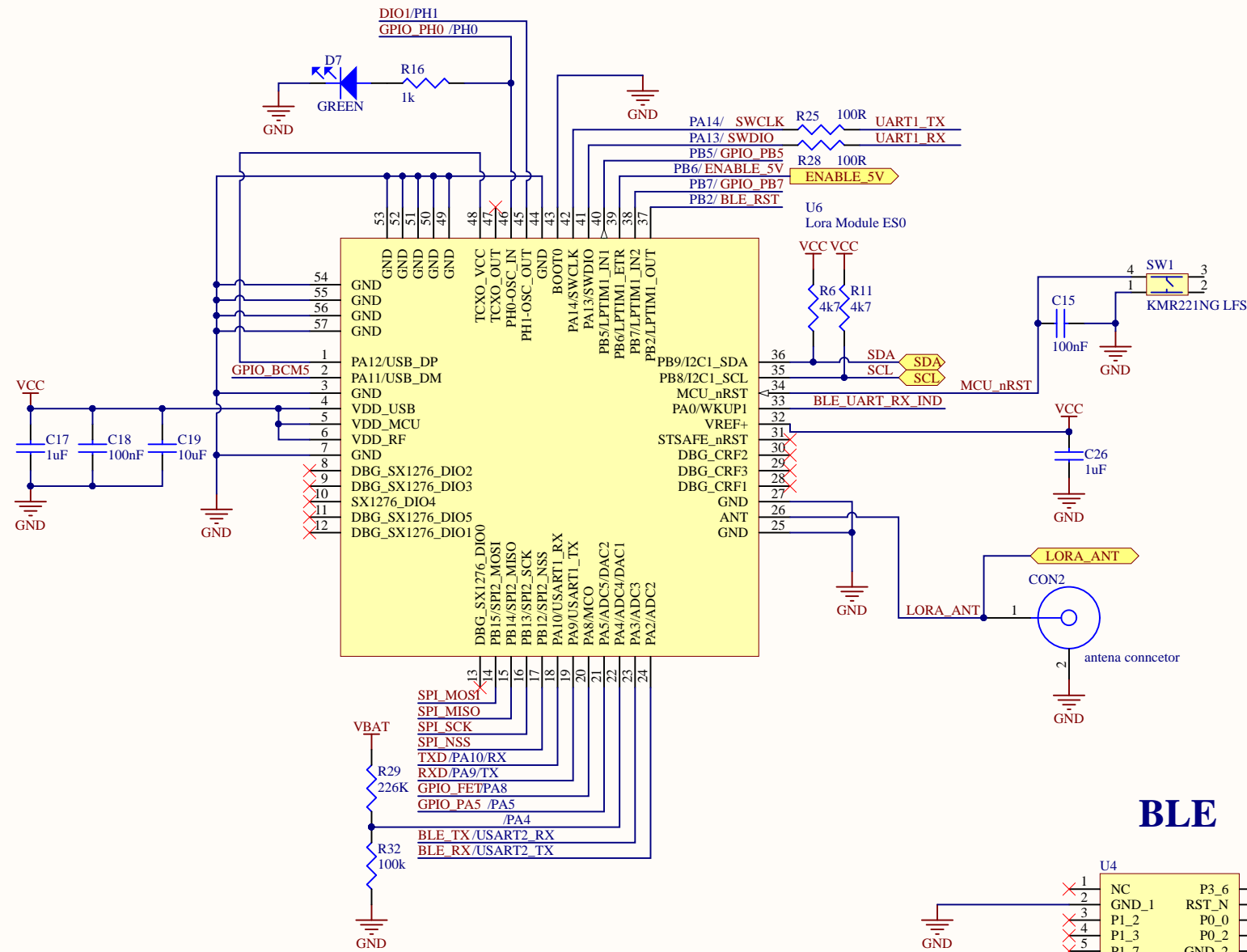


UART diode switch

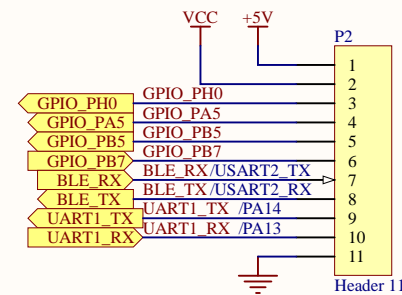


IRNAS		URL	
Arribada PMP			
Size: A3			Revision: V0.1
*			Sheet 4 of 6

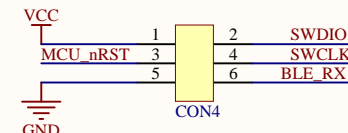
LORA



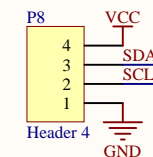
GPIO header



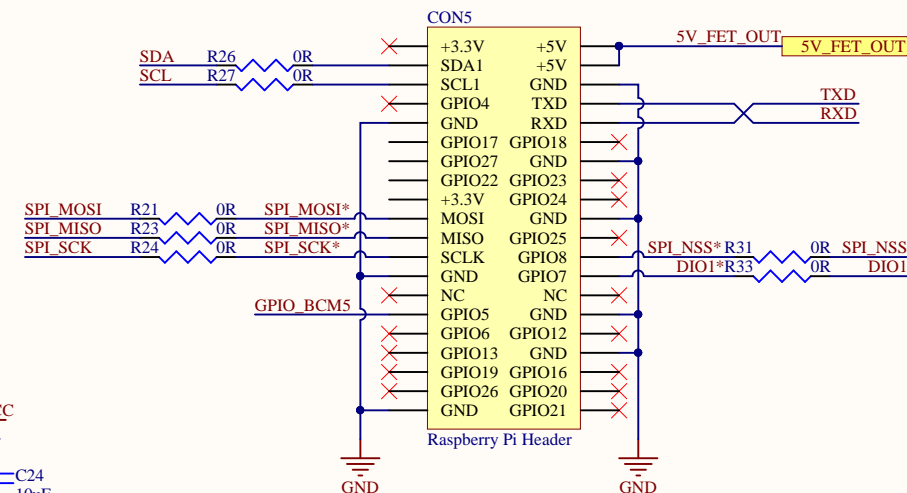
PROGRAMMER TC2030



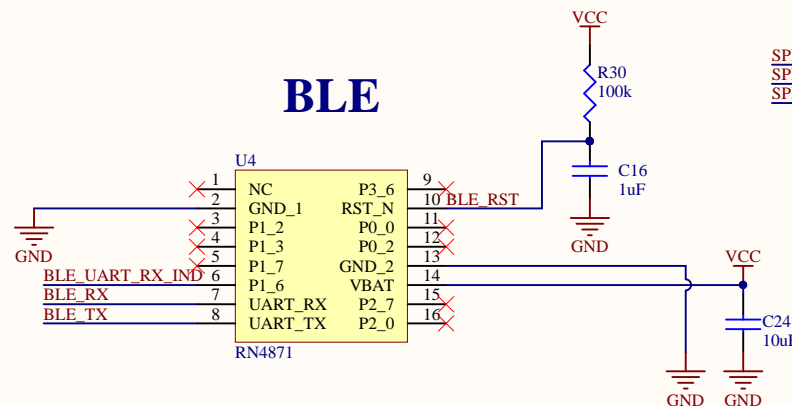
I2C



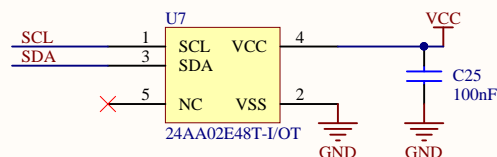
RPI CONNECTOR



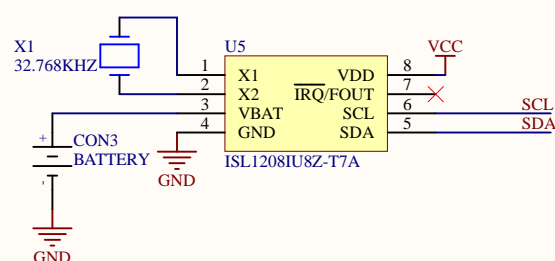
BLE



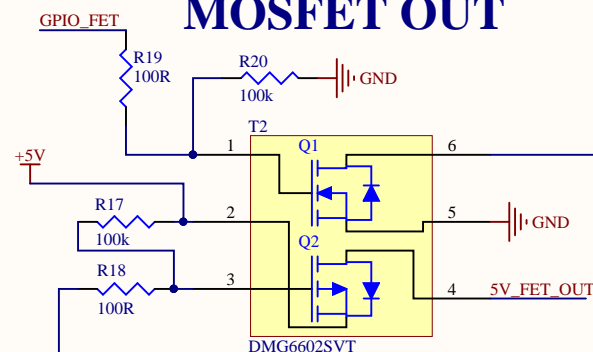
EEPROM WITH EUI



RTC



MOSFET OUT



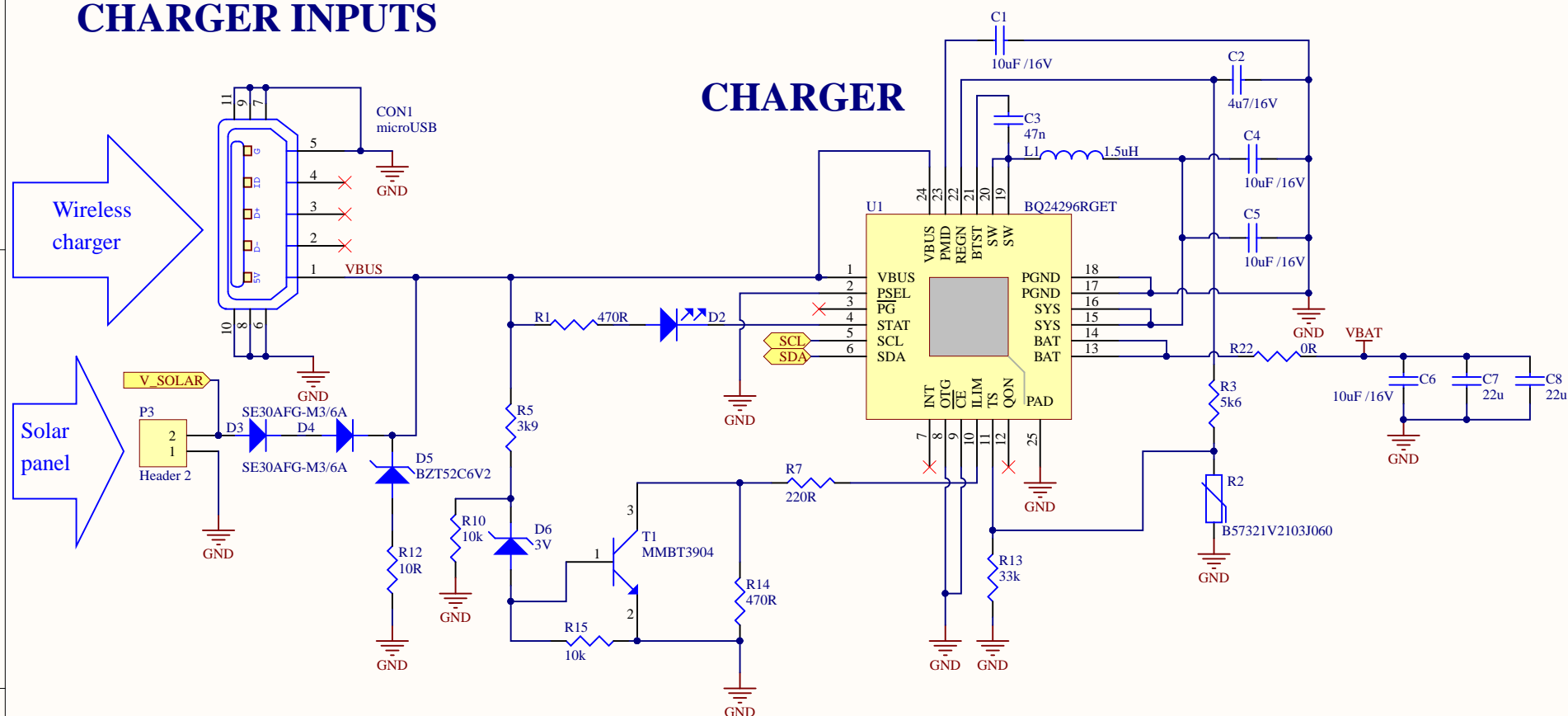
IRNAS

URL

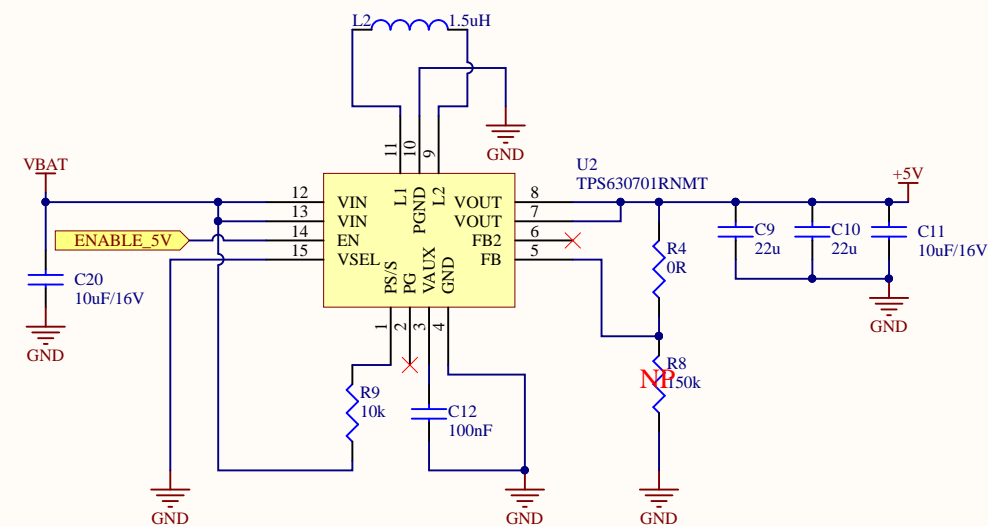
Title: Arribada-PMP.PrjPCB		
Page Contents: PAGE3-BLE, LORA, RTC.SchDoc		
Size:	DWG NO	Revision: V0.1
Date: *	Sheet 5 of 6	

POWER SHEET

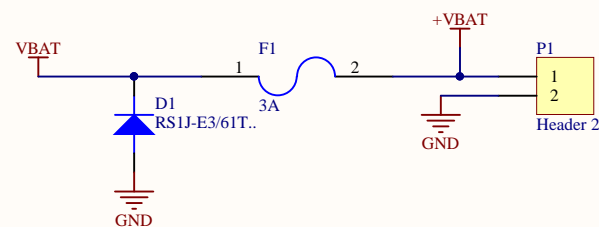
CHARGER INPUTS



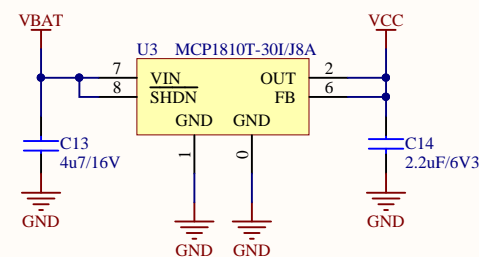
BOOST CONVERTER



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: V0.1
Date: *	Sheet 6 of 6		