Section	name	Use	schematic
Figure 1.1	ESP32-S3-WROOM-1	The ESP32 is the brain of the system, processes al the information, and sends WiFi commands to the Raspberry pi	ESP
Figure 2.1	Buttons 1 & 2	May be removed in a later version, as all they are needed for is programming. Right now they are the default BOOT and RESET buttons	Buttons
Figure 3.1	PIR breakout	Breakout pins for the PIR motion sensor	Motion Sensor
Figure 4.1	AMS1117-3.3 LDO	Takes the higher voltage from the USB and brings it to a usable 3.3 volts	power
Figure 5.1	TP4056	This is the Battery management circuit. Makes sure the battery doesn't explode	Battery Management
Figure 6.1	LED	Useful for debugging and for giving status. Not much is planned	LED

Buttons

GND

C5
1uF

enable

R1
10k

+3.3V

KEY1
K2-3.6×6.1_SMD

enable

1   2

GND

C6
100nF

R2
100k

KEY2
K2-3.6×6.1_SMD

boot

1   2

GND

Power

U2
AMS1117-3.3

GND

1 GND
2 VOUT   VOUT 4
3 VIN

+5V

+3.3V

C2
10µF

C1
22µF

GND

GND

C3
22µF

+3.3V   GND

C4
100nF

+3.3V   GND

GND

USB1
MICRO USB B

GND

5 SHLD
4 GND
3 ID
2 D+
1 D-
   VCC

data+

data-

+5V

Battery Management

U3
TP4056

+5V

4 VCC   BAT 5   battery+

8 CE   EP   9

7 CHRG#   TEMP 1

6 STDBY#   PROG 2

3 GND

GND

R3
1.2kΩ

BT1
BH-18650-B1BA002

battery+

2   1

GND

LED

LED1

LED-R

LED-G

LED-B

R4
200R

GND

ESP

U1
ESP32-S3-WROOM-1(N8R2)

GND 41

GND

1 GND   GND 40   GND
2 3V3   IO1 39   pir_sensor
3 EN   IO2 38
4 IO4   TXD0 37
5 IO5   RXD0 36
6 IO6   IO42 35
7 IO7   IO41 34
8 IO15   IO40 33
9 IO16   IO39 32
10 IO17   IO38 31
11 IO18   IO37 30
12 IO8   IO36 29
13 IO19   IO35 28
14 IO20   IO0 27

+3.3V

enable

LED-R
LED-G
LED-B

data-

data+

boot

IO3 IO46 IO9 IO10 IO11 IO12 IO13 IO14 IO21 IO47 IO48 IO45
15 16 17 18 19 20 21 22 23 24 25 26

Motion Sensor

B1
PIR_Sensor_AM312

PIR

1 VCC   2 OUT   3 GND

+3.3V

pir_sensor

GND