Outputs

U$3
TB6612FNG

Pin	Name		Name	Pin
1	A01		VM1	24
2	A01		PWMA	23
3	PGND1		AIN2	22
4	PGND1		AIN1	21
5	A02		VCC	20
6	A02		STBY	19
7	B02		GND	18
8	B02		BIN1	17
9	PGND2		BIN2	16
10	PGND2		PWMB	15
11	B01		VM3	14
12	B01		VM2	13

MOT_PWMA
MOT_A1
MOT_A2
3.3V
GND
MOT_B1
MOT_B2
MOT_PWMB

JP1 2 1
JP2 2 1

GND

C1 10uF
V_BATT
GND

R8 200 LED_R
R11 100 LED_B
R19 100 LED_G

D2
RED
BLU
GRN
A
LED-TRICOLOR
3.3V

SP1
PIEZO
SPEAKER/PS12
GND

Power

J1
V_BATT
GND

Nnet Interface

U1
MB85RC256VPF-G-JNERE2

Pin	Name		Name	Pin
6	SCL		VCC	8
5	SDA			
7	WP			
1	A0			
2	A1			
3	A2		GND	4

SCL
SDA
3.3V
C4 10uF
GND

R1 10k
3.3V

U$2
ESP12

Name	Name
RESET	TX
ADC	RX
CH_PD	GPIO4
GPIO16	GPIO5
GPIO14	GPIO0
GPIO12	GPIO2
GPIO13	GPIO15
VCC	GND

RX
TX
3.3V
GND

Teensy 3.1

U$1
TEENSY_3.1+4

Name	Name
0/RX1/T	VUSB
1/TX1/T	VIN
2	3.3V
3/CAN-TX/PWM	VBAT
4/CAN-RX-PWM	GND
5/PWM	
6/PWM	PGM
7/RX3	
8/TX3	AREF
9/RX2/PWM	AGND
10/TX2/PWM	A14/DAC
11/MOSI	
12/MISO	
13/SCK/LED	A11
14/A0	A10
15/A1/T	
16/A2/T	
17/A3/T	
18/A4/T/SDA0	
19/A5/T/SCL0	
20/A6/PWM	
21/A7/PWM	
22/A8/T/PWM	
23/A9/T/PWM	

RX
TX
MOT_PWMA
MOT_A1
MOT_A2
MOT_PWMB
MOT_B1
MOT_B2
3.3V
R10 10k
R9 10k
ADC_VIS
ADC_IR
ADC_MIC
ADC_BAT
SDA
SCL
PIEZO
LED_R
LED_G
LED_B
V_BATT
3.3V
GND

Sensors

U$4
MPU-9150.QFN

Name	Name
VDD	SDA
VLOGIC	SCL
CPOUT	
	AUX_DA
CLKIN	AUX_CL
CLKOUT	
	AD0
REGOUT	INT
FSYNC	GND

3.3V
SDA
SCL
C2 2.2nF
GND
C3 0.1uF
GND
GND

U2
SPW2430

Name	Name
VDD	OUT
GND	
GND	
GND	

3.3V
ADC_MIC
GND

R12 PHOTOCELLPTH
R13 10k
3.3V
GND
ADC_VIS

T1 BPX81
3.3V
R20 2k
GND
ADC_IR

V_BATT
ADC_BAT
R4 10k
R7 4.7k
GND