U1

Teensy4.0

1	GND	
2	0_RX1_CRX2_CS1	
3	1_TX1_CTX2_MISO1	
4	2_OUT2	B_LED_r
5	3_LRCLK2	B_LED_g
6	4_BCLK2	B_LED_b
7	5_IN2	M_LED_r
8	6_OUT1D	M_LED_g
9	7_RX2_OUT1A	RX-2
10	8_TX2_IN1	TX-2
11	9_OUT1C	M_LED_b
12	10_CS_MQSR	motor_PWM
13	11_MOSI_CTX1	
14	12_MISO_MQSL	
15	VBAT	
16	3V3	
17	GND	
18	PROGRAM	
19	ON_OFF	
20	13_SCK_CRX1_LED	
21	14_A0_TX3_SPDIF_OUT	reed
22	15_A1_RX3_SPDIF_IN	
23	16_A2_RX4_SCL1	
24	17_A3_TX4_SDA1	Pot
25	18_A4_SDA0	
26	19_A5_SCL0	
27	20_A6_TX5_LRCLK1	
28	21_A7_RX5_BCLK1	

54	D+	
53	D-	
52	39_DAT2_TX5	
51	38_DAT3_RX5	
50	37_CMD_SCK2	
49	3V3	
48	36_CLK_CS2	
47	GND	
46	35_DAT0_MOSI2	
45	34_DAT1_MISO2	
44	33_MCLK2	
43	32_OUT1B	
42	31_CTX3	
41	30_CRX3	
40	29_TX7	RX-1
39	28_RX7	TX-1
38	27_A13_SCK1	
37	26_A12_MOSI1	
36	25_A11_RX6_SDA2	
35	24_A10_TX6_SCL2	
34	VUSB	
33	3.6V to 5.5V VIN	
32	GND	
31	max 250mA 3V3	+3V3
30	23_A9_CRX1_MCLK1	
29	22_A8_CTX1	

U3
Voltage regulator
5V
3 OUT IN 1
2 GND
GND
D4

R3 470
C3 100uF
Power ON LED
D3
GND

SW1B SW_DPDT_x2
Q3 IRF4905
R10 10k
D5
motor_PWM
R2 10k
Q2 2N3904
SW1A
SW_DPDT_x2
reed GND
GND
C1 0.1uF
J1
car_gnd
SW2 SW_Reed
From - of wipermotor fuse fuse
From + of wipermotor fuse fuse
External

GND
C2 100uF
GND

JP1 XBEE 1

+3V3	1	VDD
TX-1	2	DOUT
RX-1	3	DIN
	4	DIO12
	5	RESET
	6	RSSI
	7	DIO11
	8	RES
	9	DTR
	10	GND

DIO0	20
DIO1	19
DIO2	18
DIO3	17
RTS	16
DIO5	15
RES	14
DIO9	13
CTS	12
DIO4	11

GND

JP2 XBEE 2

+3V3	1	VDD
TX-2	2	DOUT
RX-2	3	DIN
	4	DIO12
	5	RESET
	6	RSSI
	7	DIO11
	8	RES
	9	DTR
	10	GND

DIO0	20
DIO1	19
DIO2	18
DIO3	17
RTS	16
DIO5	15
RES	14
DIO9	13
CTS	12
DIO4	11

GND

M_LED_b R4 470
M_LED_g R5 470
M_LED_r R6 470
D1 Motor LED
GND

B_LED_b R7 470
B_LED_g R8 470
B_LED_r R9 470
D2 Beat LED
GND

Pot RV1 R_POT_TRIM +3V3
GND

Teensy4 digital in/outs:

OUT:
motor start:
Motor LED B   =9
Motor LED G   =6
Motor LED R   =5
Beat B   =4
Beat G   =3
Beat R   =2

IN:
Reed-switch   =14
PotentMeter   =17

=16

For I2S programing Xbee BLE:
https://www.tinyosshop.com/audiob-i2s-bluetooth-digital-audio-receiver-module
https://www.tinyosshop.com/index.php?route=information/news&news_id=42

7 - GND
8 - BCK   I2S synchronous data clock, It's a 2.304MHz square wave signal.
9 - SD   I2S synchronous data output.
10 - LRCK   I2S word select, 48KHz. 1 - Left channel data, 0 - Right channel data.
Setting switch: We set to I2S in normal state. Set to SPI when you need programming the module
11 - Vin 3.3V.

Notes:

Prototype board for installing in cars