Ports

J1 — Right Header — +3.3V
10 P1_01
9 P0_27
8 P0_10
7 P1_07
6 P1_06
5 P0_11
4 P0_09
3 P0_30
GND

J7 — Left Header — +3.3V / +6V
10 P0_03
9 P0_02
8 P0_05
7 P0_04
6 P1_10
5 P1_03
GND

J9 — Rear pins — +3.3V
4 P0_20
3 P0_25
GND

J8 — Front Left Pins — GND
3 P0_07
2 P0_06
+3.3V

J10 — Front Right Pins — +3.3V
4 P0_24
3 P0_23
GND

SWD port

J6 SWD
1 VTref — +BATT
10 RESET — RESET
SWDCLK/TCK — SWCLK
SWDIO/TMS — SWDIO
SWO/TDO
NC/TDI
GNDDetect
GND

Motors driver

U3 DRV8833PWP
C5 10uF C6 2.2uF R1 10k C9 10nF +6V
VM / VINT
nSLEEP
VCP
AISEN — P1_13
BISEN — P0_28
nFAULT
AOUT1 / AIN1 — P1_14
AOUT2 / AIN2 — P1_15
BOUT1 / BIN1 — P0_29
BOUT2 / BIN2 — P0_22
GND(PPAD)
R2 1R R3 1R
C3 100nF C4 100nF
J2 Left Motor
J3
J4 Right Motor
J5
GND

Magnetic Encoders

U1 DRV5015A1 — +3.3V — C1 10nF — VCC OUT — P0_31 — GND
U2 DRV5015A1 — +3.3V — C2 10nF — VCC OUT — P0_21 — GND
U4 DRV5015A1 — +3.3V — C7 10nF — VCC OUT — P1_11 — GND
U5 DRV5015A1 — +3.3V — C8 10nF — VCC OUT — P1_12 — GND

nRF5340 module

U7 BT40
H0/GND, H1/GND, H2/GND, H3/GND — GND
H0 H1 H2 H3
P1_02 1 P102/SDA
P1_03 2 P103/SCL
3 P00/XL1
4 P01/XL2
P0_04 5 P004/AIN0
P0_05 6 P005/AIN1
P0_02 7 P002/NFC1
P0_03 8 P003/NFC2
SWDIO 16 — SWDIO
SWCLK 15 — SWCLK
P21/RESET 14 — RESET
P030/LED 13 — P0_30
P11/SWO 12 — P0_11
P009/BUTTON 11 — P0_09
GND 10 — +BATT
VDD 9 — +BATT
GND

User LEDs

LD1 LED — P1_04 — R12 100 — GND
LD2 LED — P1_05 — R13 100 — GND

Center Mounting Hole

H1 MountingHole:MountingHole_3.2mm_M3_Pad_TopOnly

Battery Protection and global switch

+BATT
Q4 DMP2045U-7
Q3 DMP2045U-7
R14 100
SW1 SW_SPDT
C20 10nF
BT1 Battery
GND

6V Step-Up

+BATT
C10 22uF
L1 1.5uH
D1 PMEG6030EVPX
U6 LM5158
BIAS, EN, AGND, PGOOD, RT, MODE, SS, EP, COMP
SW, SW, VCC, PGND, PGND, FB
+3.8v
P0_15
TP1 PG
R4 9.53k R5 0
C12 22nF
C13 110pF C14
R6 4.7k 6.8nF
R7 100k
R8 20k
C11 1uF
C15 22uF
R9 10k
Q2 DMG2301L-7
Q1 DMN62D0U-7
TP2 +6v
+6V
P0_15
GND

3.3V regulator

+BATT
C16 10uF
L2 10uH
U8 MAX1723
SHDN, GND, LX, OUT, FB
R10 560k
R11 270k
+3.8v
C17 10uF C18 1uF
U9 ADP121-AUJZ33R7
Vin, EN, Vout
C19 1uF
TP3 3.3v
+3.3V
P0_15
GND