Brain.DuinoBot v1.2
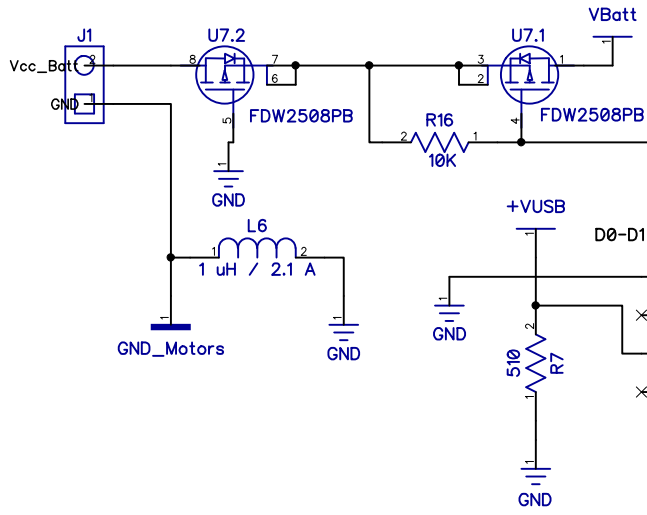
Power Supply

NOTE: All .1 uF caps must have Low-ESR.
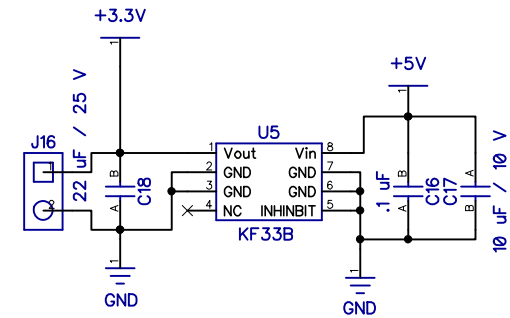
Reverse polarity Protection & Pwr Switch

Vcc_Bat

J1

GND

U7.2
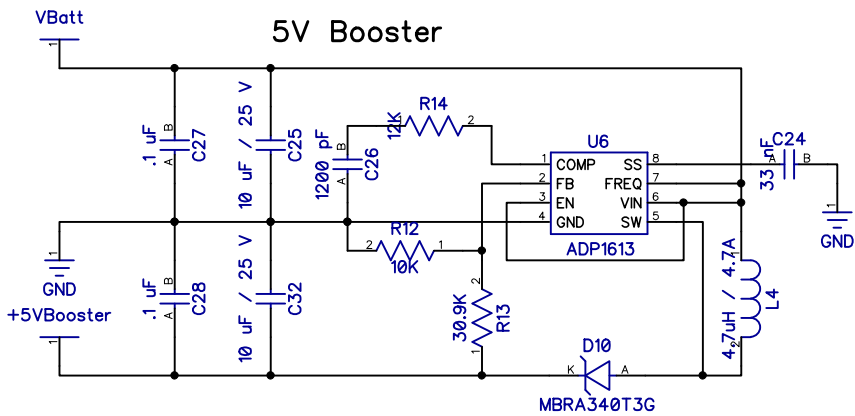FDW2508PB

R16
10K

U7.1
FDW2508PB

VBatt

GND

L6
1 uH / 2.1 A

GND_Motors

GND

+VUSB

D0-D1 have internal pullup

GND

R7
510

S1

R6
1.1K

GND

5V Power Selector

U4

STAT
D0
D1
I.LIM

IN1
OUT
IN2
GND

+VUSB

+5Vbooster

+5V

C14
.1 uF

C15
.1 uF

R9
1K1

Green
D7

C29
100 uF / 25 V

GND

L5
47 nH / 300 mA

+5VCPU

C30
22 uF / 25 V

GND

3.3V Regulator

+3.3V

+5V

J16

C18
22 uF / 25 V

U5

Vout   Vin
GND   GND
GND   GND
NC   INHINBIT

KF33B

C16
.1 uF

C17
10 uF / 10 V

GND

GND
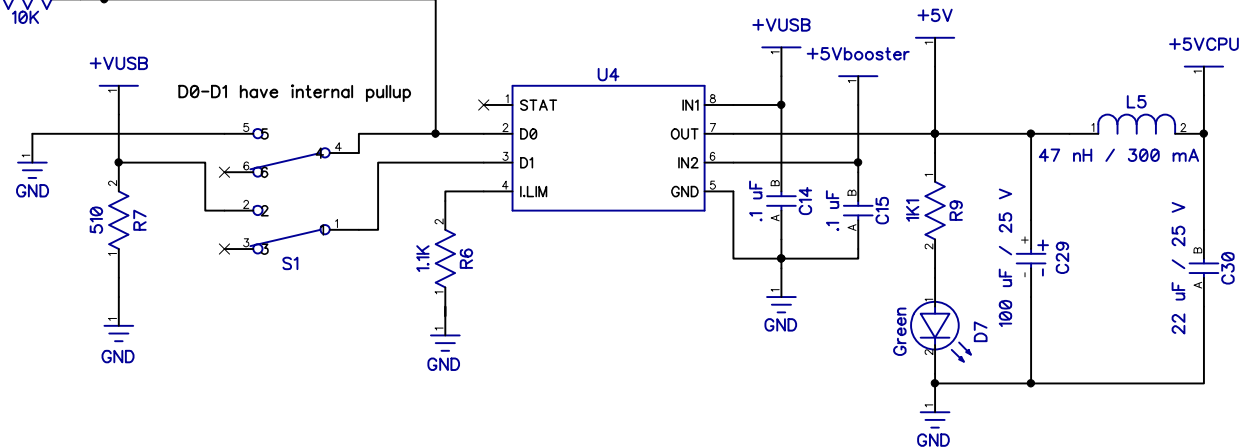
J16: No Soldering

5V Booster

VBatt

C27
.1 uF

C25
10 uF / 25 V

C26
1200 pF

R14
12K

R12
10K

R13
30.9K

U6

COMP   SS
FB   FREQ
EN   VIN
GND   SW

ADP1613

C24
33 nF

GND

L4
4.7uH / 4.7A

D10
MBRA340T3G

GND

+5VBooster

C28
.1 uF

C32
10 uF / 25 V

12V booster

VBatt

C22
.1 uF

C20
10 uF / 25 V

C21
1000 pF

R11
12K

U2

COMP   SS
FB   FREQ
EN   VIN
GND   SW

ADP1613

C4
33 nF

GND_Motors

GND_Motors

Blue
D12

R19
2K7

C23
.1 uF

C31
10 uF / 25 V

R8
10K

R10
86.6K

R15
68K

J2
6 / 12 V

D9
MBRA340T3G

L3
10uH / 4.7A

+Vmot