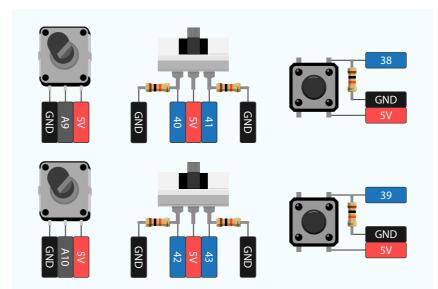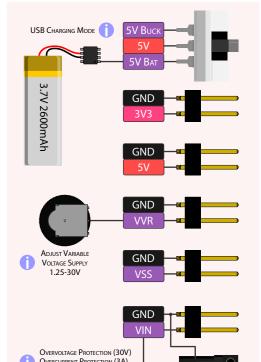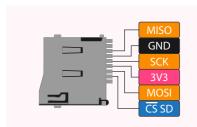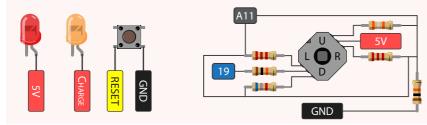# THE DEFINITIVE evive PINOUT DIAGRAM

1.8" TFT
SPI Interface
ST7735R

GND
LEDK
LEDA · 3V3
GND
RST LCD
D/C̄ LCD
MOSI
SCK

CS LCD
GND

MISO
GND
SCK
3V3
MOSI
CS SD

5V
GND

Test Point

3V3
RX3 3V3
TX3 3V3

XBee

GND

HC-05
Bluetooth

TX3 3V3
RX3 3V3
GND
3V3

RX3 3V3
TX3 3V3
3V3
GND

3V3

WiFi
MODEL ESP-12E

5V
Charge
RESET
GND

A11

U
L O R
D

5V

19

GND

46
GND

GND
53 PB0   GND   53   PB1 52   SCK
51 PB2   51   50   PB3 50   MISO
49 PL0   49   48   PL1 48   CS̄ TFT
47 PL2   47   46   PL3 46   Buzzer
45 PL4   45   44   PL5 44   Motor1 En
43 PL6   43   42   PL7 42   SlideSw2 Dir1
41 PG0   41   40   PG1 40   SlideSw1 Dir1
39 PG2   39   38   PD7 38   Tactile Sw 1
37 PC0   37   36   PC1 36   IO3V3
35 PC2   35   34   PC3 34   CS̄ SD
33 PC4   33   32   PC5 32   DReady
31 PC6   31   30   PC7 30   Motor2 Dir1
29 PA7   29   28   PA6 28   Motor1 Dir1
27 PA5   27   26   PA4 26
25 PA3   25   24   PA2 24
23 PA1   23   22   PA0 22
5V   5V   5V

MOSI
D/C̄ TFT
RST TFT
Motor2 En
SlideSw2 Dir2
SlideSw1 Dir2
Tactile Sw 2
IO3V3
CS̄ ADC
Dir Level Shifter
Motor2 Dir2
Motor1 Dir2

Nav Key Dir · POT 2 · Vbat Sense · VVR Sense · VIN Sense
PK7 PK6 PK5 PK4 PK3 PK2 PK1 PK0   PF7 PF6 PF5 PF4 PF3 PF2 PF1 PF0

GND GND 5V 3.3V RESET IOREF

ADC IN POWER

Arduino MEGA 2560

RESET
GND
MOSI
5V
MISO
SCK

COMMUNICATION
SCL 21 SDA 20 RX3 19 TX1 18 RX2 17 TX2 16 RX3 15 TX3 14   RX0 0 ▼ TX0 1 ▲

DIGITAL OR PWM
2 3 4 5 6 7 8 9 10 11 12 13 GND AREF

MADE IN ITALY

PD0 PD1 PD2 PD3 PH0 PH1 PJ0 PJ1   PF0 PE4 PE5 PG5 PE3 PH3 PH4   PH5 PH6 PB4 PB5 PB6 PB7 AREF PD1 PD0

Nav Key Press

LEGEND
- GND
- VIN/VSS/VVR
- 5V
- 3V3
- Control
- Digital Pin
- Analog Pin
- Port Pin
- Communication
- Component
- (i) Information
- ⚠ Attention

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38
GND
5V

39
GND
5V

A9 · GND 5V
GND 40 41 GND
GND A10 5V
GND 42 43 GND

USB Charging Mode (i)
5V Buck
5V
5V Bat

3.7V 2600mAh

GND
3V3

GND
5V

(i) Adjust Variable Voltage Supply 1.25-30V

GND
VVR

GND
VSS

GND
VIN

(i) Overvoltage Protection (30V)
Overcurrent Protection (3A)
Reverse Polarity Protection

Set Input Voltage for Motor Driver IC to VVR or VSS using Jumper JP1 (i)

VVR   JP1   VSS

29   28   44

SN754410

45   30   31

Max 1A Per Channel ⚠
Thermal Shutdown (i)

Motors

MPR121
1   11
2   12

(i) Capacitive Touch Sensor

GND VVR 45 44
Servos

GND VVR 45 30 31 44 28 29
Motor Drivers

36 37 33
74LVC245

36 3V3   37 3V3
IO 3V3

Vbat SCL SDA
PCF8563

SCL SDA
MCP4725

GND
DAC

ProbeI/V can be set for Voltage Sensing (±5V) or Current Sensing (±3A) using Jumper JP2 (i)

I Mode   JP2   V Mode   ADE7912

DAQ

Probe I/V   COM   Probe V