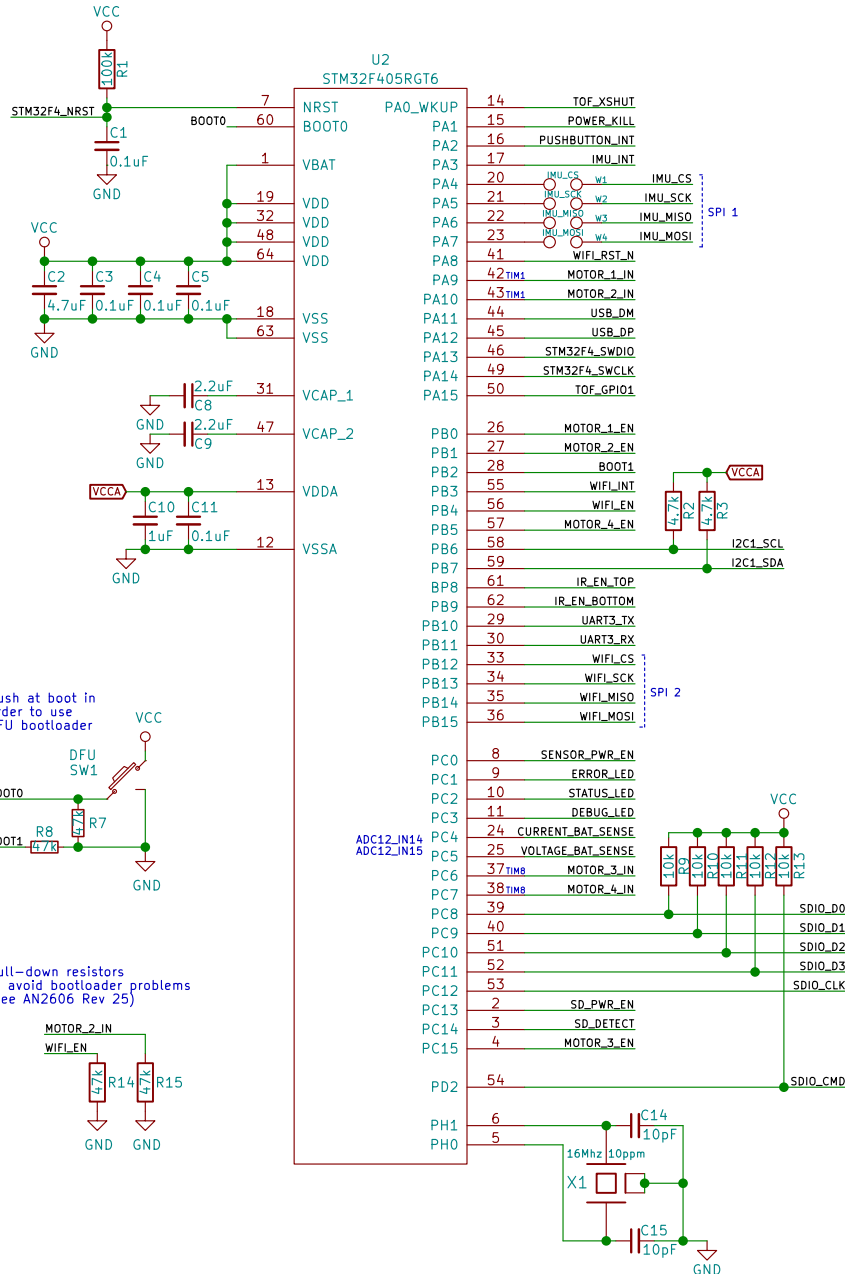
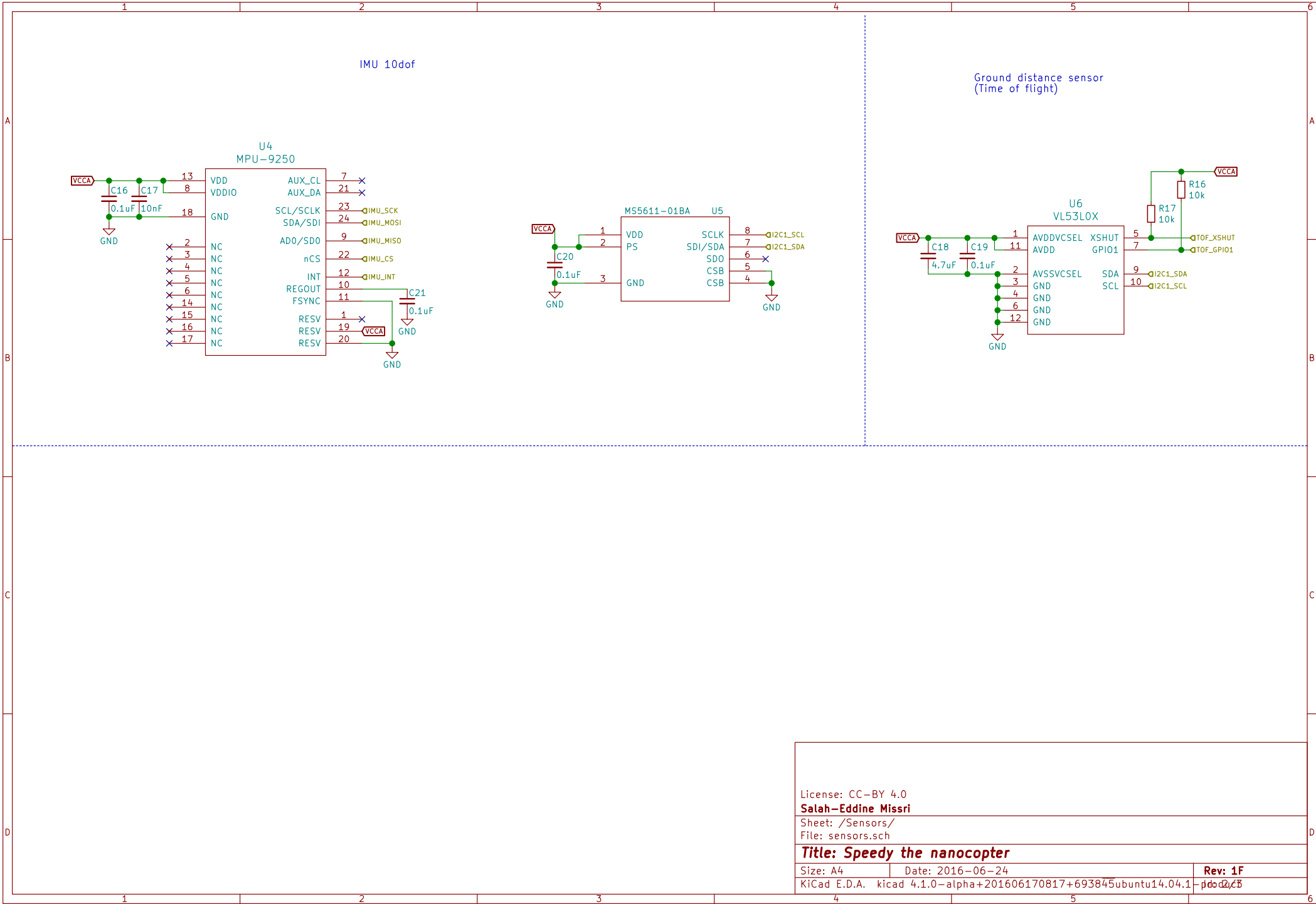


Microcontroller  
STM32F405/7  
LQFP64





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**Salah-Eddine Missri**

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The schematic diagram illustrates the electrical connections for the INA213-SC70 module. A single-cell LiPo power supply (PWR) is connected to the module's CONN5 header. The positive terminal (+) of the power supply is connected to pin 1 of CONN5, which is also connected to the VCC pin (pin 3) of the INA213-SC70 module. A 3A fuse (F2) is placed in series between the power supply and the module. The negative terminal (-) of the power supply is connected to pin 2 of CONN5, which is also connected to the GND pin (pin 2) of the module. The module's GND pin (pin 2) is connected to the common ground (GND) of the system. The module's REF pin (pin 1) is connected to the common ground (GND). The module's VCC pin (pin 3) is connected to the +BATT terminal. A 10mΩ resistor (R18) is connected between the +BATT terminal and the VCC pin. A 0.1μF capacitor (C24) is connected between the VCC pin and the GND pin. The module's OUT pin (pin 6) is connected to the CURRENT\_SENSE terminal. The module is labeled U8.

Single cell LiPo power supply

CONN5

1 2

F2 Fuse 3A

GND

+BATT

Full range 3A / 30mV at least a 90mW resistor

10mΩ R18

VCC

C24 0.1μF

INA213-SC70

3 4 5

2

GND

1

REF

OUT

6

CURRENT\_SENSE

50V/V gain with INA213 Full range 3A / 1.5V

U8

The top diagram shows the connection for U7. The power supply is connected to VCC (pin 1), +BATT (pin 12), and GND (pins 5, 6, 11). Decoupling capacitors C22 (0.1uF) and C23 (10uF) are connected to VCC and GND. The motor connections are MOTOR\_1 (pin 10), MOTOR\_2 (pin 7), and MOTOR\_2 (pin 8). The motor connections are MOTOR\_1 (pin 10), MOTOR\_2 (pin 7), and MOTOR\_2 (pin 8).

The bottom diagram shows the connection for U9. The power supply is connected to VCC (pin 1), +BATT (pin 12), and GND (pins 5, 6, 11). Decoupling capacitors C26 (0.1uF) and C27 (10uF) are connected to VCC and GND. The motor connections are MOTOR\_3 (pin 10), MOTOR\_4 (pin 7), and MOTOR\_4 (pin 8). The motor connections are MOTOR\_3 (pin 10), MOTOR\_4 (pin 7), and MOTOR\_4 (pin 8).

Allows to recharge  
a 1 cell LiPo at 500mA  
Ireg = 1000V/Iprog

$V_{OUT} = 1.20V \times (1 + R2/R1) + 1.7\mu A \times R2$  @25°C

$V_{OUT} = 1.20V \times (1 + R2/R1) + 1.7uA \times R2$  @25°C

+BATT

C39 100uF

C40 10uF

SENSOR\_END

LT1965 U14

IN IN SHDN SENSE ADJ

OUT OUT

GND GND GND

2 1 3

3.3k R33

2.0k R36

C38 10uF

VCCA

GND

— ပုံစံသေးငယ်