To power my brushless motors and my ESC (Electric Speed Controller), I use a Lipo battery which is connected to a PDB (Power Distribution Board). I did not find a way to get the voltage value on my Arduino. How can I get the voltage value of my Lipo battery (in a float value for example) on my Arduino?

Sensored brushless DC motor control with Arduino code: In this project I implemented a simple software PWM code because I had needed an active PWM signal on pin 2, 4 or 6 (only one is active at a time), for that I used Timer2 module and I configured it with a prescaler of 1/8 which means the PWM signal frequency is about 7.8KHz (equal to 7800Hz).

data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAKAAAAB4CAYAAAB1ovlvAAACs0lEQVR42P4yPggAALAwTcZ5wu5QEAZ2AeA92B8Pl8Bi8flCKF7G8AAkG4gAAOA1dgr2XlfAWEaA4p65Lb456o90DpAAlf8lTgAAAAAElFTkSuQmCC

So there are 2 difficulties; one is the tail esc signal (probably Dshot protocol), and another is the main motor feedback cable from the esc to the flight controller. In particular, if one use a lower KV main motor, then the main motor speed discontinuously increase at the throttle stick 5~10% (if one cut this feedback cable, then the gyro does not work).

BLDC Motor Control With Arduino, Salvaged HD Motor, and Hall Sensors: There is a lot of interest these days among hobbyists in controlling brushless DC (BLDC) motors, which have improved performance and better energy efficiency over traditional DC motors, but are more difficult to use. Many off-the-shelf products exist...

VESC - Open Source ESC. This the Hardware for my open source custom ESC. Schematic top level. Layout -made with KiCad!-3D views. Update: The BOM is no longer available on google docs, it is included in the design folder as an .ods file.

Take your brushless motor and add 5mm bullet connectors to its wiring. This is to enable the motor to readily connect with the other parts of the electrical system.

The STM32L562E-DK Discovery kit makes use of the STM32L562QEI6QU innovative ultra-low-power oriented features to enable prototyping for many wearable or sensor applications, with state-of-the-art energy efficiency, secure boot, and TrustZone-based software isolation.

A 40xx brushless motor and an absolute position sensor AS5600 with a I2C interface (1Mbps)
A 50xx brushless motor and an absolute position sensor AS5048a with a PWM interface (1Khz) Here is the pinout of the ESC, with both I2C and PWM interface for encoders : There are so many things to add and to improve. Bye, Patrick.

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