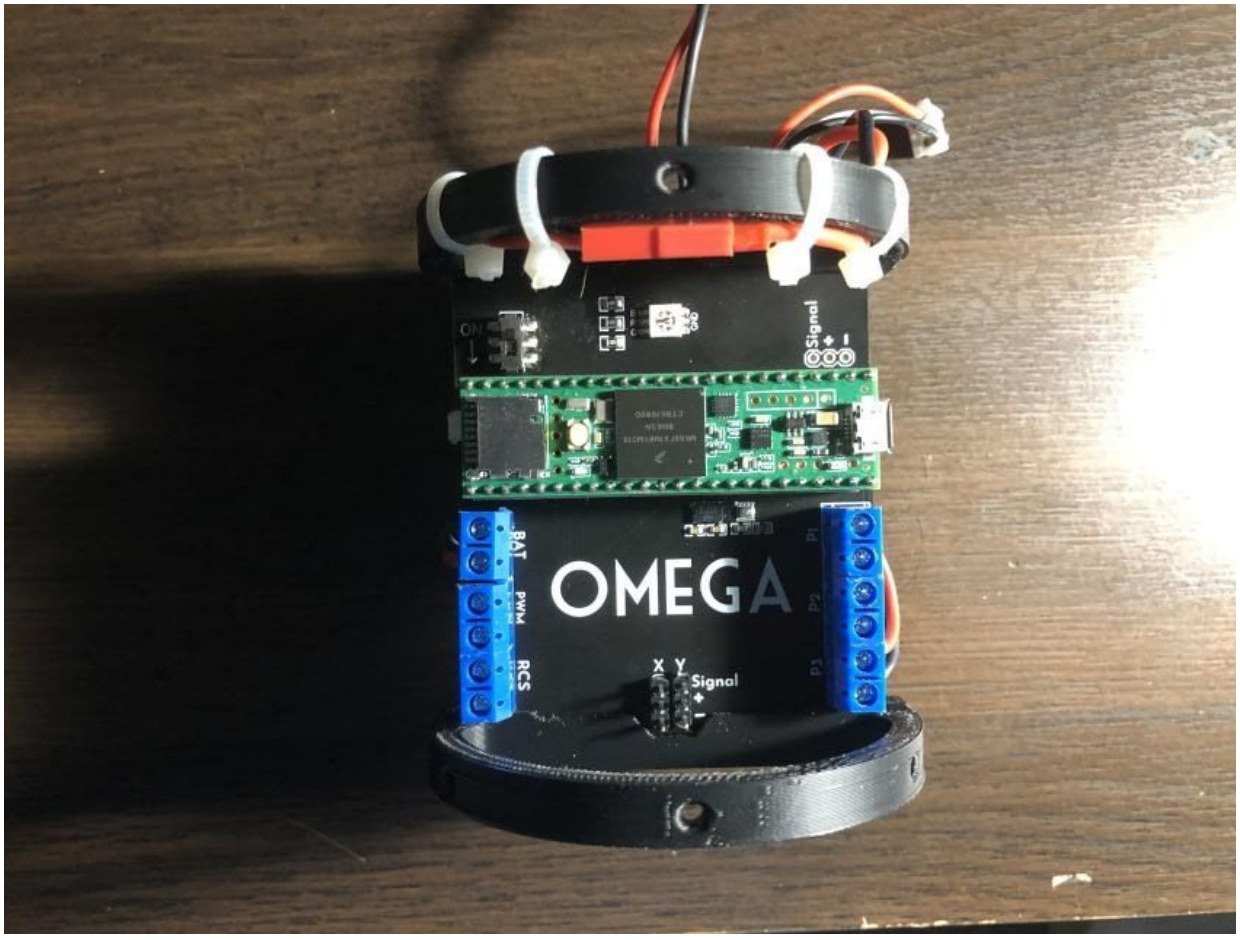
Omega Avionics User Manual



How to assemble the flight computer:

- Take the JST Connector from the parts bag and screw it into the blue Terminal Block labeled P1.
- Plug in your 2S lipo battery into the BAT terminal block.
  * Make sure to check the labels on the back of the pcb to make sure the battery terminals are plugged in the right way!

- Then wrap the JST connector wire around the top mounting bracket and use the four zip-ties included to secure it to the bracket.

You have finished assembly of the Flight Computer!

Software:

The code on the flight computer is set up to have the abort system activated which will deploy the parachutes if the rocket tilts past 45 degrees and the burnout system which will deploy the chutes if the rocket detects it drifts below the set altitude. Also the PID gains are set up for a 500g rocket with a E12 rocket motor.

If you ever need to change these or any other setting you will have to download the Arduino IDE and TeensyDuino to be able to communicate with your flight computer. Once you are ready to flash the new code contact me: deltaspacesystems@gmail.com. Based on what you want I will send you the updated code with your specific features and settings!

DataLogging:

The code is set up to log Orientation X, Orientation Y, Roll, System State, Timestep, Z Axis Acceleration, and Altitude! Again if you want to add another object to datalog please contact me! On line 101 change the number to increase the amount the flight computer logs to the SD card every second. I recommend using between 100(10hz data logging) and 250(4hz data logging) in flight. Please use at least a 4gb SD Card for the flight computer. Before every flight make sure to clear the previous data from the sd card and re-insert it into the flight computer.