A.N.T. Labs

Final Presentation

WEEK 10: NOV.28TH, 16

LAB TIME: FRI 1PM

Team Members

- Jorge Rodriguez
- Kyle Bautista
- Lyuyang Hu
- Pablo Ramirez
- Samuel Ayala

Introduction

ANT Labs

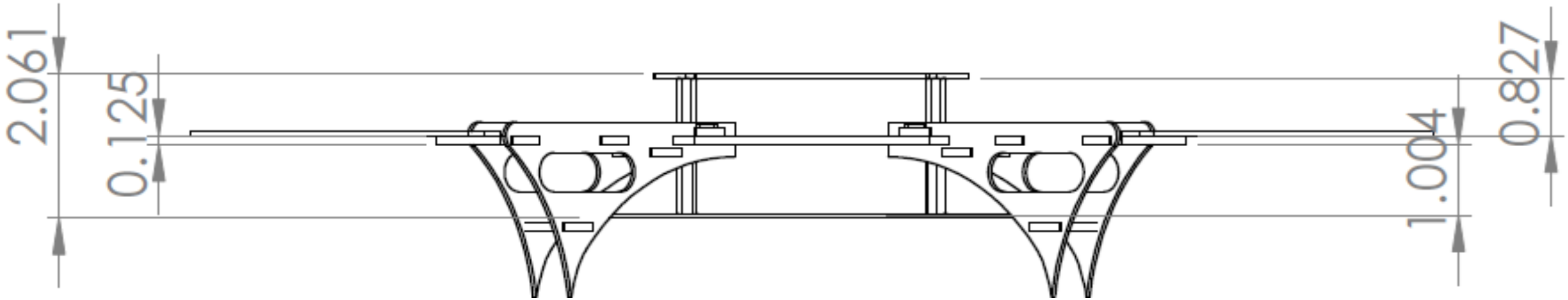
Objective: Ten weeks ago, we were all thrown into this project - some of us with little to no hands on experience with SolidWorks or tools used in labs. Our mission was to manifest to the best of our imagination the brain child that we had in mind when we thought of a quadcopter. In less than ten weeks of school, ANT Labs managed to come together and work with the dynamics of flight (such as Bernoulli's Principle) and put together a quadcopter. Here is the final product of our combined ideas.

Design: Calculation and Material

Materials:
- Foam
  - landing gear base
- Polycarbonate
  - landing gear
  - battery plate
  - propeller arms
  - main body
- Cobra 2204 2300kv
- 3000mah Battery

Calulations:
- 14inch between motors
- Zippy Battery-224g
- Flight Controller-25.8g

Design: Structure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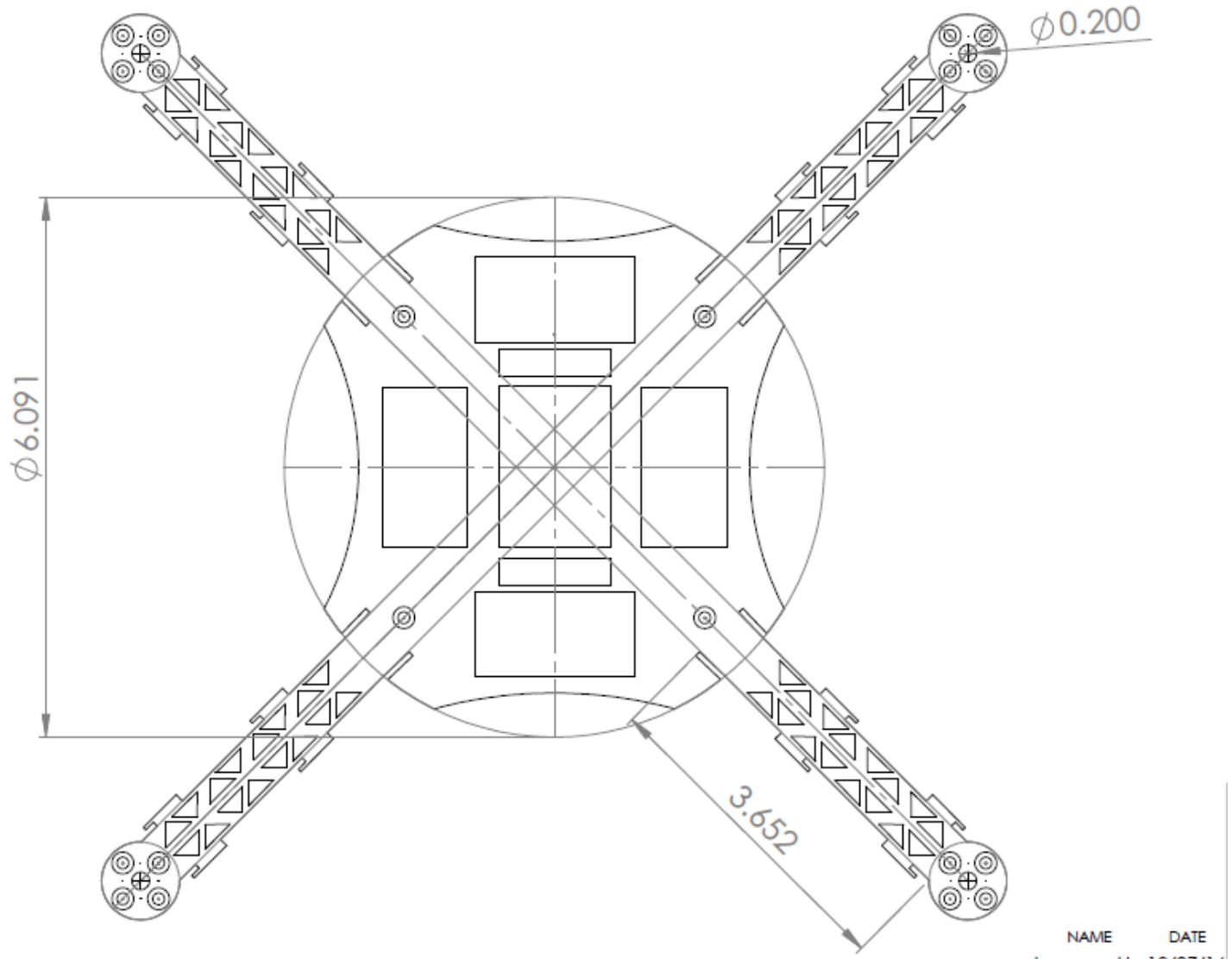
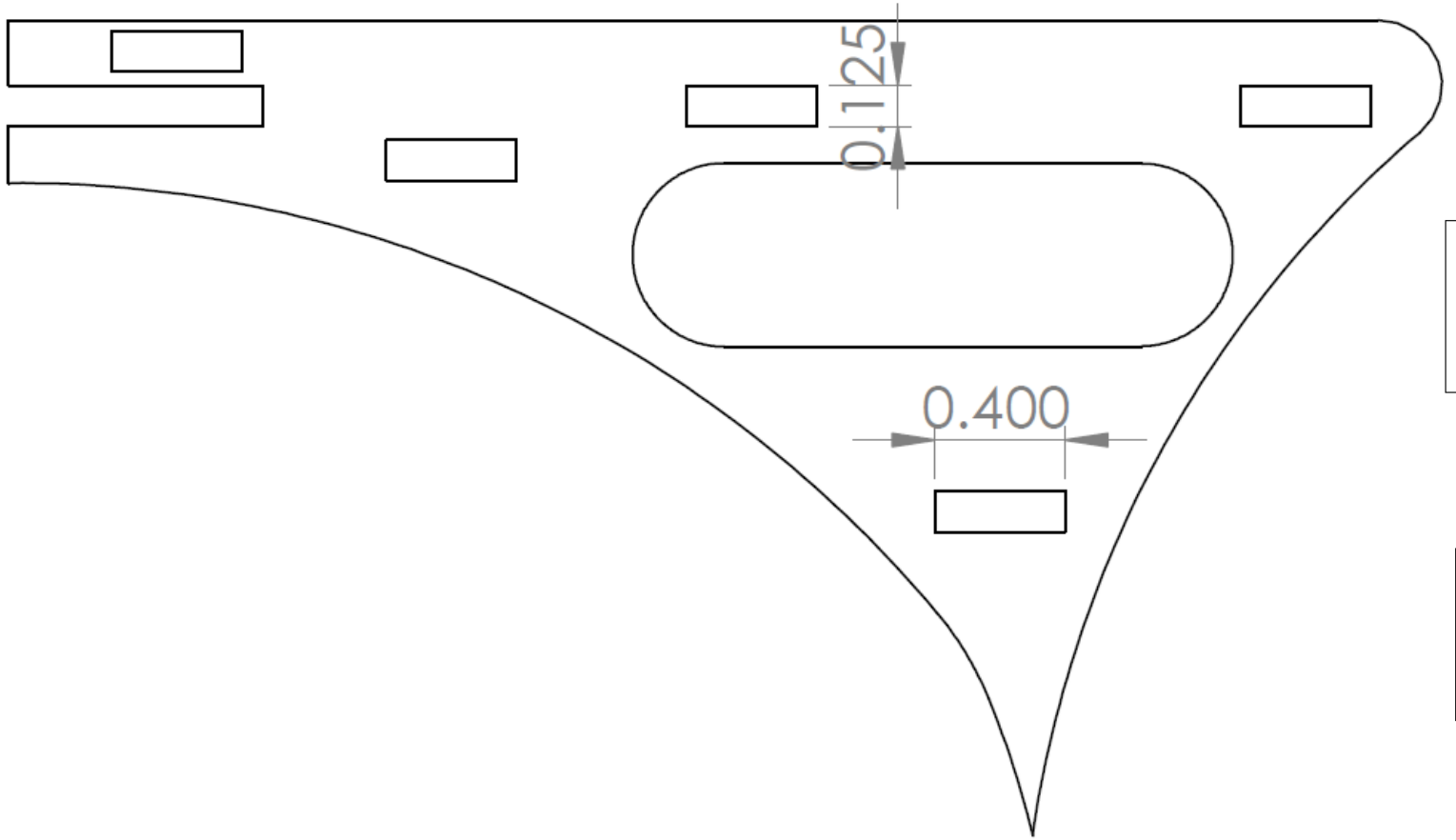
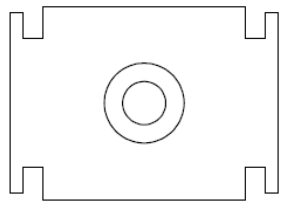
0.125
1.004
0.827

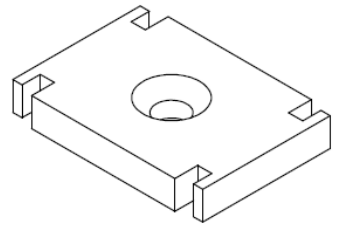
Middle Layer



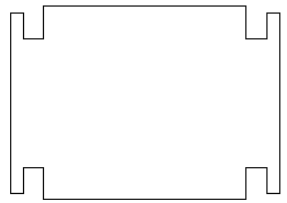
Landing Gear

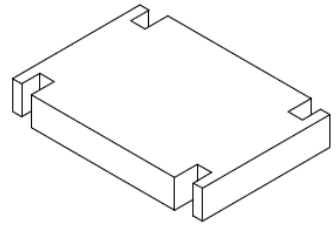




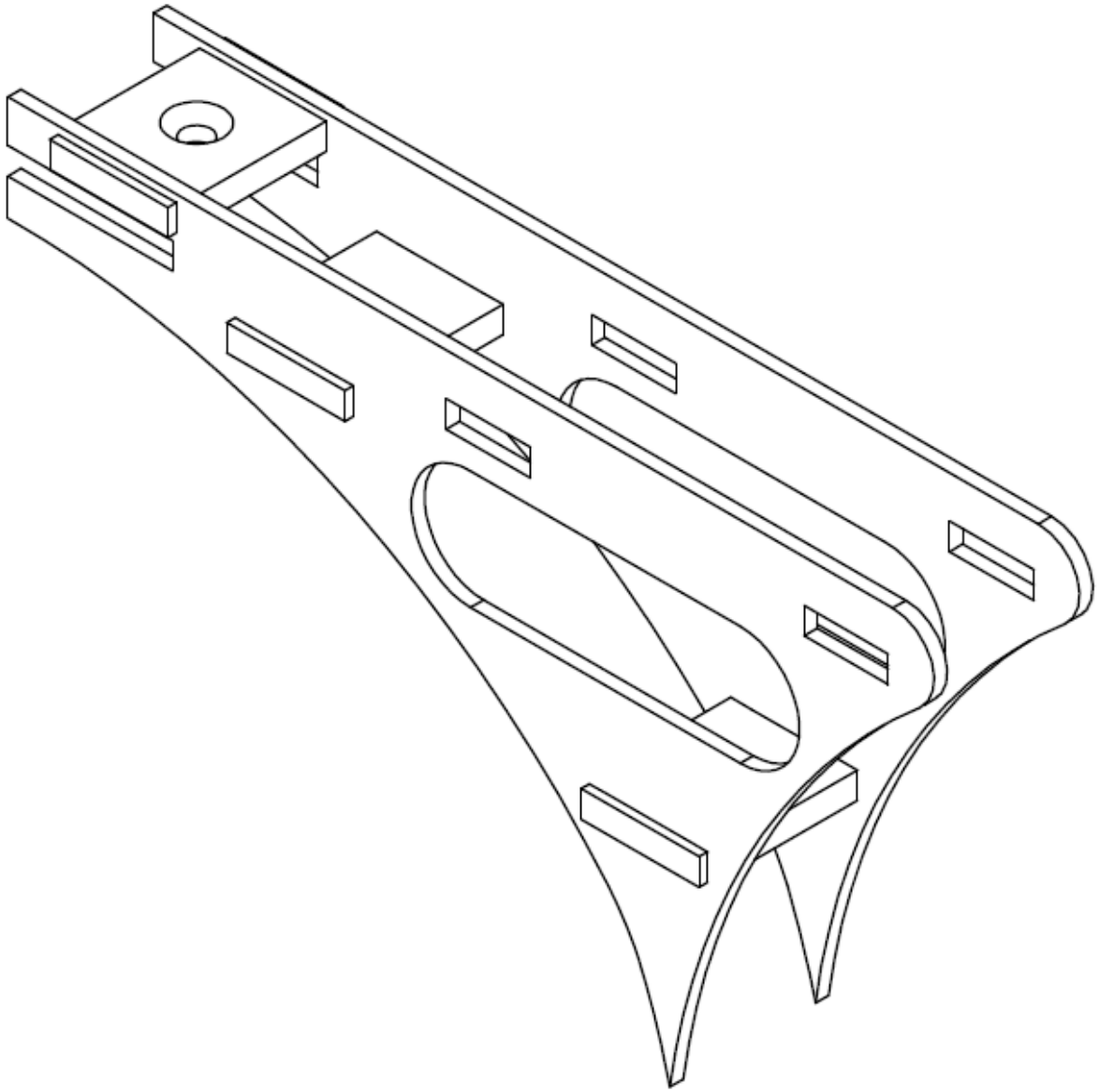


Connectors With Screws
FOUR Pieces

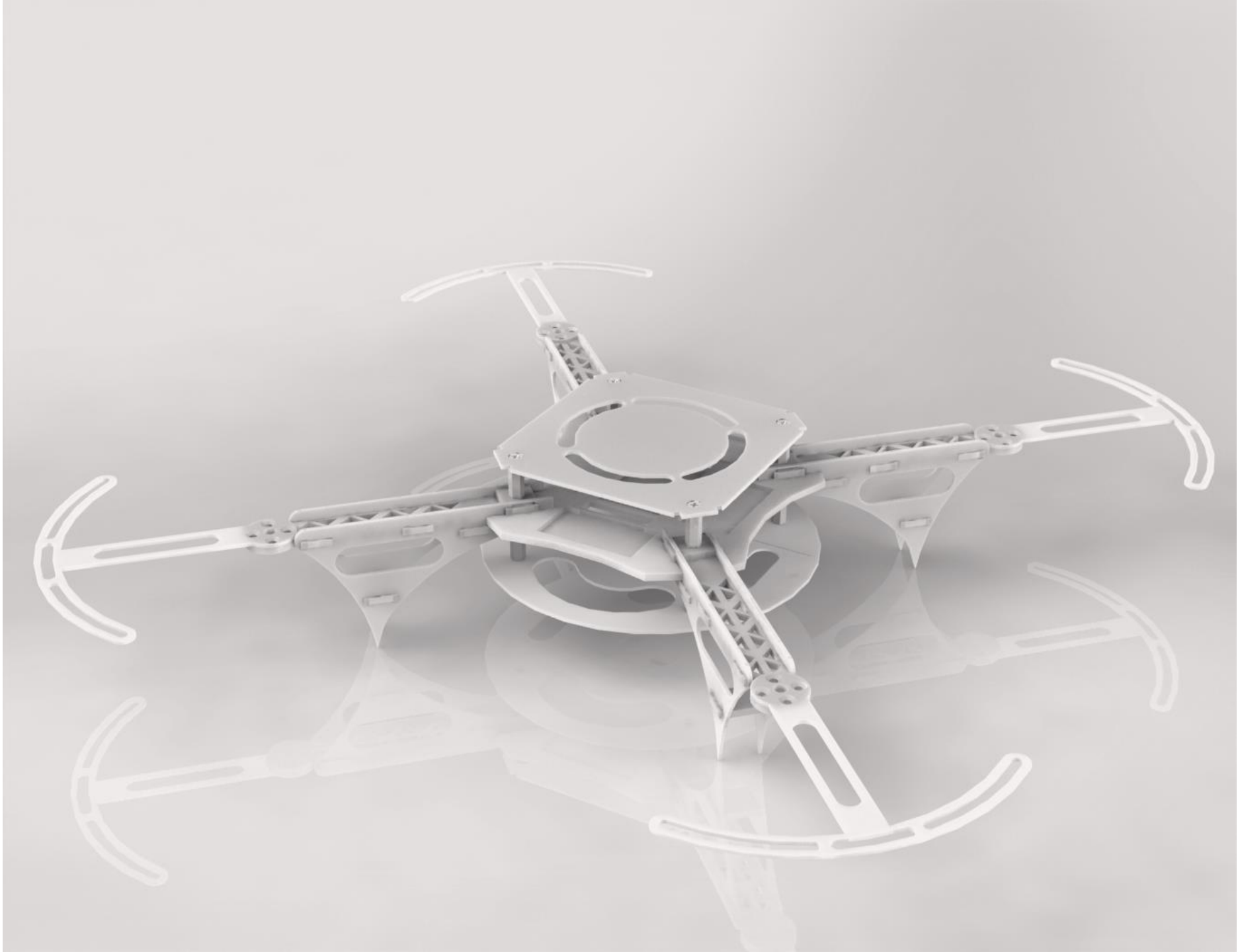




Assembled Landing Gear



Assemble Animation



Final Parts List and Cost

Motor: Cobra 2300kv [4 Pieces] + Motor Mount *4

Propeller: 6 inch [2 Pairs]

Flight Controller: NAZA-M Lite ESC *4

Transmitter/ Receiver

Battery

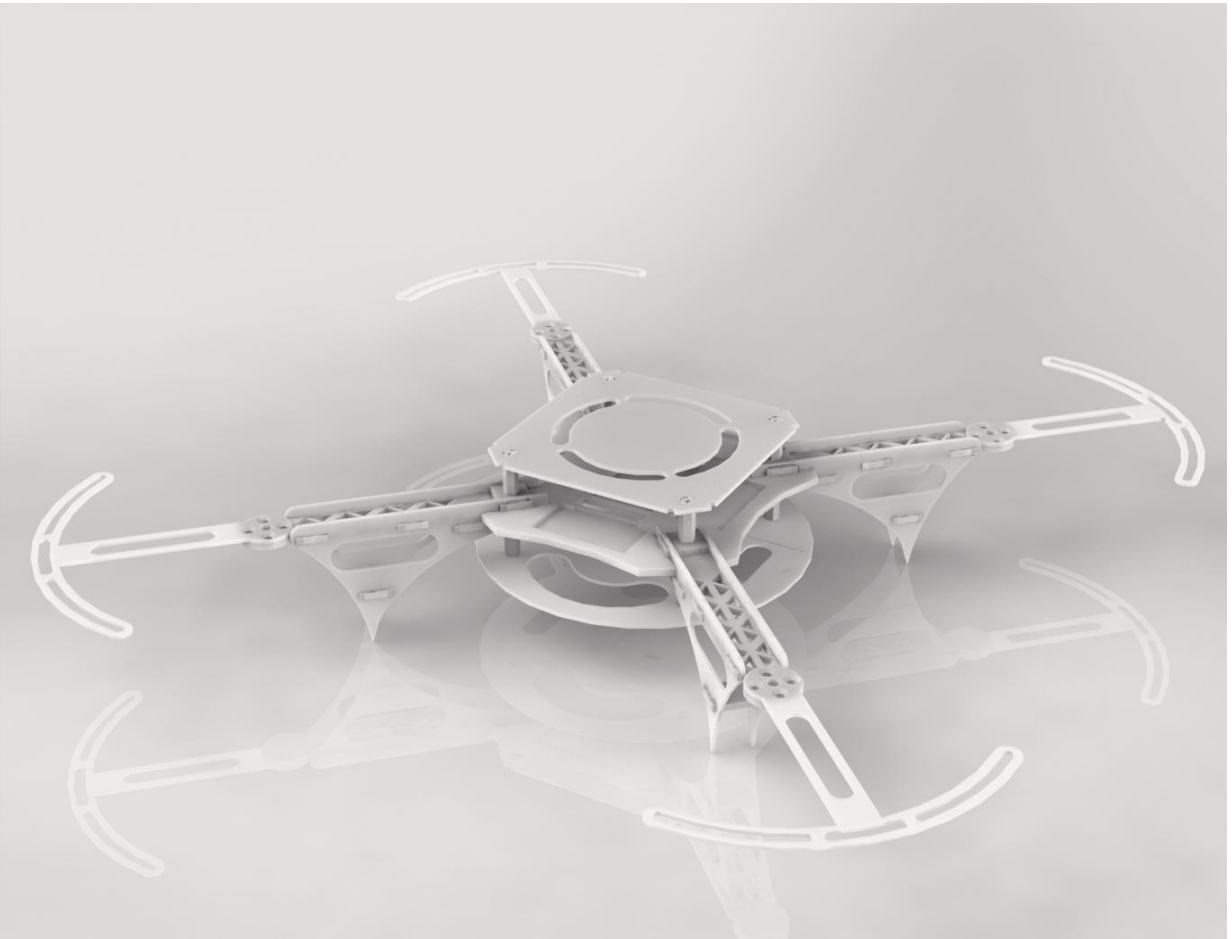
⅛ Polycarbonate *2 Sheets

1/16 Polycarbonate *2 Sheets

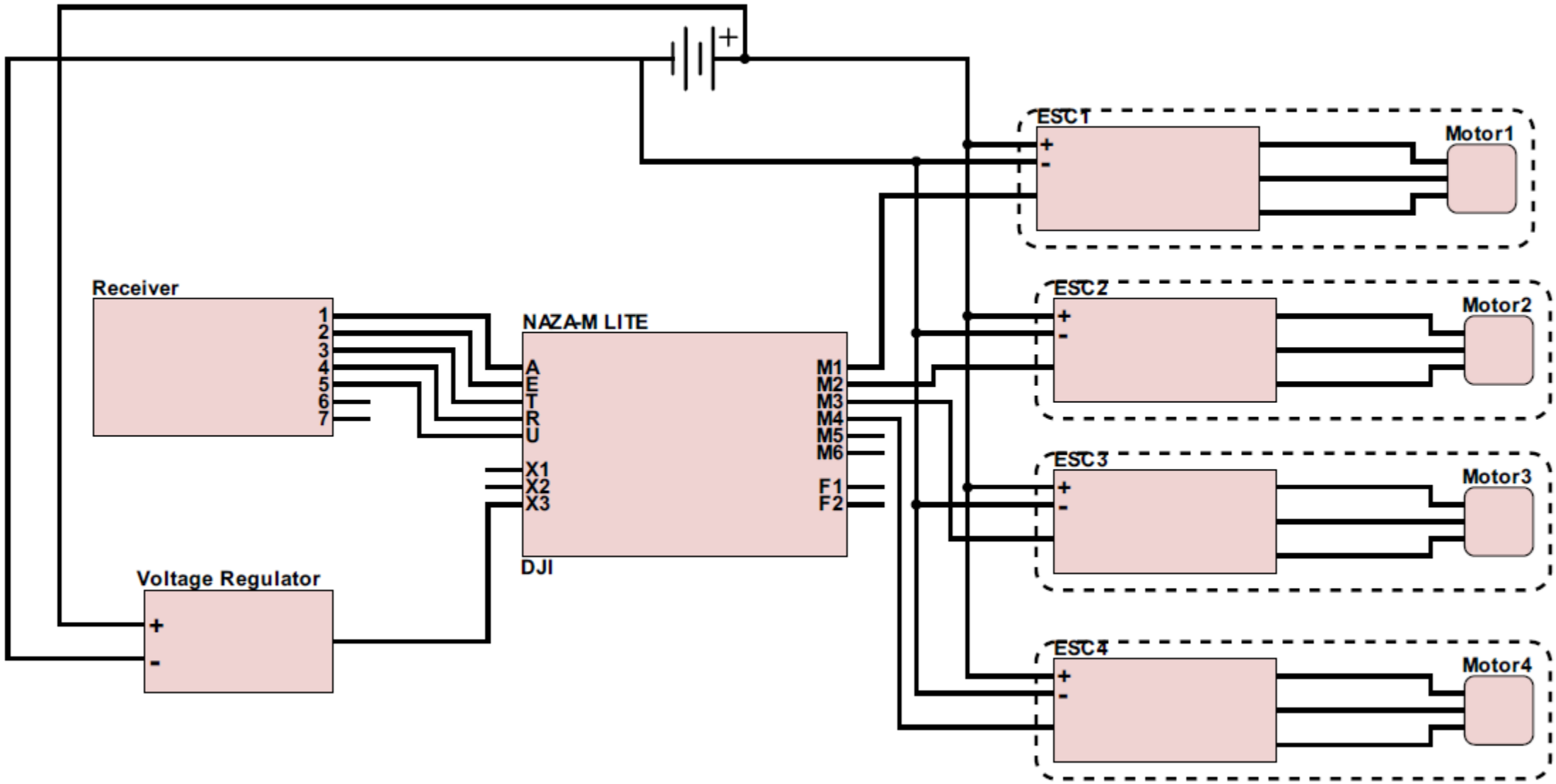
Foam

$315.92

Fabrication and Problem Shooting



Electrical Diagram

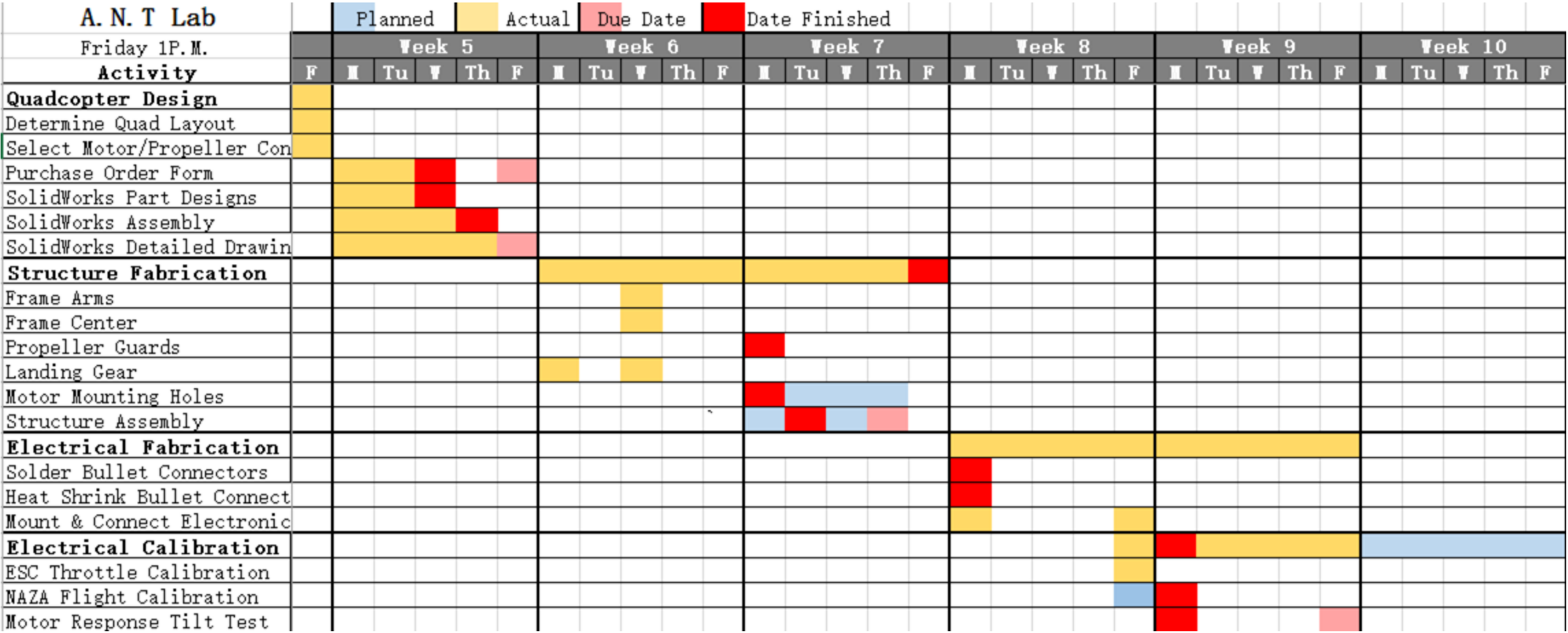


Testing and Performance Evaluation

Test Flight #1

A.N.T Lab 11/21

Project Progress Overview



NT Lab

11.28.2016