**Quad copter:**

# Frame:

Esc and motors:

<http://www.hobbyking.com/hobbyking/store/__6455__Hobbyking_SS_Series_8_10A_ESC.html>

<http://www.hobbyking.com/hobbyking/store/__5429__AX_2308N_1100kv_brushless_Micro_Motor.html>

We can pick specific ones later.

We need props too. And extras since these break easily.

We need a frame. We can make one from stuff from a hardware store or buy one such as this:

<http://www.hobbyking.com/hobbyking/store/__56213__HobbyKing_Super_H_600_QuadCopter_KIT_.html>

Add in miscellaneous hardware, zipties, wire, a lipo or three and a charger, this puts us at about $250-300.

# Controls:

http://www.amazon.com/Ardupilot-Flight-Control-Board/dp/B00AHY1JO0

We will use the beaglebone and an ardupilot. <http://ardupilot.com/> We could add an IMU such as the one from the glove page if we want to make our own controller.

These are about 50-100 bucks though. This will be the hardest part. We could also just create our own controller on the beaglebone. We would need three PID controllers and a lot of tuning. I **do not** like this idea.

There are other controllers. Cheaper ones. I have not used one ever so I do not know what we should use.

# Tasks:

How do we want to fly it? RC control, computer commands? Will we have autonomous modes? Do we want a manipulator? I think flying is fine, we do not need to add any other tasks.

Overall This seems like it would be about $500.