QuadDuino

Andrew Moore
Quad copter using an Arduino board for flight stabilization and object avoidance
Uses the AeroQuad open project guidelines
Stabilization software packaged with AeroQuad kit
Object avoidance will be personal code using sonar sensors from the AeroQuad store
Potential Appearance
Hardware

- Aluminum Frame
- Arduino Uno
- AeroQuad v1.9 shield
- Gyroscope
- Accelerometer
- x5 Sonar distance sensors
- 4x motors and propellers
- 4x Electronic Speed Controllers
- HobbyKing Spektrum Rx/Tx units
Arduino with AeroQuad v1.9 Shield
Software

- Uses Arduino 1.0 open source code
  - C-like
  - uses a setup() and loop() method to form basic outline
  - Uses serial input and output

- Stabilization software is AeroQuad 1.9
Special Considerations

- Motor distance from the center
- Total weight of the device
- Low battery behavior
Demonstrations

- QuadDuino Update 1
  - http://www.youtube.com/watch?v=xYYJC50uZvY&feature=youtube_gdata_player

- QuadDuino Update 2
References

- www.aeroquad.com
- www.arduino.cc