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# FALCON - QUADROTOR FLIGHT CONTROL SYSTEM

# OUR PROJECT

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- ✖ IARC Competition
  - + Autonomously navigate a building
  - + Find and retrieve USB flash drive
- ✖ We are making the flight controller for this vehicle.
  - + Stability control
  - + Dead reckoning

# VIDEO

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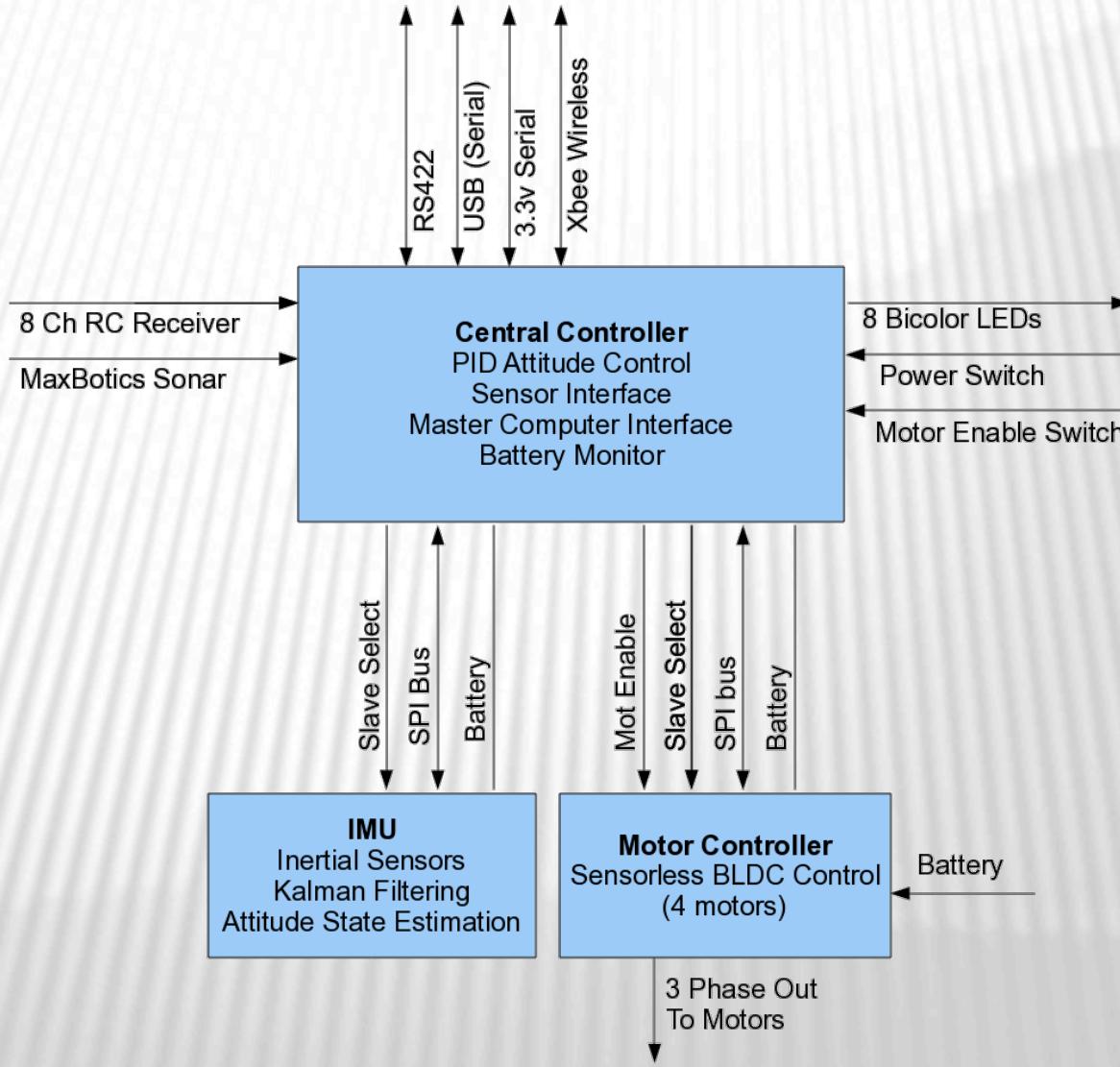
- ✖ [http://www.youtube.com/watch?  
v=ulaZ91LmbfA](http://www.youtube.com/watch?v=ulaZ91LmbfA)

# MOTIVATION FOR A NEW DESIGN

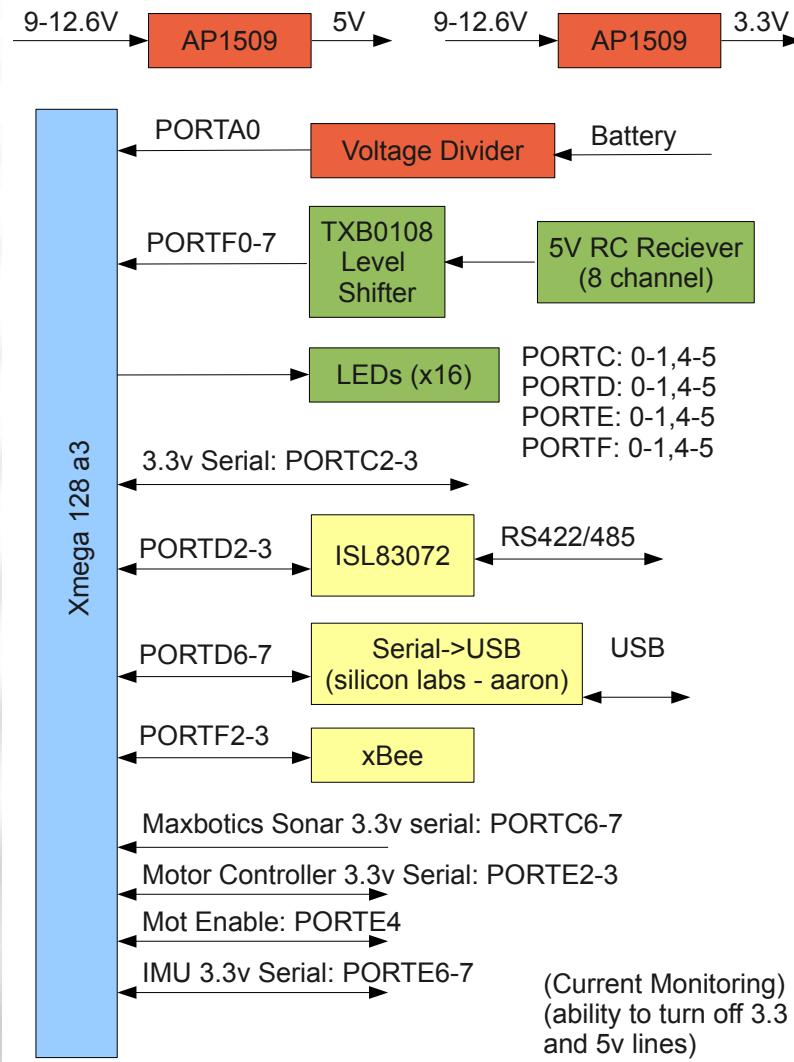
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- ✖ Create an integrated solution
- ✖ Increase robustness
- ✖ Increase performance
- ✖ Reduce cost

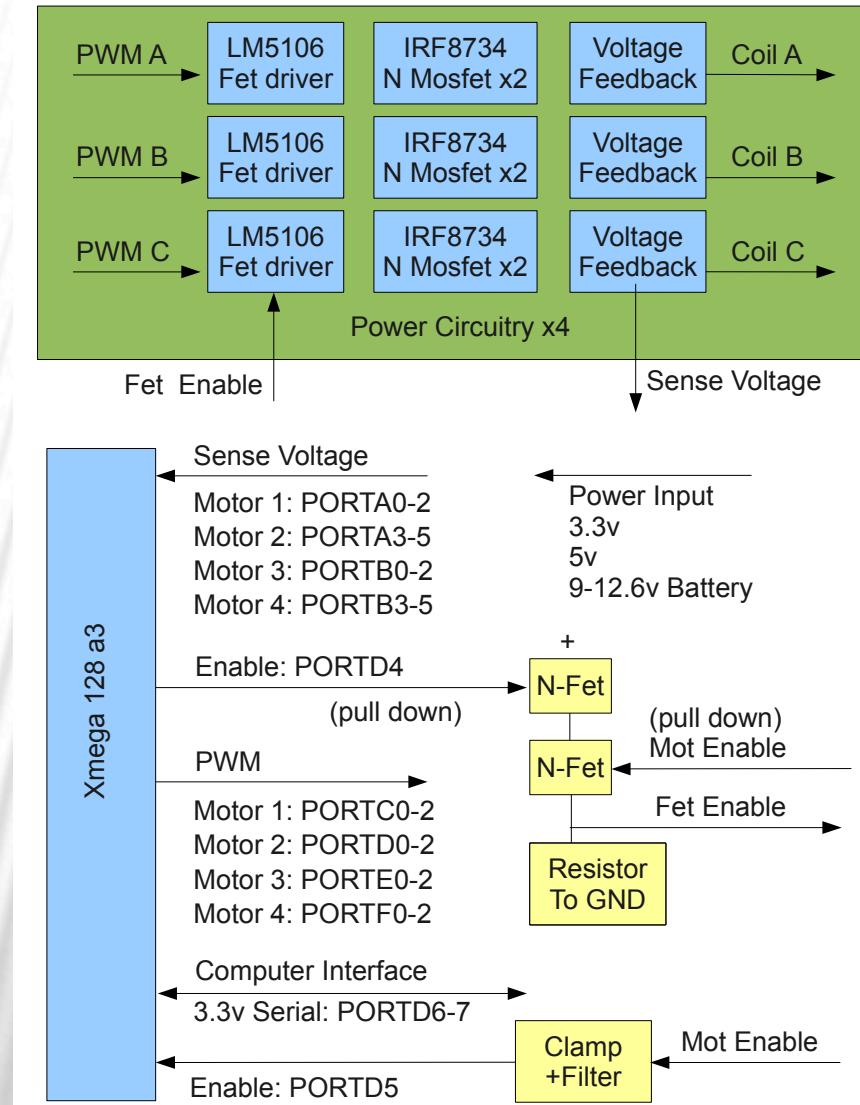
# HIGH LEVEL BLOCK DIAGRAM



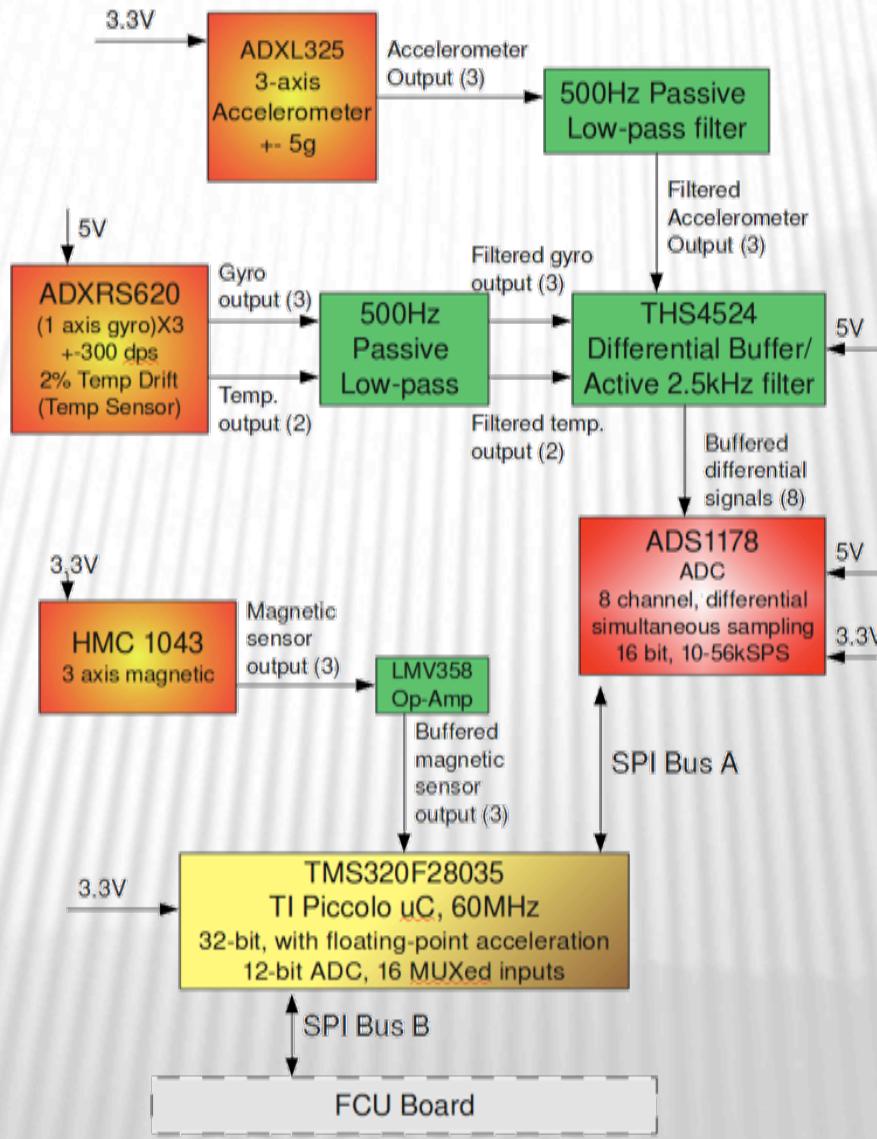
# FCU



# MCU

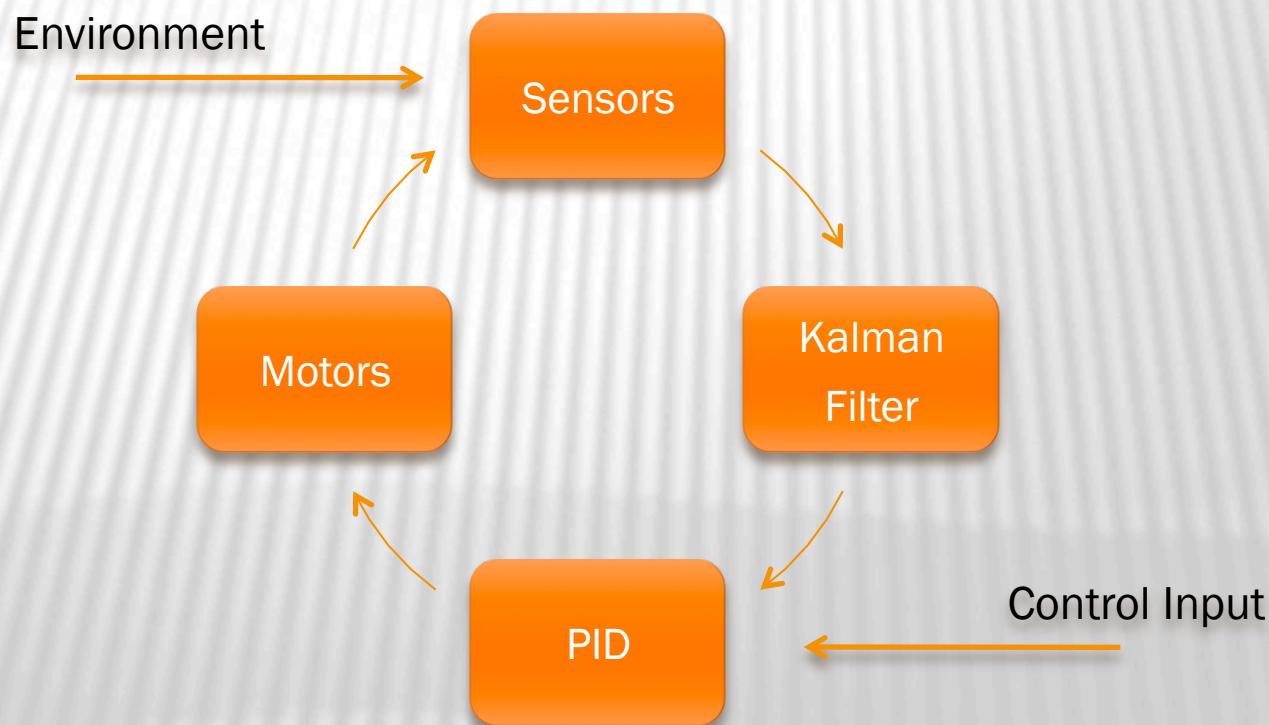


# IMU



# CONTROL SYSTEMS

- ✖ Kalman Filtering
- ✖ PID
- ✖ Sensorless BLDC Motor Controllers



# SPONSORS

**Revolution Robotics**



Aaron Moore

# ANY QUESTIONS?

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