

Basic Drones Dynamics

DASL 106

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Contents : Week 4

- Pros and Cons of Quadcopter
- Pros and Cons of Hexacopter
- Pros and Cons of Octocopter
- Experiment study

Quadcopter



- Pros

- Relatively cheap to manufacture
- Powerful enough to add accessories
- Great maneuverability

- Cons

- Not as powerful as a hexacopter and octocopter.

Hexacopter



- Pros

- Higher power and speed.

- Fly higher in the air.

- Safety : Even if one of the motors dies, it hovers stable enough to safe land.

- Cons

- Priced higher than quadcopter.

- Larger size makes it difficult to fly in tight spaces

- Expensive motors.

Octocopter.



- Pros
 - Faster speed than Quad, Hexacopter.
 - Not hindered as much by wind or rain
 - Even loss of 2-3 motors, it can hover
 - Extremely powerful
- Cons
 - Less Battery life
 - Big in size.
 - Expensive compare with other copters.

Octocopter.



- Practice with Google Chrome Extension
 - Motor response.
 - Three movement :Roll, Pitch, Yaw test in hands.
 - Take an actual flight.

Homework

- Payload Calculation with Hexacopter and Octocopter and compare each other.