1.4. General UAS capabilities
```
vertical take off an landing
max airspeed 23 knots
max altitude 1000 ft AGL (can be electronically limited)
hover and stare with autonomous position hold
flight endurance up to 30 minutes
communications range up to 2.5 km LoS at >150 ft AGL
assisted tele operation or waypoint programmed flight path
```

2.1.2. Measurements
2.1.2.1. Wingspan 42 inches diameter
2.1.2.2. Fuselage Length same as above
2.1.2.3. Fuselage Diameter same as above
2.1.2.4. Fuselage Height 10 inches
2.1.3. Weight
2.1.3.1. Empty Weight 1.2 lbs (without battery and payload)
2.1.3.2. Maximum gross take-off weight: 2.2 lbs including battery and max payload
2.1.3.3. Maximum allowable landing weight: 2.2 lbs

2.2.3. Maximum Altitude: 1000 ft
2.2.4. Maximum Endurance: 30 Min

2.2.6.4. Va (maneuvering): 23 knots
2.2.6.5. Vc (cruise): 15 knots

2.2.7. Rate of Climb/Descent 2 m/s electronically limited
2.2.8. Performance Limitations
2.2.8.1. Wind
2.2.8.1.1. Headwind launch, recover, and Flight: 16 knots
2.2.8.1.2. Crosswind launch, recovery, and flight: 16 knots
2.2.8.1.3. Tailwind launch and recovery: 16 knots

2.2.8.1.4. Maximum in flight wind: 18.5 knots

2.3.2. Electric Motor: Yes
2.3.2.1. Motor Power Output: max 60 W per Motor
2.3.2.2. Current - draw range: 7 A stable hover to 16 A peak
2.3.2.3. On-Board Battery
2.3.2.3.1. Voltage: 14.8 V
2.3.2.3.2. Amp hours: 3.7 A and 4.0 A
2.3.2.4. Does the system have a separate electrical source? No
2.3.2.4.1. If not, how is UA power managed?

```
internal
```

2.3.2.4.2. What indication does the pilot/operator have of power levels?

```
Indicator in video display for remaining battery level
additional elapsed flight time is displayed
```

2.3.2.4.3. Is there reserve power or do procedures address reserve? Yes
2.4. Avionics/Navigation
2.4.1. Provide detailed information of on-board sources of position, altitude, heading, and airspeed information. This should include manufacturer, model #, and other information where appropriate

```
Absolute position
GPS (normal GPS, NO DGPS)
Latitude, longitude (MGRS Pos)
Horizontal and vertical speed
Course
Update rate:   4 Hz

Altitude Baro Altimeter
Relative Altitude:m
Resolution:0.05 m
Update rate: 10 Hz

Heading Magnetometer
Tilt Compensated Heading
Resolution:0.5 ˚
Accuracy:+/- 5 ˚ over full Tilt (+/- 25 ˚ Roll or Pitch)
Update rate:10 Hz

Rotational Speeds
3 Axis: Roll, Pitch, Yaw
Update rate:10 Hz

Accelerations
3 Axis: Drone Body Frame, X, Y, Z
Resolution:    0.15 m/s≤
Update rate:   10 Hz

Estimated Roll, Pitch angles

2 Axis: Roll, Pitch
Update rate:   10 Hz
```