

# Job Description for Electrical Design Engineer

**Job Title:** Electrical Design Engineer

**Department:** Engineering

**Reports To:** HW Lead

**FLSA Status:** Exempt

## Summary

Conduct general engineering and design of electrical/electronic systems for small unmanned aerial systems (UAS) and other small robotics.

## Essential Duties and Responsibilities

- Engineering and design of electrical systems for small aerial and ground robotic platforms and payload systems, involving a mix of digital and analog electronics
- Designs target highly constrained size, weight, and power environments requiring advanced layout techniques
- Designs frequently involve integration of advanced sensors, high-frequency digital signaling, and RF radiators in close proximity
- Participate in definition of design parameters and specifications at a component level
- Simulation-based analysis to prove design before prototyping
- MentorGraphics software for schematic design and PCB layout
- Attend and present design reviews
- Design of cable, wire harness, and other interconnects
- Generate design support material including bills of material, schematic prints, layout prints, interconnect diagrams, cable lengths, routing details, impedance reporting, etc.
- Embedded programming to support design testing
- Integration tests to verify functional operation
- Generating test fixtures and test procedures for system level test
- Assume design responsibility, using the relevant ISO quality procedures as guidelines, through all the development phases, up to and including engineering release
- Support prototype build, test, evaluation and validation
- Communicate with suppliers and customers as required
- Some travel may be required
- Use industry standards for drawings and drawing control systems

## Required Skills

- A MS or BS degree in Electrical Engineering, or equivalent
- Practical experience in digital and analog design
- Experience with MentorGraphics
- Experience with digital and analog circuit simulation
- Excellent electronic debugging skills and expert experience with lab equipment

## Recommended Skills

- Extensive experience in the UAS industry
- Hands on design experience
- Strong interpersonal skills in a multidisciplinary environment
- Autopilot development or tuning experience
- Gimbaled and/or mechanized camera systems experience
- Experience with remote controlled aircraft and helicopters
- Waterproof / water-resistant environment design experience
- Able to maintain a security clearance