

## **Electrical Engineer - Hardware/Firmware**

Raptor Scientific, a Global Aerospace & Defense Test and Measurement Company, is seeking an Electrical Engineer for hardware/firmware digital and analog /mixed signal designer to develop, define evaluate, analyze and debug Analog, Digital and Mixed Signal embedded designs. Raptor Scientific is a leading engineering company focused on the Test & Measurement sector in the Aerospace and Defense market. Our company is a leader in Air Data Test equipment, Mass Properties measurements and Radar Cross-Section measurement systems. This position will directly support the Avionics Systems / Air Data Test business unit at the company's offices located in Peterborough, NH

### **Job Responsibilities, Activities**

Seeking a hardware/firmware digital and analog/mixed - signal designer to define, design, evaluate, analyze and debug Analog, Digital and Mixed Signal embedded designs. The individual will be helping in the design, development and maintaining of pressure control systems that simulate Altitude and Airspeed pressures for our air data test set and calibrator lines. This includes the design of control loops and interface with drivers for solenoid valves, pumps, and other pneumatics. Familiarity with measurement of pressure, flow and temperature a plus. The individual will work closely with our chief electrical engineer and a team of production and technicians, who design and manufacture air data test systems for the commercial and military market. Some of the key job responsibilities include:

- Work with a small team of engineers to improve and develop new avionics test equipment and support existing product lines
- Ability to be productive and prioritize in a small company environment with multiple competing priorities
- Design and develop circuit boards containing a mix of analog and digital circuitry through the creation of schematics and prototyping with development boards
- Assist and/or manage PCB layout, placement, and fabrication activities with PCB layout resources
- Experience with hardware integration, test and debug tools (logic analyzers, scopes, emulators)
- Experience with FPGA and microprocessor development.
- Assist in the development of embedded firmware for new pressure controllers and modify firmware for existing pressure controllers
- Proficiency in C and assembly language programming for embedded applications is a plus
- Familiarity with common communication protocols (such as RS-232, RS-422, SPI, I2C, USB, Ethernet, IEEE-488) is a plus
- MCUs with digital and analog front ends to incorporate timers, counters, PWM, RTC, comparators 12-bit ADC, embedded PLLs, and extremely accurate oscillators
- Generate and maintain electrical design documentation such as schematic diagrams and bill of materials
- Provide trouble-shooting assistance to production team as needed
- Experience designing battery powered devices a plus

### **Preferred Education and/or Experience**

- 3- 6 years' experience in contracts administration, accounting or related field
- Requires AA degree; college degree preferred
- Experience with government contracts and/or a working knowledge of FARs/DFARs a plus
- Proficient in MS Office Suite including intermediate to advanced skills in Word and Excel (e.g., pivot tables, charts and formula calculations)
- Exhibit problem solving, critical thinking and personal accountability
- Exhibit solid time management and follow-through skills with the ability to manage multiple tasks with tight deadlines
- Exhibit strong attention to detail and strong organizational skills
- Strong written and verbal communication skills with an ability to develop effective working relationships with internal and external customers
- Ability to work well independently and with a professional team in a fast-paced work environment

### **Compensation and Benefits**

- Compensation includes an attractive compensation package, base salary (based on background and previous experience) and incentive bonuses.
- 401(k), Dental Insurance, Health Insurance, Paid time off, Professional Development assistance, Tuition reimbursement, Vision insurance
- Bonus pay, signing bonus