

Electrical Design Engineer Job Description

Connor-Winfield Corporation has a challenging opportunity for an **Electrical Design Engineer** to join its **Engineering Team** in **Aurora, IL**. Connor Winfield is involved in leading-edge product design and development of time and frequency management devices supporting synchronization in wired and wireless communication networks. The successful candidate will be responsible for research, design, integration, documentation, and product support of time and frequency modules and related sub systems based on phase locked loops and GNSS timing sources. Responsibilities include specification, design, schematic entry, bring-up, test and debug of printed circuit boards and systems in cooperation with layout, software and mechanical engineers. Participation in the selection of components, bill of material generation, prototype and pilot manufacturing, design verification and regulatory compliance testing leading up to full product release, as well as maintenance of existing products are also included. This position works closely with software engineers, manufacture engineers, quality, production, and sales members to support development activities.

Primary Roles and Responsibilities:

- Design, develop, test, document, create new or modify existing designs based on specifications from customers and sales.
- Work with ASIC designers to implement digital and analog phase lock loop circuits in timing systems.
- Generate schematics for implementing ASICs and supporting RF circuitry for low noise applications.
- Oversee PCB layout with CAD designers to implement low noise techniques, determine power and ground floor plans, impedance control, copper weight, etc.
- GNSS timing source measurement and testing.
- Creation of product documentation including schematic diagrams, and bill of materials (BOM).
- Familiarity with manufacturing processes.
- Participate with internal and external teams.
- Demonstrate time management, task tracking, and organizational skills.
- Perform other similar and related duties as required.

Qualifications and Education:

- B.S. in Electrical or Electronics Engineering and 4-6 years' work experience.
- Experience with electrical design tools (Altium).
- Understanding of phase lock loops, filters, and RF layout techniques.
- Experience with performance and document design verification testing
- Hands on lab equipment skills (spectrum analyzer, signal generator, oscilloscope, counter, etc.)
- Strong math background with a strong problem analysis and solving skills.
- Thorough understanding of electronic components and product application with the ability to answer customer technical questions.
- Ability to read and interpret drawings, schematics and specifications
- Demonstrated ability to make timely and effective decisions, handle multiple priorities and delegate responsibilities to ensure high quality service is delivered on time.
- Need to be detail-oriented with understanding of the importance for complete and accurate documentation.
- Knowledge of production processes and quality control procedures.
- Excellent analytical and troubleshooting skills.
- Ability to work independently on projects with little supervision
- Excellent time management, prioritizing, and organizational skills.
- Motivated, positive, self-started with strong work ethics.

Highly Desirable Knowledge, Skills, and Abilities

- Microcontroller Hardware programming
- Python programming
- Communications Protocols; UART, SPI, I2C, RS232, USB, Ethernet
- Managing system electrical requirements and evaluating and mitigating system risks

Job Type: Full-time

Benefits:

- 401(k)
- 401(k) matching
- Dental insurance
- Disability insurance
- Flexible schedule
- Health insurance
- Life insurance
- Paid time off
- Vision insurance

Schedule:

- Monday to Friday

Education:

- Bachelor's (Preferred)

This Job Is Ideal for Someone Who Is:

- Dependable -- more reliable than spontaneous
- People-oriented -- enjoys interacting with people and working on group projects
- Adaptable/flexible -- enjoys doing work that requires frequent shifts in direction
- Detail-oriented -- would rather focus on the details of work than the bigger picture
- Achievement-oriented -- enjoys taking on challenges, even if they might fail

This Company Describes Its Culture as:

- Detail-oriented -- quality and precision-focused
- Outcome-oriented -- results-focused with strong performance culture

Benefit Conditions:

- Waiting period may apply

Work Remotely:

- No