

# Job Description

Position Title	Principal Electronics Engineer
Location(s)	Valencia, CA
Typically Reports to	Electrical Engineering Manager
Salary	\$150-160K

## About H2scan Corporation

H2scan was founded in 2002, and is headquartered in Valencia, California. H2scan helps our customers meet safety, regulatory and process control requirements in mission critical industries such as energy, utility, petrochemical, fuels cell and gas lines. We do that by providing the most accurate, tolerant and affordable continuous hydrogen sensors for monitoring of industrial processes that generate or use H<sub>2</sub>, including transformer condition monitoring. H2scan holds 33+ patents and our products are sold in over 50 countries.

## Job Description

The Principal Electronics Engineer is responsible for applying electrical knowledge and design principles to develop leading edge sensor products for use in the emerging green economy. This includes determining what equipment can be used, ensuring the final electrical plan meets the customer's needs and specifications, and verifying product status in the field to ensure the plan represents as-built conditions. Principal electronic systems designers frequently check design drawings from suppliers and other resources, provide on-site support during product build, lead verification and validation activities (including development of test procedures and fixtures), and interact with contractors, subcontractors, working cooperatively across functional boundaries including presenting design details and status to company management. This position requires expertise in the use of microcontrollers, memory circuits, analog-to-digital and digital-to-analog converters as well as power/analog circuits such as voltage converters, regulators, and transformers. Experience in the development of ASICs is a significant plus. The work requires significant firmware and software experience. The work will extend from large product developments to small research projects. It will also include product requirements definition, proposal development support and mentoring of junior staff. This job requires a moderate amount of travel.

## **Essential Responsibilities**

- 1. Design, Develop and analyze precision analog circuits for electronic instrumentation including capacitive and resistive sensing, control loop and power distribution.
- 2. Analysis and design of digital signal processing circuits, firmware, and software for sensor signal conditioning

H2scan is an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation and gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.





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- 3. Circuit design and schematic capture, component selection and physical layout
- 4. Drive product certification of newly designed products for various safety standards
- 5. Analysis for worst-case tolerance and potential failure modes (FMEA)
- 6. Conduct testing and evaluation of prototype products and circuits
- 7. Work with other design engineering disciplines and applications engineers to provide optimum designs on a rapid schedule.
- 8. Work with manufacturing during new products introduction and troubleshooting failure modes for existing products.
- 9. Work with suppliers for specification and fabrication of new designs and existing products
- 10. Work with customers to provide engineering support of new applications and existing products.
- 11. Follow product development from concept through production.
- 12. Product development cycle from concept through production release
- 13. Analog and digital circuit design, analysis, and simulation
- 14. Component evaluation and selection
- 15. Manage PCB layout and assembly of engineering prototypes.
- 16. Performance and validation testing
- 17. Experience and interest in generating proposals that provide potential customers with complete system concepts and solutions to their system requirements.
- 18. Supervise a team of electrical engineers.

#### **Essential Qualifications, Skills & Experience**

- 1. Bachelor of Science degree (Master of Science preferred) in Electrical/Electronic Engineering or equivalent (including physics) from an accredited institution.
- 2. Manage product certification tests for FCC, CE, and UL safety.
- 3. Excellent troubleshooting and problem-solving skills
- 4. Excellent verbal and written communication skills
- 5. 5-10 years of experience in an electronics environment
- 6. Proficient in the use of Microsoft Office software
- 7. Preferred: PCB layout using Altium, PADs and OrCAD tool set
- 8. Preferred: Embedded system firmware using C and assembly language
- 9. Preferred: Digital signal processing algorithm development
- 10. Control loop design and implementation (analog and/or digital)
- 11. Ability to work at a fast pace and perform a variety of functions.
- 12. Ability to lift up to 20 lbs occasionally with reasonable accommodation.
- 13. Available to work between 8:00am & 5:00pm M-F with occasional Saturday work.
- 14. Teamwork, cooperation with leadership, and a positive attitude

#### Benefits

- Health Insurance benefits
- 401(k)
- Life insurance
- Family leave (paternal, maternal)
- Bonuses
- Equity/stock options



- Three weeks paid vacation
- Paid sick days
- FSA/HAS

H2scan is an Equal Opportunity Employer