

Senior Firmware Engineer

About Us:

Halogen Systems, Inc. is a small growing manufacturing company in Reno, Nevada which is known for its quality of life and expansive outdoor adventures.

Our mission is to preserve and conserve our earth's resources through solving pressing water treatment problems using disruptive, novel, patented technologies that we invent here in Nevada. Our first product is used aboard ships for Ballast Water Treatment to prevent the transfer of invasive species in world's oceans. And our new five multi-parameter sensors for drinking water and wastewater eliminates the waste streams used by all other competitive sensors (saves 69,000 gallons of water per year, per sensor) and eliminates up to four other discrete sensors. Our sensors require a fraction of the maintenance needed by competitive products.

Job Description

We are looking for a Senior Firmware engineer to help develop, support and maintain new and existing cutting-edge instrumentation products. Must be hands on in testing and a desire to be creative in solving problems. Works closely with the Hardware and application development team to lead all aspects of the firmware product design life cycle from initial software requirements capture, architectural design, coding design, implementation, test, and release to customers.

Specific Responsibilities

- Developing Halogen coding and design standards.
- Developing complex firmware in C and assembly language in accordance with applicable software development methodology and release processes
- Working closely with the Hardware and application development team to lead all aspects of the firmware product design life cycle - from initial software requirements capture, architectural design, coding design, implementation, test, and release to customers.
- Provide critical input on sensor signal processing and algorithm development
- Lead implementation and use of Microchip, AVR, and SAM device engineering tools such as configuration management systems, build processes, and debuggers
- Provide technical leadership and guidance to coach, mentor and motivate team members
- Promote positive disruption to challenge the status quo and encourage an environment of continuous improvement and learning
- Lead and sign-off on peer code reviews

Specific Experience and Skills Required:

- Firmware development in C, C++, and assembly language.
- Knowledge of Modbus RTU protocol, Modbus TCP protocol, and Power over Ethernet
- Proficient use of advanced development/debugging tools, e.g., MPLAB C8, MPLAB C16, MPLAB C32 compilers, linkers, ICE, logic analyzers, requirements capture tools, bug/issue tracking tools

- Experience with design verification and validation, including design reviews, code reviews, test plans
- 8-12+ years' experience in an Embedded Software role
- Strong interpersonal & collaboration skills to work effectively with all levels of the organization
- BS Degree in Electrical, Electronic, or Computer Engineering or other technical or equivalent experience.

Desired Background and Skills:

- Experience with serial communication protocols such as I2C, SPI or similar methods
- Analog hardware design
- Ethernet, CAN protocols including J1939 and UDS
- Algorithm optimization experience with Modbus architecture
- Windows based Engineering tool software application development
- Ability to work and communicate well in a small team environment
- Self-motivated individual