Altergy Job Description -

Firmware Engineer

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| **General/Overall Requirements:**We are seeking an individual who has experience developing Firmware from the ground up or modifying existing Firmware for embedded C microcontrollers implemented in real time control applications. This individual shall function as an integral member of a product and process team for the development, manufacture, sale, marketing, distribution, and service of Altergy’s fuel cell products. Emphasis is on the simultaneous design of product functionality and implementation of the Firmware in the manufacturing process. Experience or familiarity with product and process engineering functions to create mass produced, high quality, and low cost products while developing manufacturing process design/analysis, process control, and product testing is desired.Demonstrated ability to work in a team environment and utilize progressive people skills, as well as compliance with all company policies, procedures, and directives, existing and future is required.**Duties and responsibilities:** * Program embedded C for microcontrollers of both 8-bit and 32-bit architecture with specific experience including devices from Atmel, Microchip, and Texas Instruments.
* Program to perform ADC, DAC, and PWM functionality.
* Program to provide I2C, SPI, Ethernet, and USB communications at the microcontroller.
* Combine these communication and protocol building blocks to produce a digitally controlled power supply using high frequency DC-DC topologies such as Full Bridge, Boost, Buck, and Flyback.
* Work with Systems Engineering, Electrical Engineering, Mechanical Engineering, and Research and Development to define, document, test, and implement product designs and tests.
* Prepare and maintain project schedules, present oral and written reports, and reviews.
* Ensure that product/system meet the appropriate safety and performance standards such as U.L., C.S.A., F.C.C., or other agency testing.
* Perform hands on measurement, testing, and analysis.

**Qualifications:*** Must be familiar with 8-bit and 32-bit architecture microcontrollers.
* Must be familiar with C and Visual Basic programming languages.
* Must be familiar with development environments used for Atmel, Microchip, and Texas Instruments microcontrollers.
* Must be familiar with microcontroller to microcontroller communications including I2C, SPI, Ethernet and USB.
* Must be familiar with method of operation and control theory of classical DC-DC topologies including Buck, Boost, Full Bridge, and Flyback.
* Must be able to take ownership of assigned tasks and project schedules.
* Must be creative, resourceful, able to think independently, and able to provide leadership on projects.
* Ideally the candidate has experience with digitally controlled converters utilizing microcontrollers or DSPs to perform the PWM duty cycle calculation based on real time measurements and operating parameters.
* Bachelor’s Degree in Engineering (B.S.E.E., B.S.C.S., or B.S.C.E.)
* 10+ years related experience

**Contact:*** Qualified candidates please submit a cover letter and resume to: hr@altergy.com
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Altergy Systems is an Equal Employment Opportunity Employer. All qualified candidates will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity or national origin.