



Yaskawa Solectria Solar is America's leading manufacturer of high power photovoltaic inverters. Join a driven and innovative team working in a fast paced and challenging high technology environment. Let your talent fuel one of the nation's fastest growing industries. We offer an excellent benefit package, the ability to work with cutting edge technology, room for professional growth, and career advancement within the company. Yaskawa Solectria Solar is an Equal Opportunity Employer. Qualified candidates should send their resume to: hr@solectria.com

POSITION DESCRIPTION

TITLE: **Embedded Software Engineer**
SUPERVISOR: **Embedded Controls Group Manager**
CLASSIFICATION: **Exempt, full-time**
LOCATION: **Lawrence, MA**
REFERENCE CODE: **ENG-2017-212**

DUTIES:

- 1) Responsible to lead embedded software design efforts throughout the full product life cycle, ensuring timely delivery of reliable and feature rich products.
- 2) Take lead on critical new features design in new product as well as existing product. Coordinate with team members on detailed requirement creation, simulation analysis, design review, validation and verification, documentation and support of production and customer service.
- 3) Take lead on software quality effort, such as defensive coding practice, validation test, static code analysis, team coding convention practice, active bug tracking and updating.
- 4) Assist on software DFMEA and risk analysis.
- 5) Provide outstanding documentation of software designs.
- 6) Perform timing and memory analysis for high performance control system implementation.
- 7) Maintain tracking and documentation of project progress.
- 8) Assist on special customer service projects as needed.
- 9) Assist on standard certification of our software and product.
- 10) Additional duties may be assigned, as business circumstances require.

REQUIREMENTS:

Education:

BSEE, BSSE, BSCE, BSCS with 7 years' experience OR
MS with 5 years experience OR
Ph.D with 3 years' experience.

Skills/Knowledge/Abilities:

- 1) Solid knowledge and experience with embedded software, RTOS, bootloader design.
- 2) At least 5 years of working experience on embedded software development.

- 3) Proficient in C/C++, experience with assembly language.
- 4) A strong understanding and advocacy of defensive programming methods to defeat issues such as noise, intermittent communications, erroneous configuration entry, and communications data overruns or errors.
- 5) Experienced and good understanding of analog and digital circuit and integration with low level software design.
- 6) Ability to understand complex designs and failure modes with software/hardware interactions.
- 7) Experienced and good understanding of common communication protocols for embedded system, such as USB, SPI, I2C, UART, Modbus, McBSP, CAN, DNP3, Ethernet, TCP/IP and wireless.
- 8) Must have strong computer skills, ability to use design tools, system debuggers, programmers, word, excel, power point, databases, web interfaces, etc.
- 9) Significant understanding and work experience of software quality assurance and software testing principles and standards.
- 10) Excellent interpersonal skills. Fluency in English is essential.
- 11) Active in problem solving. Self-motivated. attention to detail, self-driven as project leader.
- 12) Strong sense of schedule driven design, feature/effort trade efforts, and design for reliability.
- 13) Ability to work as a leader or individual contributor, depending upon assignment.
- 14) Willingness to travel domestically and internationally up to 20% of the time.

Desired Skills

- 1) Design and validation of safety critical software including compliance with safety standards such as UL1998 or DO-178B.
- 2) Advanced testing experience including unit test, functional test, system test, white box testing, black box testing, boundary testing, stress testing, and automatic regression testing, software in the loop, processor in the loop and hardware in the loop validation tests.
- 3) Power electronics and renewable energy related knowledge and experience.
- 4) Knowledge and experience with coding standard such as MISRA.