Yaskawa – Solectria Solar, a wholly-owned subsidiary of Yaskawa America, Inc., is the #1 commercial PV inverter supplier in the U.S. Solectria’s products include 3.8 to 750 kW PV inverters, string combiners and web-based monitoring for all size solar systems. Solectria is backed by over 100 years of power electronics an inverter experience. All of Solectria’s three-phase central PV inverters are made in the USA. System owners, developers and EPCs rely on the high performance, reliability and bankability of Yaskawa – Solectria Solar. We look to hire people who value a positive work culture, want to be part of a winning team, and have a desire to learn and grow.

Our culture of continuous improvement values hiring individuals that are looking for the opportunity to stretch their current talents and skills to the next level and beyond. If you are a **Hardware Engineering Manager** with an expert power electronics design background, we may have the perfect opportunity for you.

We are seeking a **Hardware Engineering Manager** in our **Lawrence, MA** facility to provide hands on technical leadership to our cross functional design team. In this role, you will lead a team of professionals in power stage conception, specification, analysis, implementation and validation for high performance PV inverter components. As the systems engineering expert, you will ensure that products are designed for efficiency, and protection with high quality results.

The ideal candidate will have BSEE, MSEE or PhD in electrical engineering with an emphasis in power electronics and a strong understanding of PWM controlled power electronics. Significant expertise in electronic circuit design, mechanical/thermal/packaging design and communication layers of Ethernet, CAN, SPI and RS-485 are required. We are looking for someone with significant technical depth and the ability to lead mentor and develop the team.

We offer the opportunity to experience the excitement, challenge and rewards of working in an entrepreneurial, fast growing, and industry-leading company where you will be challenged to lead the hardware design process. This position is very hands on and will allow you the opportunity to stand out and be recognized for your success. When you join the Yaskawa Solectria Solar team, you'll be surrounded by exceptionally talented individuals widely regarded as leaders in their areas of expertise.

Yaskawa Solectria Solar is an equal opportunity employer.

Please send resume and cover letter to Cory\_McHugh@yaskawa.com

Full description below:

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**DUTIES:**

1. Provide hands on technical expertise and leadership to a highly skilled cross functional design team.
2. Technical Duties:
   1. Overall power stage conception, specification, analysis, implementation, and validation for high performance PV inverter components
   2. Printed circuit board designs for high reliability, cost sensitive products.
   3. Power semiconductor selection, simulation, and implementation.
   4. System thermal management design and packaging for optimal performance/cost.
   5. Gate drive circuitry and protection.
   6. Design for EMI/EMC in harsh environment.
   7. Magnetics specification, design, and implementation.
   8. Safety circuits such as ground fault detection, insulation monitoring, and Arc detection.
   9. Isolation system design for sensing and communications.
   10. Embedded system processor system design, MCU/DSP core selection/integration
3. Leadership Duties:
   1. Serve as Systems Engineering expert within group, showing competence across all technical domains necessary to implement complex grid tied PV inverter and related systems.
   2. Schedule work assignments and communicate with priorities to meet design and business targets.
   3. Provide outstanding visibility and documentation of team design output.
   4. Manage, develop and recruit hardware team members to support business requirements. Monitor and continuously improve team performance, administer ongoing performance review.
4. Additional duties may be assigned.

**REQUIREMENTS:**

**Engineering Skills:**

1. Expert power electronics design background, Power semiconductor implementation, design for efficiency, and protection.
2. Must understand the fundamentals of PWM controlled power electronics. Implementation experience with buck, boost, flyback, and inverter power sections is expected.
3. Significant hands on experience with circuit board design, including: Altium PCB design software, IPC rules and guidelines, PCB design for test, and PCB design for manufacturing.
4. Deep knowledge of circuit analysis and simulation to ensure design margin and reliability.
5. Design background in harsh, electrically noisy environments.
6. Knowledge of Electrical safety standards, EMI/EMC and Environmental compliance.
7. Experience in design for long life and high MTBF.
8. Significant electronic circuit design including Processor based systems, Communications interfaces, OpAmps, Filters, Isolation, Circuit protection, voltage regulation and conversion.
9. Knowledge of mechanical/thermal/packaging design for industrial/power electronics.
10. Expertise in communications hardware layers of Wireless Ethernet, Wired Ethernet, CAN, SPI, and RS-485.
11. Ability to understand complex designs and failure modes with software/hardware interactions.
12. Direct experience with safe operation and testing of high power (1MW+) and high voltage (600VAC, 1500VDC) equipment.

**Business/Personal Skills:**

1. Career must show a progression of technical and managerial responsibilities, with at least 3 full years of focused group leadership experience.
2. Rapid product development, while maintaining high quality results.
3. Outstanding work ethic. Positive, can-do attitude is a must.
4. Ability and flexibility to work as a leader or individual contributor, depending upon team needs and schedule dynamics.
5. Project management skills, project planning, schedule creation and maintenance, and project execution to consistently hit targets.
6. Strong sense of schedule driven design, meeting cost targets, NRE decisions, feature/effort trade efforts, and design for manufacturing.
7. Detail oriented and keen attention to quality control
8. Fluency in written and spoken English is essential.
9. Willingness to travel up to 10% of the time.

**Education/Certification:**

BSEE and 10 years of experience, with 3 years in team leadership roles OR

MSEE and 8 years of experience, with 3 years in team leadership roles OR

PHD in Electrical Engineering with 6 years of experience, with 3 years in team leadership roles