

Principal Engineer (Hardware) - Allentown

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Employer:	ABB Inc.
Location:	Allentown, Pennsylvania 18106 United States
Last Updated:	01/07/2009
Job Type:	Employee
Job Status:	Full Time
Academic Sub- Category:	Research

Job Description

The primary function is to provide technical leadership in hardware design and support of Protection, Control, Automation and Communication products for electrical power systems. Lead hardware design for new product development and enhancement of new products. International coordination of activities relating to product development is essential.

Focus strategic direction of products to optimize sustainable growth and profitability.

Major Responsibilities:

Implements new hardware development, cost reductions, and design modifications that will assure product and technology leadership in accordance with the company's strategic plan. Interface with Product Managers, Project Managers and R&D Engineers during product development and enhancement process to ensure that customer feedback and concerns are addressed in the design.

Responsible for the delivery of hardware components for new products, enhancements, and hardware quality issue resolution. Responsible for and must ensure that project schedules are met and the output satisfies the acceptable quality levels as defined.

- Prepare system level and detailed hardware specifications.
- Analyze and design analog and digital circuits. Document product robustness using simulations, analysis and testing methods.
- Write test plans, conduct tests and evaluate test results.
- Prepare and maintain product documentation, instruction manuals, project notebooks, and design and test documentation.
- Lead design reviews, analyze concepts and cost effectiveness of the hardware designs. Review the software architecture and implementation.
- Coordinate engineering activities with purchasing and manufacturing. Assist Purchasing on supplier selection and component evaluation.
- Write papers, participate in technical meetings, seminars, and conferences.
- Protect inventions following ABB intellectual property guidelines.
- Ensure that development documentation protocols and procedures are followed in accordance with established QA process including 1E (nuclear) and ISO 9001.
- Prepare and maintain product cost estimates and project plans. Lead hardware projects of moderate complexity.

Requirements:

Knowledge and Skill Requirements

Master's Degree in Electrical Engineering or related field, Ph.D. preferred. Requires 15-20 years of experience in Electronic Hardware Design. Must be an expert in mixed signal hardware design and testing with strong background in both Analog and Digital Hardware design and testing. Experience in the hardware design of power system protection, control and automation products is desirable. Experience with PowerPC and FPGA is desirable.

Must have a strong software knowledge and an understanding of real-time embedded systems.

Knowledge of UL, IEC and ANSI standards for Electrical/Electronic products used in electrical power systems. Knowledge of US patent process is desirable.

Effective oral, writing and documentation skills, and strong analytical and problem solving skills.

Working knowledge of project management processes and procedures and ability to learn new skills and assume new responsibilities.

Contact Information

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