



Job Title: Software/Test Engineer - LabVIEW	Dept: Manufacturing Engineering (MFG O/H)
Reports to: Director of Manufacturing Engineering	Division: Ithaca, NY
Hours: Full-time – 40+ Hrs/week	Rev Date: 03-04-21

Primary Function

Maintains the manufacturing software life cycle program. Exercises developmental and analytical skills in the resolution of production issues through remote monitoring and test software. Demonstrates creativity in implementing process improvements and new manufacturing methods including the conception, design and implementation of new software and tools. Utilizes project management skills to transition new or improved software into Production, including fast-tracking of incubator products. Analyze and summarize risks, costs, and benefits regarding alternative courses of actions. Prepares technical reports and makes recommendations. Supervises fellow software development team members and ensures compliance to software SOP's. Prepares and executes process validations.

Duties and Responsibilities

- Design, develop and maintain software for the control and data acquisition of internal test benches using LabVIEW.
- Plan, track, and implement all phases of the software life cycle, from inception and planning through development, validation, transfer and maintenance.
- Performs project engineering work from design to implementation in accordance with the company's policies.
- Investigates software bugs and develops plans for solutions in line with economic, personnel and environmental considerations.
- Draft and execute validation and verification protocols for software processes, new and sustaining.
- Interface with various I/O and peripherals through a variety of interfaces and protocols: Ethernet, RS-485/232, ModBUS, etc.
- Clear understanding of Queued State Machine - Producer Consumer architecture to communicate to multiple sub processes.
- Design and develop software for real time devices utilizing National Instruments Real-Time and FPGA toolkits for LabVIEW Support, modify and upgrade existing software and test benches.
- Maintain legacy manufacturing software suites currently deployed to the production floor Develop and implement continuous process improvement projects that decrease programming errors, reduce cycle time and/or reduce costs.
- Maintain Work Instructions, BOM's, and Routers affected by software projects using the Document Control System.



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- Gathers technical specifications and designs from key team members and customers to determine and create test system controls and system requirements and functional specifications to conceptualize, design, develop and implement new software and tools.
- Participate in PFMEA activities when applicable.
- Utilize SPC where applicable to monitor critical device performance parameters and establish meaningful software process control limits.
- Apply DOE and statistical tools to identify root cause(s) software malfunction and propose and implement corrective actions.
- Identify and resolve manufacturing errors expeditiously with attention to impact on safety/ergonomics, quality, cost and production schedules from software.
- Support improvement projects by developing cost justifications and savings analysis.
- Performs training as assigned.
- Perform other work-related duties as requested, directed or assigned by management.

Working Relationships

- Actively participate on new product release teams from the earliest phases and to assure that desired programming and testing features are employed and to facilitate a smooth transition from Engineering to Manufacturing
- Interact with all Company departments
- Interact with Manufacturing Leaders
- Interact with external technical experts and consultants

Education and Experience

- BS in Computer Science, Engineering, or Software Engineering required. [or CLD/CLA Certification]
- Proficiency in LabVIEW required, National Instruments Certified LabVIEW Developer (CLD) preferred.
- At least 5 years of LabVIEW development experience.
- Experience in medical device industry or ISO 13485 compliant facility preferred.
- Must understand GMP with regards to software design, documentation, qualification and implementation.
- Experience in test systems design preferred.

Knowledge, Skills and Abilities

- Excellent analytical and problem-solving skills with the capability of explaining the underlying concepts and principles.
- Proficient in LabVIEW development.



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- Solid understanding of test systems and software integration techniques.
- Working knowledge of electronics and systems design required.
- Prior success in the development and implementation of process improvement initiatives.
- Working knowledge of VisualBasic is a plus.
- Requires understanding of validation concepts and document control.
- Excellent written and verbal communication skills including effective presentation of technical data to all levels within the organization.

Supervisory Responsibilities

- No Direct Reports.

Physical Demands & Work Environment

- Must be able to lift up to 25 lbs. and to adhere to safety requirements
- Corrected normal vision and color vision are required
- Manufacturing and Office
- Occasional exposure to elements such as odor, noise, dust, heat, cold or chemicals

Disclaimer: This Job Description is not intended to be all-inclusive and may be subject to change to include new responsibilities and tasks or change existing ones as management deems necessary to meet the ongoing needs of the company.