



Job Title:	Manufacturing Software Engineer	Job Code:	MFGENG
Department:	Manufacturing Engineering	Division:	Ithaca, NY
Reports to:	Director of ME & QA	FLSA Status:	Exempt
Hours:	Full-time – 40 Hrs/week	Rev Date:	10-13-2026

Primary Function

The Manufacturing Software Engineer will support the development, maintenance, and continuous improvement of Transonic's manufacturing software, automated test systems, and calibration equipment.

The initial focus of this position will be to develop a strong understanding of existing LabVIEW-based software, manufacturing test systems, and Calibration Lab processes to ensure effective knowledge transfer and operational continuity. The ideal candidate will be a fast learner with strong software engineering fundamentals, capable of adapting to unfamiliar software platforms and technical processes.

Over time, this position will support software modernization using broader programming languages and technologies while maintaining reliable and validated manufacturing and calibration systems.

Duties and Responsibilities

Manufacturing Software and Test Systems:

- Design, develop, maintain, troubleshoot, and improve manufacturing software and automated test systems.
- Learn and support existing LabVIEW applications, including software architecture, equipment interfaces, and production testing requirements.
- Investigate software bugs, equipment communication failures, and programming errors to minimize production interruptions.
- Support the complete software lifecycle, including requirements, development, verification, validation, implementation, and maintenance.
- Maintain software documentation, version control, technical specifications, and applicable Work Instructions.
- Support software integration with test equipment, instrumentation, data acquisition systems, and communication interfaces.

Calibration Lab Support

- Develop hands-on knowledge of Calibration Lab operations, equipment configurations, procedures, and software applications.
- Work closely with Calibration Lab personnel to understand calibration setups, measurement systems, and associated software.
- Troubleshoot calibration software, equipment interfaces, and system performance issues.
- Support improvements to calibration processes, software reliability, and equipment functionality.
- Develop sufficient technical proficiency to independently support existing calibration software and equipment-related issues.



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Quality System and Continuous Improvement:

- Participate in PFMEA activities, NCMR investigations, root cause analysis, CAPAs, and risk assessments related to manufacturing software, test systems, and calibration processes.
- Support software verification, validation, ECOs, and compliance with applicable ISO 13485 Quality System requirements.
- Identify and implement improvements that reduce equipment downtime, programming errors, testing cycle time, and operational costs.
- Evaluate opportunities to modernize existing software applications using programming languages and technologies beyond LabVIEW.
- Support new equipment implementation, software improvements, and manufacturing process development.
- Provide technical training and support to Manufacturing Engineering, Calibration Lab, and Manufacturing personnel as needed.

Role Expectations

- During the initial six months, develop a strong understanding of existing LabVIEW applications, manufacturing software, Calibration Lab processes, equipment setups, and associated systems through hands-on training and knowledge transfer. Demonstrate increasing independence in troubleshooting, maintaining, and supporting these systems, with the goal of independently resolving routine manufacturing and calibration software issues by the end of this period.
- Longer-term responsibilities will include identifying, evaluating, and implementing opportunities for software improvements and modernization using broader programming languages and technologies while maintaining system reliability, operational continuity, and compliance requirements.

Working Relationships

- Collaborate with Manufacturing Engineering, Calibration Lab, Quality Assurance, Regulatory Affairs, Engineering, Manufacturing, and Document Control.
- Interact with equipment suppliers, software vendors, external technical experts, and consultants as required.
- Work closely with cross-functional teams to support software development, production troubleshooting, process validation, and continuous improvement.

Education and Experience

- Bachelor's degree in Computer Science, Software Engineering, Electrical Engineering, Computer Engineering, or a related technical field preferred. Equivalent practical experience may be considered.



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- 2+ years of experience in software development, automated test systems, manufacturing software, or a related technical field preferred. Relevant internship, co-op, or hands-on project experience will also be considered.
- Experience with programming languages such as Python, C++, C#, or equivalent preferred.
- Experience with software integration, instrumentation, data acquisition, and automated test equipment preferred.
- Experience with software verification, validation, configuration management, and technical documentation preferred.
- LabVIEW experience beneficial but not required.
- Prior experience in medical device manufacturing, ISO 13485 environments, or calibration systems preferred.

Knowledge, Skills and Abilities

- Strong software engineering fundamentals, debugging capabilities, and analytical problem-solving skills.
- Demonstrated ability to quickly learn unfamiliar programming languages, software platforms, equipment configurations, and technical processes.
- Willingness to develop hands-on expertise in manufacturing test equipment, calibration systems, and associated processes.
- Knowledge of software development practices, version control, software lifecycle management, and validation principles.
- Ability to troubleshoot software, hardware, and equipment integration issues.
- Strong attention to detail and ability to maintain accurate technical documentation.
- Ability to manage multiple priorities and respond effectively to production and calibration support needs.
- Excellent written and verbal communication skills and ability to collaborate across departments.
- Self-motivated, adaptable, and capable of working independently while supporting cross-functional teams.
- Interest in continuous learning, software modernization, and manufacturing process improvement.

Supervisory Responsibilities

- No Direct Reports.

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