

## **Job Description**

### **SENIOR SOFTWARE (V&V) DESIGNER/ENGINEER**

#### **JOB SUMMARY:**

Reporting to the Software Manager, the Senior Software (V&V) Designer/Engineer requires advanced formal engineering or computer science education and training, superior problem solving skills and independent decision-making ability. Responsibilities includes, coordinating software V&V tasks, designing and implementing software V&V activities in a team setting. Systems typically require the analysis, design and development of real-time control algorithms, sensor interfaces, serial and other communications interfaces.

#### **RESPONSIBILITIES:**

- Lead and supervise a small software verification and validation team
- Perform verification and validation of the requirements for the application of computer technology in real-time embedded control applications
- Analyze and specify software development and verification environment (SDVE), debugging and profiling tools
- Analyze product requirements to develop software verification and validation processes by formal and/or model-based methodologies
- Perform software requirement analysis, software design, software implementation and software verification against product requirements
- Perform software traceability analysis from system requirements to software design and implementation
- Develop, deploy and support DO-178B processes, reviews (SOI), development plans and review checklists
- Review of source code against detailed design documents and standards
- Perform source code analysis and testing
- Develop and document formal test cases, procedures and results
- Perform traceability and test coverage analysis
- Analyze, generate and review software life cycle data packages for DO-178B certification
- Mentor and review the work of junior software engineering employees
- Perform activities as assigned by the Software Manager

**Qualifications:**

- Bachelor's degree in Computer Science or Engineering or equivalent combination of training and experience in multi-disciplines team setting in Software and Engineering Industries
- Minimum 4 years experience leading a software verification and validation team with proven abilities to design & test and to deliver embedded real time software systems for certification
- Minimum 6 years of C/C++ programming experience for embedded systems
- Minimum 4 years experience with integrated software development and verification environment (SDVE) and tools, configuration management systems (CM) and problem reporting system (PR)
- Minimum 4 years working experience on MPC55xx, ARM7 and Cortex-Mx micro-controller series
- Experience with DO-178B processes or equivalent formal certification processes;
- Working experience on formal and model-based software design and implementation methodologies and models (Simulink, SCADE)
- Excellent analytical and problem solving skills
- Strong verbal and written communication and presentation skills
- Exceptional organization skills and able to meet tight deadlines
- Experience with assembler, DOORS, and control theory are assets
- Professionally registered (P. Eng) in Ontario (or have the ability to obtain such registration within one year of employment)