

## REQUISITION FOR PERSONNEL

### Job Description

### SENIOR SOFTWARE DESIGNER/ENGINEER

#### JOB SUMMARY:

Reporting to the Software Manager, the Senior Software 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 development tasks, designing and implementing software systems 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 development team
- Analyze and develop software systems for the application of computer technology in real-time embedded control systems
- Perform hardware, software and interfaces trade off and feasibility studies
- Analyze and specify software development environment (SDE), debugging and profiling tools
- Analyze system requirements to create software architecture and structured software design by formal and/or model-based methodologies
- Perform software requirement analysis, software design, software implementation and software verification
- Perform modeling, simulation and verification of control algorithms
- Perform software traceability analysis from system requirements to software design and implementation
- Perform and support hardware and software integration and troubleshooting at target level
- Develop, deploy and support DO-178B processes, reviews (SOI), development plans and review checklists
- 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

## REQUISITION FOR PERSONNEL

### 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 2 years experience leading a software development team with proven development abilities to design & test and to deliver embedded real time software systems
- Minimum 8 years experience with embedded systems and real-time operating systems
- Minimum 6 years of C/C++ programming experience for embedded systems
- Minimum 4 years experience with integrated software development environment (SDE) and tools, configuration management systems (CM) and problem reporting system (PR)
- Minimum 2 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)