**Position Title: Embedded Software Engineer**

**Grade:** C

**Status:** Open position

**Location:** Shanghai or Hangzhou, China

**Department:** Engineering – Controls & SW Team

**Position Reports to:** Team Leader – Controls & SW Team

**Vacancy Reference no.** *N/A*

Ricardo is a global world-class, multi-industry consultancy for engineering, technology, project innovation and strategy.  With a century of delivering value, we employ over 2900 professional consultants, engineers and staff world-wide.

Our people are committed to providing outstanding value through quality engineering solutions focused on high efficiency, low emission, class-leading product innovation and robust strategic implementation.

**THE ROLE**

Joining a World Class team of Control and Electronics engineers working on Hardware, Software and Controls solutions in Engine, Transmission, Hybrid and Vehicle control applications. The embedded software engineer in this position will be responsible for basic software development and integration of basic and application software of powertrain ECU’s (VCU, HCU, EMS, TCU, BMS, MCU).

**Key Responsibilities**

* Specification, development and integration (ASW+BSW) of xCU basic software (UAES, Bosch, Delphi, etc.)
* Develop scripts and processes to smoothen the xCU integration tasks
* Ensure software deliveries quality and timing

*Everyday tasks will include:*

* Basic software development: I/O, diagnostics, OS/Tasking/Memory configuration, etc.
* DSM (Diagnostic System Manager) development and offer solutions to diagnostic related issues (OBD)
* Application + Basic Software integration, code generation, build and flashing to real-time xCU and offer solutions to related issues
* AUTOSAR based development
* Software integration verification, QAC, MiL/SiL/HiL testing, DVP production and completion
* Support HIL plant model and test script development
* Software scripts and tools development to improve efficiency
* Software development documentation

**PERSONAL SPECIFICATION**

**Skills**

* Good knowledge of control system software development, design and testing
* ECU **Embedded SW development** and calibration experience for Automotive applications (EMS/HCU/VCU/TCU/BMS)
* Fluent with auto-code generation tool chains, embedded coder and Targetlink (including model base design)
* Strong experience of low level programming languages targeting embedded controllers
* Strong experience of Basic Software development for powertrain control system
* Strong experience of vehicle controller network communication, CAN/CCP
* Strong experience of CAN Network Management development
* Analytical approach to developing controls algorithms in an automotive environment
* Experience with real-time calibration tools (ETAS INCA/Vector CANape, etc.)
* Ability to solve technical issues
* Languages:
* Very fluent in English (written and spoken) for intra-company communication with EU/US project teams
* Chinese is a plus

**Personal Attributes**

* Robust character with strong self-drive and motivation.
* Organized and rigorous with personal target of high quality delivery
* Methodical approach to issue investigation and resolution
* Strong information transfer and inter-personal skills
* Focused on delivering results and working as an integral part of a programme team
* Being able to work under pressure and self-manage own time deadlines
* Willingness to undertake some travel (within China and possibly abroad)
* Proven ability for technical guidance of less experienced engineers
* *Project attitude: the* ***right*** *people, doing the* ***right*** *thing, at the* ***right*** *time,* ***right***

**Knowledge**

* Qualified to degree level with technical background in vehicle control software development, testing and implementation
* Excellent knowledge of C and Python programming languages is mandatory
* Good knowledge of Matlab/Simulink/Stateflow and embedded coder is mandatory
* Good knowledge of CAN, CCP/XCP and ASAP2 protocol
* Good knowledge of diagnosis related protocols (ISO15031, ISO14229)
* Good knowledge of DSM, UDS, OBD development is mandatory
* Good knowledge of AUTOSAR is required
* Good knowledge of Safety L2/L3 (HW+BSW) development is required
* Good knowledge of rapid prototyping control systems
* Literate in IT systems (MS Word, Excel, and PowerPoint)
* Familiar with software quality processes (including ‘V-cycle’, ASPICE, ISO26262, etc.) and related tools

**Closing date: N/A**