Embedded Software Engineer

About ION Science Ltd:
ION Science has over 35 years of industry experience designing, manufacturing, and supplying Photo Ionisation Detection (PID) gas sensors, gas detection instruments, and leak detectors for a wide range of industries and applications.

This is a fantastic opportunity to join our collaborative team in our new dedicated R&D technology centre and be part of a well-recognised brand associated with quality.

Main Purpose of the Role:
You will be a member of the R&D department, applying your talent for embedded software/firmware design to develop and implement world leading gas sensors and instruments, that are used in Hazardous Locations (e.g. ATEX and SIL).

Key Responsibilities:
- Develop firmware/embedded software for sensors and instruments to save lives and protect the environment from harmful volatile organic compounds (VOCs)
- Collaboration with team members to deliver the right products
- New product development (NPD) and Introduction (NPI) of Sensors and Instruments
- Maturation research projects (Technology Readiness Levels 4-6) into New Products
- Maintenance and Sustaining Engineering of existing product designs and test fixtures to meet new requirements and fix bugs or obsolescence

Job Role:
- To develop common embedded software (Free RTOS) and firmware (bare metal) that can be used across a portfolio of products
- Identify emerging technologies and solutions that are relevant to our industry
- Integration of hardware and firmware (e.g Hardware Abstraction Layers, Device Drivers)
- Hardware troubleshooting, fault finding and problem solving
- To facilitate technology decision making throughout the team
- Adopt the engineering quality processes in accordance with ISO9001, ISO14001, ISO45001
- Communication and reporting to management and other stakeholders

Skillset:
- Development source code in C, C++ for STM32, and Microchip microcontrollers and DSPs
- Integrated Development Environments (IDEs) including Visual Studio, Visual GDB and Keil
- Able to read schematics and mechanical drawings.
- Working with PCBs and microcontroller programmers
- Use of standard electronics tools including debuggers, multimeters and logic analysers
- Understanding of mechanical and software components

- Understanding of scientific principles to do with gas chemistry relevant to VOC gas sensing and detection
- Understanding of I2C, SPI, UART, USB communications and wireless interfaces BLE, LoraWAN
- Proven experience of developing products for test and production environment (DFT/DFM)
- Familiar with C, C++ for embedded development
- Familiar with FreeRTOS
- Have excellent levels of attention to detail
- Excellent at building rapport with internal departments and external customers
- Possess high levels of organisation and prioritisation skills
- Have a flexible approach and a can-do attitude
- To be able to work under pressure and meet work deadlines
- Effective and confident communicator
- Self-motivated and driven to deliver high quality products

Education, Qualifications & Experience:

- Essential: Degree level qualified
- Essential: 5 years + in engineering experience
- Desirable: experience in hazardous location ATEX design and certification EN 60079-11
- Desirable: previous experience of design to SIL2 functional safety EN 61508

Reporting to:

You will report to the Engineering Manager

Company Benefits

25 Days Annual Leave + Bank Holidays
Annual leave increases with service
Pension Scheme – 8% Employer Contribution*
*After successful probation
Life Assurance Scheme
Private Medical Scheme

Working Pattern

Monday – Thursday 08:30 – 17:00
Friday 08:30 – 15:45
Full Time
Permanent Position

Location:

This role is based at the Ion Science head office, located in Fowlmere, 10 miles south of Cambridge. The role is required for you to be on site.

Our Core Values: