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## Hardware/Firmware Design Engineer

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### **About ION Science Ltd:**

ION Science has over 30 years of industry experience designing, manufacturing, and supplying PID gas sensors, gas detection instruments, and leak detectors for a wide range of industries and applications. We are an unrivalled worldwide Gas and Leak detection Company, with a Team of workers who strive to deliver exceptional product quality and customer satisfaction.

This is a fantastic opportunity to join our growing Team and be part of a well-recognised brand associated with quality.

### **MAIN PURPOSE OF JOB:**

You will be a senior member of the department, applying your talent for hardware and firmware design to develop and implement world leading gas sensors and instruments, that are used in Intrinsically Safe environments. (e.g. ATEX)

### **REPORTING TO:**

You will report to the Engineering Manager

### **KEY RESPONSIBILITIES:**

- Lifecycle development of New Products using STM32 microcontroller platform
- On time completion of product developments to high standard and satisfying requirements
- Maintenance of existing designs to meet new requirements and fix bugs or obsolescence

### **JOB ROLE:**

- To develop common hardware, firmware and software modules that can be used for multiple products to decrease development time
- Identify emerging technologies and solutions that are relevant to our industry
- Integration of hardware and firmware
- Hardware troubleshooting, fault finding and problem solving
- To facilitate technology decision making throughout the team
- Adopt the engineering quality processes in accordance with ISO9001
- Communication and reporting to management and other stakeholders



#### **SKILLS:**

- Prototyping with through hole and surface mount components size down to 0402 and DFN type packages.
- Hardware design with microcontrollers including STM32, TI MSP430, Microchip AT SAM3A
- PCB Design packages – Proteus Design Suite preferred.
- Analogue design experience such as transimpedance amplifiers, voltage regulation, and signal conditioning
- Digital design experience
- Able to read schematics and mechanical drawings.
- Working with PCBs and microcontroller programmers
- Use of standard electronics tools including surface mount soldering, multimeters and oscilloscopes
- Understanding of mechanical and software components
- Understanding of scientific principles to do with gas chemistry relevant to VOC gas sensing and detection
- 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
- IT skills including Microsoft Office packages

#### **EDUCATION, QUALIFICATION and EXPERIENCE:**

- Essential: Degree level qualified
- Essential: 5 years + in engineering experience
- Desirable: engineering experience in ATEX design and certification (Ex ia)

#### **BENEFITS:**

- 25 days annual leave + Bank Holidays (annual holiday increasing with service)
- Pension Scheme
- Life Assurance Scheme
- Private Medical Scheme



- Bike purchase Scheme

**SALARY:**

TBC

**WORKING PATTERN:**

Monday to Thursday: 08:30 – 17:00;

Friday 08:30 – 15:45

Full time

Permanent position

**LOCATION:**

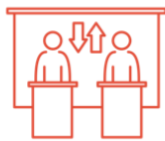
This role is based at the Ion Science head office, located in Fowlmere, 10 miles south of Cambridge.

The role is required for you to be on site.

**Our Core Values:**



**Fun**



**Embrace change**



**Respectful**



**Responsive**



**Challenge the status QUO**



**Committed**

**What our current employees say about working for ION Science:**

*“I have worked at ION Science for 8 years now and I wouldn’t want to work for anyone else! It doesn’t matter whether you are office staff or production, you are always treated with respect by everyone.” L Stanford: Senior Production Assistant*

*“I have been with ION Science for nearly 5 years now and our Company values really are integral in all we do. ION Science is fun, yet such a driven Company to work for.” E Lane: Marketing Supervisor*