

## Firmware Engineer

Osensa Innovations develops and manufactures fiber-optic temperature sensor products for the semiconductor and high-voltage power distribution/transmission markets. Please refer to our website [www.osensa.com](http://www.osensa.com) for additional details.

We are looking for either a Junior or Intermediate Firmware Engineer for a full-time permanent position to work at our Burnaby facility. The start date could be as early as February 2017. Salary will be competitive with industry standards and augmented to reflect talent.

The right candidate will grow to become our firmware expert, and be responsible for the firmware running in our products as well as our R&D & Manufacturing support devices. The focus of the job is both new product development and the addition of new functionality to existing products. The successful candidate's primary role will be to "do the work" necessary to create working implementations of these new products, or execute the design changes required to add the new functionality to our existing products. This would also include working in tandem with other departments to support their efforts. You would work under the guidance of a senior engineer and have access to other experts to guide you, although you will be expected to solve technical problems independently.

We are looking for someone who is self-motivated, creative, disciplined, knows how to learn, and has previously demonstrated initiative and talent on at least one engineering project (paid or unpaid). Osensa is a small and efficient team, and appreciates a well-rounded individual who can contribute beyond their job title.

The position will evolve based on both the aptitude of the successful candidate and the trajectory of Osensa, but the following tasks are likely to form a significant portion of the job:

- Developing microcontroller firmware (C/C++)
- Creating test plans
- Debugging circuit boards
- Executing lab tests
- Working with manufacturing to optimize processes
- Getting familiar with algorithms and documenting them
- Organizing and Optimizing existing firmware
- Prototyping new designs and ideas

The following bullet points are requirements for the position:

- B.A.Sc. degree in a relevant engineering discipline (CPEN, EngPhys, Comp Sci, etc.)
- Working knowledge of C/C++ programming

- Experience with microcontroller-based electronic circuits
- Previously demonstrated talent and initiative on a relevant engineering project (paid or unpaid; applicants should describe how they meet this requirement in their covering letter)
- Excellent verbal and written communication skills
- Good documentation abilities

The following bullet points are not requirements, but would be useful to Osensa, as it would allow the successful candidate to become productive more quickly:

- Experience with the following software tools:
  - o Simplicity Studio (Silicon Labs IDE)
  - o Mathematica/Matlab (mathematical modeling and data analysis software)
  - o LabView (for running lab tests)
  - o Eclipse (integrated development environment (IDE) for the microcontrollers we use)
  - o GitHub (version control and collaboration tool for software development)
  - o Altium Designer
  - o Solidworks
- Experience writing custom interrupt-driven microcontroller firmware (without a real-time operating system)
- Knowledge of ARM or TMS320 microcontrollers
- Experience interfacing smart phones with custom hardware (e.g., over Bluetooth, NFC, or using the headphone plug)
- Experience with web-based connectivity for devices (Internet-of-Things)
- Previous analog or digital circuit design experience

How to apply:

Please send a PDF of your resume to [careers@osensa.com](mailto:careers@osensa.com), along with a brief cover letter (written in the body of your email and not exceeding 250 words) describing your relevant skills/experience and why you would be a good candidate for this job.

The subject line should be: "Firmware Engineer Application from (Your name)".