



# Firmware Engineer

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## Who is OmniSite?

OmniSite is an industry leader in machine-to-machine (M2M) monitoring solutions providing products and services to water, wastewater, and other industries across North America. We engineer, build, and support cellular devices that help protect the environment by detecting problems before spills occur. Our products are also used to monitor a variety of other industrial equipment. OmniSite is an equal opportunity employer. Find out more about OmniSite at [www.omnbsite.com](http://www.omnbsite.com).

## What does OmniSite offer?

OmniSite offers a friendly, casual environment and the ability to work within one of the fastest growing industries in the country. Our team members get paid holidays and start with 3 weeks of paid vacation. We also offer paid training, competitive pay, health insurance, ancillary insurance package, employee lunches, workout classes and a company 401(k) with match.

OmniSite operates out of its newly renovated 10,000+ square foot headquarters. Conveniently located just south of downtown Indianapolis, our building was originally built in the 1880s and now features an open concept, natural light, an exercise room, and employee café.

## What is OmniSite looking for?

We are looking for an embedded firmware engineer to support and enhance OmniSite's M2M and IoT product line. OmniSite's engineers are given a great deal of responsibility and exercise much discretion in decisions that must be made. This, along with the technical challenges of the job, requires engineers that are truly passionate about the work they do. For engineers at OmniSite, it's more than a job or career -- it's also a hobby.

## Essential Job Functions

- Design and develop real-time embedded firmware in C and C++
- Update, maintain, and enhance firmware
- Establish and document requirements for firmware projects
- Establish and execute unit tests and system level tests
- Coordinate with hardware engineers and conduct board bring-up and debugging on a component and system level using equipment such as digital multi-meters, oscilloscopes, and logic analyzers
- Read and understand circuit schematics and electronic component datasheets
- Assist in the evaluation and selection of microcontrollers and other components
- Create and maintain documentation related to system and software designs, source code, and operating instructions
- Follow guidelines for firmware development, source code control, coding practices and documentation
- Collaborate with engineers and/or product management to gain an understanding of the product, and offer suggestions where improvements benefit the product or product operation
- Responsible for remaining current in new technologies, professional skills, firmware development and maintenance

## Qualifications

- Bachelor's degree or higher in related field
- Experience writing real-time embedded firmware in C and C++
- Experience with integrated debugging environments (IDEs) and JTAG debugging
- Experience with microcontroller peripherals such as ADCs, PWMs, USB, I2C, SPI, and UARTs
- Experience with real-time operating systems such as FreeRTOS and Micrium uC/OS-II
- Experience with electronic test equipment including multimeters and oscilloscopes
- Solid understand of low level interrupt handling and device drivers
- Solid understanding of object-oriented principles, data structures, and algorithm design
- Solid understanding of testing techniques and methodologies
- Excellent teamwork/interpersonal skills and the ability to communicate effectively
- Desired: Experience with Atmel AVR and ARM Cortex M series microcontrollers
- Desired: Experience with interfacing with GSM, CDMA, and LTE cellular modules
- Desired: Experience with low-level digital communications, protocol design, and implementation
- Desired: Experience with Microsoft .NET and C#
- Responsibilities, skills and working conditions may change as needs evolve

## To Apply

Please email resume to: [recruiting@omnisite.com](mailto:recruiting@omnisite.com); or mail resume to: OmniSite, 203 W. Morris Street, Indianapolis, IN 46225, Attention: Recruiting.