

Power Tagging Technologies, Inc. Job Description

Position Title: Digital Signal Processing (DSP) Firmware Engineer

Reports to: Director Hardware Engineering

Location: Boulder, CO, USA

Position Summary:

The Digital Signal Processing Firmware Engineer's focus will be on developing, testing, and integrating advanced digital communications modulators, demodulators, and MAC / PHY protocols enabling and advancing communications over the power grid. This includes, but is not limited to executing tasks to support channel characterization; algorithm development, enhancement, and implementation; subsystem development; maintenance of interface control documents; and development of test plans and systems.

The position requires knowledge and experience in digital signal processing and digital communications theory and implementation.

Reporting Functions:

- None at this time

Duties and Responsibilities:

- Development, test, and integration of DSP-based software designed radio architectures, protocols, state machines, and systems.
- Implementation of embedded software functions.
- Provide full product lifecycle support from product definition, architecture, design, implementation, verification test design and implementation, delivery, support, and retirement / replacement, including full lifecycle requirements.
- Work collaboratively with other DSP / Firmware Engineers and the rest of the Engineering and Operations organization to maximize the use of best practices and the identification, sharing, and reuse of architectures, specifications, methodologies, procedures, test cases, test systems, etc., to maximize success of the overall business.
- Protect the intellectual property produced by the company.
- Perform other reasonably related duties as necessary.

Travel:

Less than 25%

Qualifications and Skills:

- BSEE or BSCS from an accredited institution with advanced digital communications focus highly desirable.
- 5+ years related product development experience, with a minimum of 2 years in DSP systems design, including floating-point algorithm design and implementation.
- Demonstrated success in developing DSP-based high bandwidth PSK, QAM, and/or OFDM modulators and demodulators, including, but not limited to, digital phase lock loops, equalizers, filters, and forward error correction algorithms highly desirable.
- Experience in FPGA development using VHDL or Verilog highly desirable.
- Experience in MATLAB, C, and RTOS required, C++ and assembly language highly desirable.
- Proficiency in numerical reasoning, mathematical formula implementation, and analysis required.
- Printed circuit board layout knowledge and implementation using PADS is highly desirable.
- Texas Instruments DSP / OMAP chipset experience and DSP BIOS is highly desirable.
- Embedded LINUX experience is highly desirable.
- Experience in development wireless communications products (i.e., cellular, terrestrial microwave, or satellite) and / or point to multipoint communications protocols is highly desirable.
- Demonstrated ability to quickly learn and master new technologies and techniques.
- High urgency, high energy level process oriented disciplined professional with excellent attention to details.
- Must be able to work effectively as part of a diverse highly skilled team and possess good verbal, written, and presentation communications skills.
- Start-up, small company, or small team experience with a track record of meeting deliverables.
- Experience developing products for a six-sigma company desirable. Green / Black belt highly desirable.
- Must be authorized to work in the United States on a full-time basis for any employer.

The above qualifications are not to be interpreted as a complete and detailed description of all requirements of the job.