Power Tagging Technologies, Inc. Job Description

Position Title: Senior Hardware Engineer

Reports to: Director Hardware Engineering

Location: Boulder, CO, USA

Position Summary:

The Senior Hardware Engineer's focus will be on developing, testing, integrating, and heuristically improving advanced digital communications modules enabling and advancing communications over the power grid. This includes, but is not limited to high-speed digital microprocessor and LSI / FPGA hardware circuitry, analog circuitry, and power supply design and implementation.

Other responsibilities as a senior engineer will include spearheading projects, mentoring and providing general work direction to junior engineers, interface with various vendors and suppliers, and serve as a subject matter expert to resolve issues during development.

The position requires extensive knowledge and experience in mixed mode circuit design theory and implementation.

Reporting Functions:

- None at this time

Duties and Responsibilities:

- Design, development, test, and integration of embedded systems hardware and printed circuit boards implementing mixed mode software designed radio architectures, protocols, and systems utilized in low cost high volume communications products.
- Analyze and recommend Hardware / Firmware portioning to optimize cost and performance.
- Documentation and release of all materials required to fabricate, place, and test printed circuit boards.
- Lead or directly conduct board bring-up and test.
- Analog and digital modeling and simulation of designs to analyze system performance and design implementation to address environmental and implementation issues.
- Assuring appropriate system partitioning, architecture, technical performance, scalability, reuse, and DFX (including design for testing and design for maintainability).
- 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 Hardware 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.

- Identification and specification of DFx requirements, including but not limited to manufacturability, test, installation, and serviceability.
- Components engineering, including but not limited to assuring that components selected for new designs are within the appropriate phase of their lifecycle, as well as assuring minimization of utilization of sole source and single source parts. Assuring proper symbol library creations and library maintenance.
- Reliability calculations and expected life projections for all hardware products.
- Specification and identification of common off the shelf (COTS) sub-assemblies and products as required.
- Development of manufacturing assembly instructions (MAIs).
- Protect the intellectual property produced by the company.
- Perform other reasonably related duties as necessary.

Travel:

Less than 25%

Qualifications and Skills:

- BSEE from an accredited institution, advanced technical degree from accredited institution highly desirable.
- 10+ years related product development experience, with a minimum of 5 years in mixed signal wide dynamic range analog and high-speed digital design required.
- Demonstrated success in developing high bandwidth PSK, QAM, and/or OFDM modulators and demodulators highly desirable.
- Demonstrated ability to design and develop very high volume low cost products for manufacture by multiple third-party off shore contract manufacturers.
- Experience in Hardware / Firmware portioning.
- Proficient in schematic capture tools such as PADS.
- Experience in FPGA development using VHDL or Verilog highly desirable.
- Experience in FPGA synthesis tools such as Leonardo highly desirable.
- Experience in ASIC development highly desirable.
- Printed circuit board layout knowledge and implementation using PADS for analog and high-speed digital mixed signal implementations is required.
- Texas Instruments DSP chipset experience is highly desirable.

- Solid track record of demonstrated technical leadership. Wireless communications experience (i.e., cellular, terrestrial microwave, or satellite) 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.