

Title: Electronics Design Engineer

Posting Date: Jan 20, 2021

Closing Date: until filled

Tartan Energy Group is a multifaceted engineering and manufacturing company that provides drilling and completion equipment and services to the oil and gas industry. For more than 20 years, Tartan has followed the philosophy of engineering our products for simplicity, reliability, and ultimate performance. Our field service personnel are well trained and certified, and are able to perform safe and flawless services. Tartan's knowledge and execution of service, add value to our customers' operation. At Tartan, we continue to innovate, expand service offerings and grow; which ultimately allows Tartan to be a leader in the oilfield service and supply industry.

Tartan Energy Group is proud to be an equal opportunity employer. We are committed to fostering an inclusive work environment where the different strengths and perspectives of each employee are both recognized and valued.

Location: Calgary, AB

Reports to: Senior Electronics Engineering Manager

General Accountability

Tartan Energy Group currently has an opportunity for an Electronics Design Engineer to join our established directional drilling development team of professionals in Calgary. As the successful candidate you will work closely with other engineers, and designers to deliver timely and technically sound results. A demonstrated ability to work effectively with other team members in a fast-paced business environment is essential.

Specific Responsibilities

- Experience in analog electronics, digital electronics, embedded electronics and hand on troubleshooting skills
- Experience in overall design of electronic products from concept and architecture, implementation, and verification to transfer to manufacturing
- Strong knowledge of schematic design and layout using Altium Designer
- Knowledge of formal PCBA documentation (schematics, PCB fabrication drawings, PCB assembly drawings)
- Knowledge of PCB fabrication technology and assembly
- Experience with basic laboratory instruments and tools (e.g., DMM, oscilloscope, logic analyzer, spectrum analyzer), being hands-on in design and debugging skills.

- Works as a member of the Electronics Engineering group to design and to assure reliability, cost effectiveness and safety of downhole tool's technologies (RSS, Near-Bit, Resistivity, EM systems)
- Works in close collaboration with electrical engineers, technicians and MWD technology development group to develop and optimize technology
- Authoring internal (technical) and external (ECN updates) documentation
- Maintains complete and comprehensive records of daily activities and reports on a weekly basis
- Designs wiring diagram with the emphasis of maintainability, usability and reliability in mind
- Familiar with FPGA and ASIC EDA tools (Cadence, Allegro, Synopsys), design flow and process

Required Knowledge, Skills & Abilities

- Expert level of understanding of CAN/SPI/I²C/RS232/RS485 protocols require with knowledge of electronic hardware design
- Skilled in usage of test equipment; oscilloscopes, power supplies, signal generators, etc.
- Accustomed to tracking changes and storing files using version control software such as TortoiseSVN or GitHub
- High level of self-drive and initiative, proactive learner, strong work ethic, goal-focused and attentive to detail
- Exceptional interpersonal and written communication ability; strong documentation skills for technical artifacts

Required Qualifications

- 7+ years of general technical expertise and experience in hardware, firmware and software development
- Experienced of firmware and hardware design, and understanding the architecture of MCU and have the ability to understand the advantage and disadvantage of these two implementation ways.
- Accredited Bachelor's Degree or higher in Electrical Engineering, Computer Engineering
- Member of APEGA in good standing or eligible for licensing in Alberta (if applicable)
- Experience with version control tools, preferably SVN
- Strong aptitude for mathematics and algorithms; working knowledge of DSP, FPGA and/or ASIC design (VHDL/Verilog)
- Process and quality mind-set, with an appreciation of design best practices
- Working knowledge of oilfield drilling operations is desirable

Prior Experience with the following tools, frameworks, language and technologies:

- Altium Designer

- ASIC, FPGA design / RTL design
- ActiveHDL
- LTSpice

Physical Demands

- This position requires a person to sit up to 8 hours per day.
- Manual dexterity to perform repetitive tasks.

We would like to thank everyone for their interest in Tartan Energy Group but only candidates selected for an interview will be contacted. Tartan Energy Group is an equal employment opportunity employer. Qualified applicants are considered without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, status as a protected veteran or other characteristics protected by law.