D-TECH ROTARY STEERABLE
AN SBO COMPANY

SYSTEM TEST & VERIFICATION ENGINEER

JOB DESCRIPTION

Department	Engineering	**Reports to**	Software Manager
Position Type	Full Time	**Shift**	Day
Location	Bristol	**Schedule**	Monday-Friday 37.5hrs/wk

POSITION SUMMARY

A hands-on role focused on the implementation and continuing management of Hardware in the Loop Simulations (HiLS), for the testing of the hardware and firmware in our downhole tools, to support D-Tech in continuing to develop high quality, competitive products and ensure that development milestones and deadlines are met.

Take ownership of the strategy and execution of testing for our legacy and new product developments, using HiLS to validate complex features. Working within our engineering team, you'll design test cases, including scenario generation, and run automated and manual testing to verify and validate our developments in line with requirements.

Manage test reports and documentation to support feature, system and sub-system sign-off, and provide feedback and assistance to engineers in addressing any issues that arise.

Contribute to reliability analysis such as risk assessments and Failure Mode Effects Analysis by compiling and examining data.

Strong analytical skills are essential to interpret test data, troubleshoot issues, and improve system robustness.

Adhering to company standards in relation to coding styles, version control and documentation.

ESSENTIAL FUNCTIONS/RESPONSIBILITIES

- Develop and execute test plans, test procedures, and test cases for our hardware and firmware
- Design, configure, and maintain the HiLS environment
- Ensure all tests provide clear traceability to high and low level requirements
- Integrate real hardware with virtual models and simulation tools
- Ensure requirements traceability and validation coverage
- Collaborate cross-functionally with the engineering team
- Conduct problem investigation, and defect reporting, working closely with the engineering team
- Produce clear and accurate test reports and documentation
- Contribute to agile planning and refinement, defining testable acceptance criteria before features are implemented
- Work with embedded toolchains, debuggers, simulators, and automated test environments as needed
- Read and understand hardware schematics and datasheets
- Perform any other engineering duties as required

REQUIRED QUALIFICATIONS/EXPERIENCE

- Bachelor's degree in computer science, Electrical Engineering, or related field, or a minimum of five years' experience working with HiLS systems
- Proven experience with HiLS testing (Speedgoat, dSPACE, NI, etc.)
- Experience with LabVIEW or MATLAB/Simulink
- Knowledge of implementing test cases using scripting languages (Python) and automation tools.
- Knowledge of embedded systems, control systems, and system integration
- Strong problem-solving and analytical skills
- Experience with version control (Git)
- User-level familiarity with Microsoft Windows operating systems and Office applications

PREFERRED QUALIFICATIONS/EXPERIENCE

- Knowledge of ARM and/or Microchip dsPIC architectures
- C code development for bare metal embedded systems
- System integration & interface debugging
- Familiarity with automated testing frameworks (Pytest, Unity, Robot Framework) and debugging tools (JTAG, GDB, oscilloscopes)
- Good understanding of digital and analogue electronics, and in particular sensors such as accelerometers, magnetometers, etc.
- Knowledge of commonly used communication systems, interfaces, and protocols such as SPI & RS485
- Systems Engineering
- UML
- Experience with task tracking software, such as Jira or ClickUp