Senior Firmware Engineer

Who We Are
Advanced Electronic Designs, Inc. (AED) is an engineering product design and development firm located in Bozeman, Montana. Founded in 1994, AED thrives on solving intricate design challenges and developing innovative solutions for a diverse clientele. Our environment is fast-paced and engaging, coupled with a healthy work-life balance and competitive compensation. Due to the hands-on nature of the products we develop, staff are required to be present on campus. When you join our team, you will be part of an exclusive group of forward-thinking engineers developing first-of-kind technologies that make a positive contribution to society.

Who You Are
You are an electrical/computer engineer whose technical breadth spans hardware turn on and debugging through professional software development on embedded systems. You're a problem solver who works well with teams and has a large breadth of experience, especially with embedded systems and Linux development.

What You'll Do
- Architect and implement bare metal, RTOS-based, and Linux firmware designs.
- Write code for a wide range of microprocessors and FPGA soft processors on simple to highly complex hardware designs in a wide variety of products.
- Collaborate with HW designers during the design process to optimize HW and FW interoperability.
- Work as a team with HW designers during board turn on and debugging by writing code to exercise peripherals on the board and verify functionality.

Qualifications

Experience:
- 8+ years of professional firmware development experience.
- Demonstrated background delivering projects on time and on budget.
- Experience managing the codebases of different projects of varying age and level of polish.
- Strong experience developing for an embedded Linux environment.
- Demonstrate a high level of expertise in C and C++.
- Demonstrable expertise developing in Linux.
- Ability to architect an RTOS-based firmware design.
- Experience debugging and troubleshooting hardware, including the use of oscilloscopes and logic analyzers.
- Comfortable with Ethernet communications using sockets - datagram, stream, and raw sockets in Windows & Linux operating systems.
- Comfortable with USB HID and USB High Speed Interfaces.

Knowledge, Skills, and Abilities:
- High level of expertise in C and C++.
- Git, Github and/or GitLab
- Cmake and/or make
- Writing unit tests for your code and understanding code-coverage tools & analytics.

- Ability to quickly navigate, read and learn existing codebases and their patterns.
- Identify opportunities for firmware architecture improvements and process improvements to enhance efficiency and reduce costs and time-to-delivery.
- Best practices and processes for the software development lifecycle.

Requirements:

- Bachelor's degree in Electrical Engineering, Computer Engineering, or equivalent.
- Pass a comprehensive background check.
- Candidates must be able to comply with the federally mandated requirements of U.S. export control and ITAR compliance laws, which require proof that the candidate is a U.S. person.
- Professionalism representing AED when interacting with staff, vendors, clients, and the public.
- Organizational skills and the ability to plan, prioritize, and execute tasks independently.
- Strong written and verbal communication skills.

Nice to have:

- Experience with Python (versions 2.x and 3.x)
- Experience with FPGA Design in Verilog

Benefits

In addition to exciting work at a growing company, we offer the following benefits:

- 401(k) retirement with a company match
- QSEHRA Health Insurance Reimbursement
- Life insurance
- Vacation and holiday pay
- Relocation assistance