Senior Staff Firmware Engineer

Who We Are
AED Product Development (AED) is an engineering product design and development firm located in Bozeman, Montana that is a wholly owned subsidiary of Sphere Entertainment Co. AED partnered with Sphere Entertainment in the design, development, engineering, and manufacturing of the groundbreaking Big Sky camera system – an ultra-high resolution camera system and custom content creation tool that was created to capture the stunning images and video required for the world's highest resolution LED screen at Sphere. AED thrives on solving intricate design challenges and developing innovative solutions for a diverse range of industries and technologies. 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.

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Who You Are
You are a highly proficient 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 as part of a team or as a single point of contact on projects, 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:
- 10+ years of professional firmware development experience.
- Demonstrated ability to estimate and work to individual task durations, and deliver projects on time and on budget.
- Experience managing the codebases of different projects of varying age and level of polish.
- Strong experience developing in 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.
- Experience with Python (versions 2.x and 3.x)

Knowledge, Skills, and Abilities:
- High level of expertise in C and C++.
- 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.
- Git, Github and/or GitLab
- 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 FPGA Design in Verilog
- Comfortable with USB HID and USB High Speed Interfaces.

Benefits
In addition to exciting work at a growing company, we offer the following benefits:
- 401(k) retirement with a company match
- Health, Vision & Dental Insurance
- Life, AD&D insurance
- Vacation and holiday pay
- Relocation assistance