

# Senior Firmware Engineer

## Who We Are

AED Product Development ([AED](http://www.aed.pro)) is an engineering product design and development firm located in Bozeman, Montana that is a wholly owned subsidiary of Sphere Entertainment Co. 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.

## 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 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:

- 8+ 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