



About Portal Instruments

Portal Instruments is redefining how advanced injectable therapies are delivered.

Founded on MIT research, Portal develops innovative drug-delivery platforms that enable patients to self-administer complex biologics safely, comfortably, and reliably. Our lead platform, PRIME Nexus®, is a reusable, software-tunable drug-delivery system designed to support high-viscosity and large-volume injectables, with both needle-assisted and needle-free delivery options depending on therapeutic needs.

Portal partners with biopharmaceutical companies and key players in the medical device ecosystem to integrate our delivery platforms into drug-device combination products that improve patient experience, reduce cost of goods, and support successful commercialization. Guided by human-factors science, rigorous engineering, and real-world usability, Portal is building the next generation of patient-centric drug delivery solutions.

Role Information

Title: Senior Embedded Firmware Engineer
Reports to: VP, Engineering
Location: Boston/Cambridge, MA

Position Overview

The Senior Embedded Firmware Engineer will contribute to software development for Portal Instruments' software-controlled drug delivery system. You will handle multiple activities across the product lifecycle and collaborate closely with the entire engineering team. Your primary responsibilities will focus on embedded software for the Portal injector and software tools used in verification and deployment.

What You'll Do

Your Impact

- Contribute directly to the development, validation, and commercialization of Portal's drug-delivery platforms
- Collaborate across disciplines to solve complex technical and operational challenges
- Help ensure solutions are scalable, compliant, and grounded in real-world use

Key Responsibilities

- Design and develop embedded software for Portal's drug delivery platform (injector) from concept through commercialization
- Design, build, debug, and optimize embedded software
- Develop requirements, specifications, and risk management of new designs and projects
- Evaluate system performance by designing, executing, and documenting verification and validation plans



- Support the risk management process using FMEA and other risk management techniques
- Support electrical compliance testing through the development of software driven test harnesses
- Evaluate and assess new technology undergoing evaluation for inclusion in the device.
- Design, build, and debug software tools for development, test and manufacturing.

What We're Looking For

Required Qualifications

- 6 years of experience in software development with a Bachelor's Degree in Computer Engineering, Computer Science, or equivalent discipline
- 2 years of experience in medical devices, biotech, pharma, or a regulated industry
- Experience writing embedded software in C++ for microcontrollers
- Experience working in an environment with continuous integration, comprehensive automated tests
- Excellent software engineering and design skills
- Experience working within quality systems (e.g., ISO 13485, design controls)
- Ability to work independently in a startup environment

Preferred Qualifications

- Experience with code clarity and maintainability
- Experience with motion control, wireless protocols, and/or device drivers
- Experience with ARM Cortex M4
- Experience programming in Python
- Experience developing software under IEC 62304 processes
- Experience supporting products through development, validation, or commercialization
- Strong communication skills and comfort working cross functionally

Working at Portal Instruments

Portal offers the opportunity to work on meaningful technology with real patient impact, alongside a highly collaborative and mission-driven team. We value innovation, accountability, transparency, and thoughtful problem-solving—and we believe great work happens when people feel supported and empowered.

Benefits & Perks

Health & Wellness

- Medical plan options including PPO HSA and HMO HSA eligible plans
- Competitive dental, orthodontic, vision, and accident insurance



- Flexible Spending Accounts (medical, dependent care, commuter)
- Employee Assistance Program with counseling, financial tools, and legal resources

Financial & Protection

- Stock options
- 401(k) with Roth and traditional options
- 100% company-paid short- and long-term disability
- Company paid life and AD&D insurance
- Paid Family and Medical Leave

Rest & Recharge

- 20 days of vacation annually (encouraged to use)
- 13 company observed holidays
- Periodic company-wide holiday shutdowns
- Sick time separate from vacation

Additional Perks

- Daily lunch (Cambridge office)
- Casual dress code
- On site bike room, lockers, and showers (subject to availability)
- Happy hours and company sponsored events
- Annual volunteer opportunities and donation match program

Inclusion & Equal Opportunity

At Portal, we believe all employees should feel they belong, contribute, and thrive. We know that diverse teams create better solutions for diverse patients, and we encourage applicants from all backgrounds to apply.

Portal Instruments is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, ethnicity or national origin, sexual orientation, gender identity or expression, genetics, military service, age, family status, or disability.

How to Apply

Please submit a resume (and cover letter if applicable) to careers@portalinstruments.com. Candidates will be contacted if their background aligns with Portal's needs.