

# Microminiaturization Specialist Electrical Engineer

## About Paradromics

Paradromics is bringing to market the first high-bandwidth data interface between brains and computers. We envision a future where data is medicine and some of the hardest challenges in physical and mental health have been reframed as technical problems with clear solutions. By allowing direct readout and modulation of neural activity, brain computer interfaces (BCI) will act like a modem for the brain, allowing it to connect with restorative digital systems. Our first product will be an Assistive Communication Device for patients with severe combined speech and motor deficits as a result of paralysis.

We offer a competitive compensation package with stock options, flexible PTO, and a friendly working environment.

## Job description

Paradromics is looking for an electrical engineer with a specialization towards microminiaturization of electronic components and assemblies. The person in this role will contribute to the hardware development of key components of our neural implant system. This includes the design of electronic printed circuit boards and packaging for both prototype and production systems. An in-depth understanding of analog and digital electronics building blocks, in particular, low-noise analog circuits are required. Experience with wearable electronics and/or microelectronics systems packaging is highly preferred. Prior experience with end to end development of complex electronic systems and ECAD/MCAD tools is required to excel at this role. Close coordination with other engineers in the team will be essential, therefore excellent communication and interpersonal skills are crucial in excelling at this role. If you like big challenges, working at the frontier of human technology, and have worked on and shipped high-performance electronic hardware in the past, we would like to hear from you.

## Required Skills & Experience

- Very strong analytical and debugging skills
- In-depth understanding of analog and digital electronics building blocks
- 2+ years of experience of designing and testing of custom microelectronic systems
- Master's degree or PhD in electrical engineering or a closely related discipline
- Knowledge of advanced PCB manufacturing techniques (HDI, etc.)
- Proficiency with professional grade ECAD/MCAD and PCB design tools
- Signal integrity-aware and low-noise PCB layout skills
- In-depth knowledge and experience of 3D printing and other additive manufacturing techniques
- High degree of proficiency with advanced lab instruments (oscilloscope, spectrum analyzer, logic analyzer, etc.)
- Rapid electronics prototyping skills (microcontroller, analog and digital interfacing, etc.)
- Experience with SPICE circuit simulators
- Excellent programming skills with Python
- High degree of proficiency with Linux, shell scripting and Linux programming environment
- Proficiency with Git version control system and collaborative development practices
- Attention to detail and ability to dig out obscure information from technical documents
- Excellent verbal and non-verbal communication skills
- Ability to produce well-written technical reports and documentation

**Qualified candidates should send cover letter and resume to [HR@paradromics.com](mailto:HR@paradromics.com)**

- Ability to clearly communicate with vendors for prototype and production manufacturing

### **Preferred Skills & Experience**

- Experience with ultra low-noise and/or biomedical instrumentation systems
- Experience in wearable electronics application area
- Multiple completed and built PCB design projects in Altium Designer
- Multiple completed and built mechanical designs in Solid Works
- Rapid mechanical prototyping skills to quickly move from an idea to physical prototype
- Experience with multiphysics simulation tools (COMSOL, ANSYS, etc.)
- Experience with advanced lab instruments and test automation systems
- Experience with wafer probing systems
- Experience with testing and packaging of noise-sensitive integrated circuits (CCD, CMOS camera, sensor arrays, etc.)
- Experience with FPGA implementation

*Paradromics is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.*

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