Electrical Engineering Manager / Staff Electrical Engineer

Date issued 03.16.2026

About the Company

Vitara Biomedical is a medical technology company reinventing the standard of care for extremely premature newborns. Backed by leading venture capital firms, Vitara's neonatal artificial womb, known as EXTEND, was created by doctors at Children's Hospital of Philadelphia to closely mimic natural fetal physiology for babies delivered as early as 22 weeks. Similar to a mother's womb, EXTEND's fluid-filled environment aims to protect fragile lungs and other vital organs during the first 28 days of life, allowing them to mature so that newborns may transition to an incubator with a greater hope of surviving and thriving. At this stage of life, organs grow exponentially—and Vitara is working to make every day count.

We work in a fast-paced, collaborative environment where creativity, rigor, and mission guide every decision. At Vitara, you'll be a part of a team that cares deeply about the science, the impact, and one another. As Vitara grows, you'll shape how we operate and leave your mark on a first-of-its-kind technology.

Position Summary

The Electrical Engineering Manager / Staff Electrical Engineer serves as a player-coach, contributing directly to hands-on hardware design and subsystem development while helping to build and mentor a growing electrical engineering team.

This role works closely with the Director of Electrical Engineering to support electrical subsystem development and technical execution across the EXTEND platform.

The position is ideal for engineers who enjoy combining hands-on hardware development with technical leadership and mentorship while collaborating across mechanical, software, systems, regulatory, quality, and manufacturing teams.

Key Responsibilities

Team Leadership

- Support the Director of Electrical Engineering in developing and scaling the electrical engineering team
- Manage day-to-day priorities and workload distribution for engineers

- Mentor engineers and provide technical guidance

Electrical Hardware Development

- Lead development of electrical subsystems for the EXTEND platform
- Contribute to the electrical architecture of the EXTEND platform, helping define subsystem interfaces, power distribution, and sensing/control strategies
- Design and debug multi-layer analog, digital, and mixed-signal PCBs
- Integrate sensors, wire harnesses, battery backup systems, and AC/DC power distribution
- Perform hardware bring-up and validation using lab equipment
- Support prototype builds, early system integration efforts, and iterative hardware development as the platform evolves
- Support IEC 60601 electrical safety and EMC design efforts

Engineering Execution

- Lead or participate in electrical design reviews to ensure technical rigor, safety, and compliance with regulatory requirements
- Develop and review technical documentation including schematics, BOMs, DHF records, and V&V reports
- Ensure compliance with FDA 21 CFR 820.30 design controls and ISO 13485 quality system requirements
- Support design for manufacturability and vendor relationships
- Support coordination and technical oversight of electrical engineering work performed by external consultants, ensuring alignment with system architecture, quality requirements, and project timelines
- Collaborate across mechanical, software, regulatory, and manufacturing teams
- Travel as needed to support laboratory testing, system bring-up, regulatory testing, and collaboration with suppliers or external development partners

Requirements

- Bachelor's degree in Electrical Engineering or related field (Master's preferred)
- 8+ years of electrical engineering experience
- 2–4+ years of technical leadership or engineering management experience
- Background designing electronics for medical devices or other regulated safety-critical systems
- Proficiency with PCB design tools such as Altium Designer or similar EDA platforms and strong hardware debugging/troubleshooting capability
- Experience with sensors, power systems, or electromechanical integration

- Understanding of complex electromechanical systems and system-level electrical architectures
- Expertise with embedded communication interfaces such as CAN, SPI, I2C, UART, Ethernet or similar protocols
- Familiarity with cable or wire harness design and associated design tools
- Familiarity with IEC 60601, IEC 62353 and similar safety standards
- Working knowledge of FDA 21 CFR 820.30 design controls and ISO 13485 quality system requirements