

802.15.4 Embedded Software Engineer

Location: Carlsbad, CA | Asheville, NC | East Coast Remote

Company Overview

Trident IoT is a developer-centric semiconductor and engineering company on a mission to simplify RF and IoT product development, so connected products work as intended, and the development cycle is faster with fewer surprises. Built by a team of seasoned IoT veterans with over a century of combined industry experience, Trident IoT exists to remove the complexity that traditionally slows the path from concept to revenue for wireless product makers.

What We Do

- **Multi-Protocol Silicon & Modules** – RF hardware enabling modern wireless standards and scalable device design
- **Production-Ready SDKs & Developer Tools** – Feature-rich, certified software platforms that accelerate development and reduce integration risk
- **Hands-On Engineering & Design Support** – Direct collaboration with experienced engineers who have shipped large-scale wireless products
- **U.S.-Based Certification & Compliance Services** – Interoperability and regulatory testing that shortens time to market

About the Role

We're looking for an **Embedded Protocol Software Engineer** to build production-grade wireless protocol software for our 802.15.4 SDK (Zigbee, Thread, Matter). This is a hands-on role where your work directly enables IoT products used in the field.

You're a strong embedded developer with systems thinking beyond the spec. You understand how SDK design impacts power consumption, reliability, debuggability, and the developer experience.

What You'll Do

Build & Optimize Protocol Software

- Design and implement SDK features in C/C++ for Zigbee, Thread, and Matter
- Build configurable drivers and plugin components that go beyond protocol specs to solve real product needs
- Work at the system level to balance protocol performance, power consumption, memory usage, and reliability
- Debug complex issues spanning protocol layers, RTOS, and hardware on ARM Cortex-M platforms

Shape SDK Architecture

- Influence SDK design with a focus on usability, extensibility, and production readiness
- Define clean APIs that enable customers to ship products efficiently
- Collaborate with hardware, QA, and product teams to translate field feedback into SDK improvements
- Prioritize real-world product needs while maintaining spec compliance

Technical Environment

C/C++, Python | ARM Cortex-M | FreeRTOS, Zephyr | CMake, Git, CI | JTAG/SWD, protocol analyzers

What We're Looking For

Required

- 3–8 years of embedded C/C++ development experience
- Strong grasp of embedded constraints, hardware-software interactions, and debugging across firmware and protocol layers
- Hands-on experience shipping embedded software at scale
- Solid understanding of at least one low-power wireless protocol
- Ownership mindset with ability to influence through technical excellence and clear communication

Preferred

- Experience with IEEE 802.15.4–based protocols (Zigbee, Thread, Matter)
- Deep expertise in at least one protocol stack
- Contributions to mass production IoT deployments (product or silicon vendor side)
- Experience maintaining embedded SDKs or platform software
- Familiarity with RTOS environments, commissioning flows, OTA updates, and wireless debugging tools

Our Engineering Culture

We're a lean, high-impact team where engineers own outcomes and collaborate closely across hardware, software, QA, and certification. We value pragmatic problem-solving, continuous learning, and modern tooling (including AI-assisted workflows). We build platforms, not one-off solutions—prioritizing consistency, automation, and developer experience. Success means shipping SDKs that power great products in the real world.

What We Offer

- Opportunity to work on industry-leading IoT and smart-home technologies
- A highly technical team focused on building high-quality, production-ready SDKs
- Exposure to real customer use cases and shipped products
- Salary between \$100,000 and \$140,000 plus a comprehensive benefits package
- Flexible work arrangements
- Access to modern development tools and hardware platforms

Note: Applicants must be authorized to work in the United States on a full-time basis. We are unable to provide visa sponsorship now or in the future.

Reporting Structure

This role reports to the 802.15.4 Team Lead and works closely with SDK architects, product management, QA, and customer-facing engineering teams.

We are an equal opportunity employer committed to diversity and inclusion in the workplace.