

Embedded Software and RF Communications Engineer

Hardware Team – Berlin, Germany

Embedded Software and RF Communications Engineer (ESE)

Envio is a technology service provider for building automation and automated indoor agriculture. Our customers are some of the largest utilities, property portfolio managers, and public/government entities on Earth. As an ESE, we are looking for you to provide a sound understanding of Agile development processes, have knowledge of PCB design and support the processes in hardware development and production.

We expect you to have experience in network programming and interfacing with cloud service and Linux device drivers development. And we expect you to have experience with RF lab equipment (spectrum analyzers, sniffers), oscilloscopes, logic analyzers, etc and have contributed to open source software projects. And we expect you to have experience working with Mesh Protocol Knowledge Zigbee, Thread, ZWave and Bluetooth/BLE Mesh.

At envio we are:

Collaborative - We believe teams solve big problems together

Resourceful - Workable solutions exist for every problem

Resilient - Try a dozen things a hundred different ways if that is what it takes

Disruptors - We invent things people didn't know they needed but can't live without

Pioneers - We take on complex challenges using new tools

Each one of our values is a part of our everyday interactions.

Minimum Qualifications

- Bachelor's or Master's in Electrical / Computer Engineering or Computer Science
- 5+ years' experience as a BMS and/or Integrations Engineer.
- 2+ years experience leading teams with a minimum of 3-5 people.
- Expertise with Field Controls, BMS protocols such as BACnet, ModBus or KNX.
- Experience designing, planning and implementing physical and logical data and communication networks (LANs/WANs/WLANs).
- Ability to manage and support the LAN/WAN/VLAN/WLAN product delivery networks to standards of capacity, availability, security, and accuracy.
- Expertise in network technologies and protocols including: TCP/IP, 802.11, 802.15.4, SNMP, VPN, DNS, DHCP.
- Experience working with OPC/Niagara/LonWorks and managing commissioning projects.
- Speak fluent business English

Responsibilities

- Develop high-performing and reliable firmware for embedded systems using microcontrollers, sensors and analog/digital interface circuits
- Implement proprietary communications protocols over varying media such as serial, wireless, and Ethernet
- Participate in the definition of system functional requirements
- Research, assess and adapt to new technologies necessary for future enhancements of products
- Development of core software and support for 2.4 GHz and Sub-1 GHz RF transceivers networks
- Develop application and firmware code in C, C++, Python
- Participate in design discussions and code reviews
- Engage with the developer community
- RF communications systems development and experimentation (low power RF)
- Participate in new hardware design and close collaboration with PCB designers

Requirements

- Proficient in C and experience or willingness to learn other languages Python
- Experience in linux environment (administration, configuration, comfortable with command line, networking, development toolchains, shell scripting, etc.)
- An understanding of best security practices in software development, especially using the C programming language
- Practical, hands-on knowledge of C programming for embedded systems including use of a variety of IDEs for development and debug
- In-depth experience with embedded microcontroller-based design including interfacing to analog and digital devices
- Strong understanding of real-time systems, managing interrupts, threads, scheduling, semaphores, and state machines with and without an RTOS
- Hands on knowledge of various standard communication protocols and topologies, including Ethernet, I2C, RS232, RS485, SPI
- Mesh Protocol Knowledge , ZigBee, Thread, Z-Wave, Bluetooth/BLE
- Networking Protocol Knowledge TCP/IP, UDP, TLS etc
- Knowledge of 4G, WiFi, etc.
- Working knowledge of source control (preferably Git and GitHub)
- Bachelor's degree in 3+ years of embedded software development experience with a strong understanding of RTOS and middleware
- Strong written and communication skills