



## Senior Embedded Software / Embedded Systems Role

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Intelligent Product Solutions (<http://intelligentproduct.solutions>) is a leading product development professional services company. The leadership and senior engineering team are deeply talented with unparalleled experience in industry and consulting services. Our client base includes some very well-known Fortune 100 brands as well as budding startups. Because of our explosive growth, we are seeking talented individuals to join our team.

Our company is seeking highly motivated application software engineers who would enjoy working on diverse and challenging products. We are looking for individuals who have high creativity balanced with strong engineering fundamentals. We seek developers experienced in multiple environments with expertise in a diverse set of programming languages and technologies.

This is an embedded software development position where the individual is expected to perform direct hands-on development for embedded software on client projects. We are engaged in all phases of the software development lifecycle, from requirements to deployment, constantly working iteratively and delivering quality product through agile development practices. Prior experience in performing bare metal and RTOS based software development is a must.

The ability to work with cross-functional engineering teams is required. We seek high-energy individuals who are self-directed, take responsibility and are able to manage their individual work; satisfying customers who expect on time and budget delivery that meets or exceeds requirements. Outstanding communication and interpersonal skills are required as this position will require frequent contact with our clients on a technical and business level.

### Position Sr Embedded Software E JOB REQUIREMENTS & QUALIFICATIONS

#### EXPERIENCE REQUIRED:

- BS in Engineering; Computer Engineering or Electrical Engineering required; MS preferred.
- Preference for a EE/ Computer Engineer with 15+ years' experience in electrical design and embedded software development.
- Minimum 10+ years experience in electrical design and analysis as applied to small digital/analog design, electronic/mechanical packaging.
- Able to drive complex system architecture (HW and Embedded Software).
- Must be able to drive detailed requirements with cross-functional multidisciplinary teams.
- Must be a self-starter with the ability to manage their individual work, and manage a small project team
- Broad technical background, with an emphasis on EE/Embedded SW. Someone who can get into the weeds with our engineers and define an overall systems architecture and then elicit and arbitrate design tradeoffs.
- Keen ability to develop effective requirements. This includes the ability to work directly with clients to identify what they need, why they need it, and potentially recommend revisions to the requirements based on practical reality.
- Strong communication and interpersonal skills. This is a client-facing position, so experience working with customers in a collaborative way is important.
- Team/Project Management. Ability work with the internal engineering team and client representative(s) throughout the project to establish milestones, ensure deliverables meet the requirements, schedule, and budget constraints, and keep the project moving forward as planned.
- Experience designing microprocessor and microcontroller sub-systems/circuits is required.
- Quantitative skills include classical hand calculations of power, timing, noise immunity and thermal analysis as well as detailed tolerance analysis for high precision systems.



- For those in Engineering Analysis roles, significant experience in applying circuit modeling and analysis is required.
- Direct experience in use of CAD tools is required with a preference for those with circuit simulation expertise.
- Knowledge of FPGA/Firmware
- "Bare Metal" embedded software development
- Experience with secure communications and Protocols CAN, BT / BLE, USB, I2C, SPI, RS232, 485, WiFi (802.11- AP, STA)
- Possess an understanding of hardware feedback and control systems and the ability to implement control algorithms in software. (Motor control)
- Excellent coding skills in embedded C/C++
- Ability to perform software and basic hardware debugging
- Ability to read and understand hardware device datasheets, schematics
- Capable of authoring interconnection diagrams
- Development experience in embedded hardware systems involving microcontrollers (especially ARM based architectures) is highly desired
- Prior work using ST Microelectronics ARM Cortex-M microcontrollers (STM32Fxxx), Amtel (SAMxx), PIC, Nordic RF5x, Rigado, Silicon Labs chipsets
- Test-Driven development, Continuous Integration and other Agile practices
- Familiarity with hardware debugging tools such as oscilloscope, logic analyzer, etc.
- Experience in embedded RTOS application level and middleware software development
- Experience with 3G/4G modem control and device provisioning, GSM specifications, and AT modem command sets and mobile phone provisioning.
- US Citizenship (preferred)
- Position is for contract to permanent

#### **ESSENTIAL FUNCTIONAL RESPONSIBILITIES:**

- Design mid to complex level parts and sub-systems of larger, more complex systems.
- Perform tolerance analysis and simple engineering analysis of electronic sub-systems using classical hand calculations.
- Work in the context of larger multi-functional teams including other electrical engineers.
- Work under the direction of a lead engineer or the Engineering Manager.
- Required to work independently on smaller projects where they may need to direct the work of a small number of supporting staff members.
- Expected to have achieved competency in schematic design and capture as well as board layout for high speed digital designs as well as analogy circuitry as an applied to moderately complex design tasks if needed.
- May be required to investigate and resolve moderately complex problems.
- Expected to be highly proficient using CAD tools, particularly in regard to circuit simulation, for routine use in the performance of their duties
- Must possess excellent communication skills and able to lead teams and interface with clients on a daily basis as needed.