

Title	Senior Digital Embedded Design Engineer
Degree	BSEE, MSEE or Ph.D.
Years Experience	10 + years MUST BE U.S. Citizen - Personnel possessing an active SECRET clearance desired. All personnel must successfully pass a Commercial Background Investigation (CBI) and obtain a DoD Interim Secret Clearance within 6 months

Role

Lead the development of highly integrated custom Embedded Digital system level solutions for a broad range of wireless applications.

Job Description

RF Integration Inc. has an exciting opportunity for an experienced, passionate and hands-on Embedded Digital system design engineer. This position is responsible Embedded Digital system specification, design, simulation, programming, optimization and characterization of board level solutions as part of our custom wireless receivers/transmitters. The ideal candidate will be responsible for performing detailed specification, design and analysis of complex systems which contain ADCs, DACs, microcontrollers, FPGAs, DSPs and DC power conversion. The job includes systems analysis, specification development, modeling & simulation, schematic entry, PCB layout, programming (FPGA and Controllers), test and evaluation, transition to production and leadership and mentoring of junior engineers as required. Experience in preparing proposals including block diagram generation, functionality estimates, labor estimates and performance/cost trade-off analysis is also required. The candidate should have intimate familiarity with embedded circuit design software and various embedded systems analysis software tools. This position requires significant independent and team work with minimal supervision.

Responsibilities

- Provide leadership in Embedded Digital Architectures, system level tradeoffs and decision making
- Distill system level specifications into detailed block level specifications
- Develop top level design approach and simulation strategy
- Perform key technical tradeoffs to ensure the success of the development program
- Provide technical management and direction to internal and external team members throughout the design process
- Develop engineering test plans and lead evaluation and debug

- Act as key technical interface with customer on all embedded systems related issues during the development process
- Perform circuit level schematic, simulation and layout design tasks using appropriate toolset
- Oversee physical design, programming and verification and take ultimate responsibility for product success
- Prepare and present customer design reviews to meet internal and external quality standards
- Manage projects based on company's New Product Development process flow and according to pre-defined performance metrics
- Provide product engineering support for transition of designs to production
- Proliferate design, analysis and layout experience and knowledge through the ranks of the organization through formal and informal technical interaction
- Act as informal mentor to junior engineers
- Key technical interface with business development manager and potential customers during contract negotiations

Skills/Experience

- Degree: BSEE or MSEE
- Experience: 10 - 20 years
- In-depth understanding of Embedded Digital Circuits to include ADCs, DACs, FPGAs, microcontrollers, memory, clocks, DC power conversion and high speed digital interfaces.
- 10+ years experience with RTL development (Verilog or VHDL) targeting either ASICS or FPGA (Xilinx or Altera) devices.
- 10+ years of Verilog coding experience. Knowledge of Xilinx and/or Altera FPGA tools, chips and architectures.
- Authoring of supporting design documentation to a high standard
- Integration of the developed firmware on the target hardware with other system components and software
- Experience of developing on large Altera and Xilinx FPGAs
- Experience of ARM System On Chip
- Working knowledge of the following engineering tools; Synopsis, Synplify, QuestaSim, Altera Quartus, Xilinx ISE/EDK, CVS
- Scripting; tcl/tk, perl
- Familiarity with Mil-Specs
- Familiarity with JESD204B and High speed SerDes interfaces

- PCB design, layout, analysis and verification methodologies for PCBs with RF, AMS, digital and power conversion circuitry. Prefer individual with hands on tool experience.
- Understanding of front-end RF and Analog circuit blocks such as LNAs, mixers, TX modulators, driver amplifiers, Frequency Synthesizers/Phase Lock Loops (PLLs), Continuous-Time Filters and ADC/DAC designs.
- Experience and knowledgeable in the use of lab test equipment such as a Sampling Oscilloscope, Logic Analyzer and Embedded Firmware tools.
- Ability to design, script, run and debug NI LabView.
- Experience working on a small team; having excellent communication skills and ability to present materials for design reviews and customer interaction.
- Must be a passionate self-starter and team player with experience in project leadership and multi-tasking.