



## HARDWARE & FIRMWARE DESIGN ENGINEER

We are looking for talented people that are out of the box thinkers and want to work in an environment where you can make a big difference. If you want to work for a company that has a multitude of areas for you to learn and grow in, a small company atmosphere with the security of a larger company, and work with a top-notch team with extremely talented engineers and fascinating technology, then this is the place for you.

### **Job Summary**

We are looking for a well-rounded, experienced, electronics design engineer to develop hardware and firmware that reside on our custom printed circuit boards. Skills areas include: design of electronic circuits for printed circuit boards, design of Field Programmable Gate Arrays (FPGA) and development of firmware for embedded microprocessors.

The engineer should be able to work in a small company environment and be able to make contributions in many disciplines, including: define hardware and firmware specifications, determine hardware and firmware architectures, define data interfaces, debug systems and manage a project team including outside vendors.

The successful candidate will keep current with the latest research and advances in the field, help shape the direction of the electronics and firmware of the product, and be comfortable tackling unfamiliar or broadly defined problems with little or no outside direction. We are looking for a person with excellent technical, management, and interpersonal skills, a good communicator, and someone who can comfortably work in a multidisciplinary field. Our company has a casual working environment, but high standards of performance.

### **Primary Areas of Responsibility**

- Design and test digital and analog circuits for printed circuit boards
- Design and simulate FPGA's in Verilog or VHDL
- Develop and test firmware for embedded processors that reside on printed circuit boards
- Test and debug of printed circuit boards with custom circuits, FPGA's and firmware
- Define electronics and firmware architectures, specifications and data interfaces
- Generate documentation: requirement documents, operating manuals, flowcharts, etc.
- Characterizing new products, including boards, modules, ASIC's
- Perform sustaining engineering on new products and legacy products
- Expertise in SW Languages (C++), Operating Systems, Development Environments & In-Circuit-Debuggers required to support firmware development

## Minimum Qualifications

- B.S. or M.S. in Electrical Engineering or a related field
- Electronic system development with at least 8 years of professional experience
- Experience in the design of electronic circuits
- Experience in Verilog or VHDL and C or C++
- Experience embedded firmware development
- Ability to test and debug electronics systems to use lab equipment
- A self-starter and team player with excellent communication skills
- Experience with project management

## Experience with Specific Development Tools is Desired: (but not required):

- Experience with circuit design CAD tools:
  - OrCAD Schematic Capture
  - PSpice, LTSpice, HyperLynx
- Experience with FPGA devices and experience with associated development tools:
  - Xilinx and/or Altera FPGA devices
  - Verilog and/or VHDL design languages
  - CAD: Vivado, Quartus, Aldec Active HDL, ModelSim
- Experience with embedded processors and firmware development tools:
  - ARM embedded processors
  - IAR Embedded Workbench
- Experience with Cypress Microsystem's Programmable System on a Chip (PSoC) and PSoC Designer CAD tool
- Experience with lab equipment
  - Oscilloscope, Logic Analyzer
- Project management tools:
  - Microsoft Office & Microsoft Project

## About Silicon Light Machines

Our company has a casual working environment, but has high standards of performance. We are a family-like, dedicated group committed to continuously improving our technology for our current customers and are also excited about our research on novel spatial light modulators meeting the needs of emerging applications. Go to our website at [www.siliconlight.com](http://www.siliconlight.com) for more information on our technology and about our company.

## Generous Benefits

- Paid Time Off and Paid Holidays
- Medical, Dental, Vision and Life Insurance
- Tele-Doc
- Flexible Spending Accounts
- Long-Term Disability
- Long-Term Care
- Employee Assistance and Wellness Programs
- 401k with company matching

Qualified candidates please send resume to: [HR@siliconlight.com](mailto:HR@siliconlight.com)  
Silicon Light Machines is an equal opportunity employer