Principal FPGA Design Engineer

Location: Rochester NY or San Diego CA, United States

Company Description

RAM Photonics has its headquarters in San Diego CA, with facilities in San Diego CA and Rochester NY. The company portfolio includes specialty optical and optoelectronic systems for defense, commercial, and industrial applications, including advanced signal processing, high-power laser, and instrumentation systems. RAM Photonics seeks capable, creative, and driven contributors skilled at communicating and performing within a technical team composed of leading photonics, electronics, and software engineers.

Job Description

The FPGA Design Engineer will be responsible for development and will contribute to commercialization of a new class of processing technology for advanced microwave/photonics systems. The candidate is expected to contribute to the overall system specifications, and is responsible for developing unit, module, and/or FPGA level requirements derived from system level requirements, developing associated architectures, implementing design, performing analysis and testing of the FPGA, module, and/or unit in a laboratory setting. He/she will be familiar with the latest technology trends in the areas of microprocessor, memory, FPGA and interface protocols. The candidate will work in the product development team environment with system, mechanical, and software engineers.

Experience Requirements:

- Minimum 6 years of experience in digital hardware design and testing, or 4 years with a related Master's degree.
- Experience designing with Xilinx UltraScale+ FPGA family.
- Experience with A/D and D/A interfacing and FPGA design experience.
- Experience with optical interconnect modules such as QSFP28 and FireFly.
- Experience with high-speed DSP data paths, digital filters, FFTs, and error-correction codes.
- Experience with external memory interfaces such as DDR4.
- Experience with interfaces and bus standards such as VME, PCI, PCIe, VPX, and Gb Ethernet.
- Experience on Verilog or VHDL scripting languages.
- Experience on simulation and synthesis (e.g. ModelSim, Synopsys) FPGA-specific tools.
- Testbench architectures, working knowledge of MATLAB, C, and/or C++ is required.
- Solid understanding of digital signal processing and the ability to work with system and firmware engineers to specify and develop designs that meet system specifications, costs, and performance requirements.
- Skills to handle fast pace and dynamic product development environment
- Strong team player with good interpersonal skills as well as excellent written/verbal communication skills

Desired Skills:

- Modeling and simulation experience in Zemax, FRED, VirtualLab, or similar software.
- Familiar with at least one CAD package, preferably Solidworks.

Qualified applicants should submit resumes with a cover letter to: **employment@ramphotonics.com**