Job Description – Senior FPGA Design Engineer

MuxLab Inc. (Montreal, Canada), a high technology leading designer and manufacturer of connectivity solutions for the Pro AV, Broadcast and Structured Cabling market, is actively seeking a candidate for the position of Hardware Design Engineer.

As an engineer, with a bachelor degree in electrical engineering and with at least 5 years' experience in hardware and FPGA design and knowledge of data transmission lines, Audio & Video transmission, and high bandwidth system design, you will be part of the R&D team designing and developing high speed video products.

MuxLab offers a unique R&D environment composed primarily of scientists and engineers implementing cutting edge audio-video technology solutions. Engineers at MuxLab are exposed to a diverse array of projects that are challenging and offer strong opportunities for learning and advancement while maintaining a great work-life balance.

Responsibilities

- Manage R&D Projects.
- Develop and design Audio & Video product.
- Perform a feasibility study of the project.
- Document the projects according to Muxlab's standards.
- Write the project technical specifications.
- IP Core development.
- Develop electrical schematics and assist the electrical CAD specialist in the PCB layout artwork.
- Perform the Verification and Validation of the product developed.
- Participate in the editing of the user's guide.
- Coordinate the transfer to production.

Required Skills and Experience

- Proven track record of high-speed digital signal transmission line design and layout.
- Proven track record of high speed and complex FPGA design implementation: FPGA design, VHDL / Verilog, RTL design and simulation, Timing closure, Familiarity with Xilinx Vivado and/or Altera Quartus
- Experience in development of parameterizable IP cores
- Board bring up experience (power supply troubleshooting, JTAG chain debugging (initial configuration of microcontrollers, FPGAs, …), debug of low-level interfaces: I2C, UART, USB, …)
- Experience in development with a real time operating system and knowledge of microprocessors and micro-controllers is an asset (C / Assembly, GCC toolchain, In-circuit debugging, …)
- Experience in digital PCB design, both schematics and layout (High-pin-count digital devices (e.g. BGAs), High-speed serial interfaces (e.g. gigabit transceivers), High-performance RAM (e.g. DDR3), On-board power supplies, Clock and signal integrity issues (impedance matching, …), Mixed-signal issues (e.g. interfacing to ADCs / DACs)
- Additional Skills: Experience with digital/analog video standards, Advanced scripting (TCL, Python, etc.), PCB design for manufacturing (DFM) techniques, Signal/image processing experience Familiarity with DxDesigner and PADS
- Must be a self-starter able to work in a multi-technology team environment with a minimum of direction.

General

- Must have a BAC in electrical engineering with a specialty in electronics and or telecommunications.
- Effective written and spoken communicator
- Dynamic, autonomous, and team-oriented individual
- Interaction with customers
- Must be a Canadian citizen or permanent resident

To apply for this position please e-mail your CV to careers@muxlab.com