FPGA Engineer

Job Offer

The Company

3Brain AG is a Swiss deep tech company working on cell-electronic interfaces that link biological networks to computers via custom-made semiconductor microchips. Our mission is to empower life scientists to probe intelligent networks, accelerate biomedical discoveries for the benefit of patients, and create a future more exciting than the present. Our interdisciplinary team of scientists and engineers are constantly pushing the boundaries of engineering for life's complexities. We are ambitious, fast-growing and love to explore. The company is headquartered in Switzerland nearby Zurich, has a Data Science and Discovery Unit in Genova, Italy, and has installed its cutting-edge products in laboratories and pharma companies worldwide.

More info: **http://www.3brain.com/about.html**.

Job description

3Brain is looking for a full-time FPGA engineer for its Swiss office. You will help develop new embedded systems for high-speed data acquisition devices and improve and maintain the existing product line. You will be responsible for fetching data from high speed ADCs or to stream to high-speed DACs. You will design IP cores for complex signal processing and hardware accelerators. You will also provide the necessary FPGA infrastructure to communicate with hardware peripherals (SPI, UART, I2C, etc.).

In particular, your tasks involve:

• Developing FPGA projects with Intel Quartus and Platform Designer.
• Creating hardware-accelerators for our embedded systems and architectures with self-checking testbenches (VHDL).
• Integrating FPGA modules for peripheral control (SPI, UART, I2C, etc.).
• Coding the hardware abstraction layer for custom FPGA Ip cores (C/C++).
• Maintenance of the existing VHDL code base.

Required Qualifications

Nobody knows it all, if you miss some qualification but you are willing to learn you should still apply.

- BSc/MSc in Electrical Engineering or similar.
- 3-4 years of experience in FPGA development / HDL coding.
- FPGA development tools such as Intel Quartus Prime or Xilinx Vivado.
- VHDL-2008 proficiency.
- VUnit: a test framework for HDL.
- FPGA timing constraints with Synopsys Design Constraints (.sdc).
- Knowledge of embedded systems/systems on chip.
- Strong commitment to high coding and design/architecture standards and best practices.
- Basic understanding of electronics.
- Fluency in English.
- Initiative and independence.

Additional Qualifications

- VHDL verification libraries such as OSVVM or UVVM.
- Knowledge of the Linux operating system for embedded devices.
- Proficiency in embedded software programming C/C++.
- Verilog and System Verilog.
- Proficiency in Python programming.
- Background in signal processing.

What We Offer

- A dynamic and stimulating work environment driven by a desire to build transformational technologies to help others.
- A young, fast-growing company with plenty of opportunities for personal growth and development.
- Working place: **Pfäffikon SZ, Switzerland**. It's a beautiful lakeside village just outside of Zurich, the country's main cultural, financial and business center.

To apply send your CV (English only) to **hr@3brain.com**, subject: FPGA Engineer. **Please ensure your CV includes the years of experience with each technology listed under the 'Required Qualifications.'** Applications missing this information may not be considered.