



EMBEDDED SYSTEMS / FPGA DEVELOPMENT ENGINEER

Contract type Permanent position, 80-100%

Location Sion, Switzerland. On site

Starting date As soon as possible

ABOUT US

Imperix is a leading provider of control and prototyping solutions for power electronics. Founded in 2013 as a spin-off from the Swiss Federal Institute of Technology (EPFL), the company develops and commercializes prototyping and test equipment for power electronics, electric drives, smart grids, and related fields. Our products are designed to accelerate the implementation of power converter prototypes and facilitate experimental activities in research laboratories. Our customer base includes both universities and industrial clients seeking to validate state-of-the-art control techniques or new power converter topologies. Today, over 90% of our sales are generated internationally across more than 50 countries.

At Imperix, we are a young and dynamic team of approximately 35 people. We are conveniently located within a short walking distance of the train station in Sion.

JOB DESCRIPTION

You will be part of the firmware group (4-6 engineers), which is part of our larger software development team (12 people). As such, you will contribute to the company's developments, with a special focus on embedded systems and FPGA-based functions. A good overview of the related activities can be obtained indirectly by browsing the product documentation on our website.

When working with us, you will act as the owner of typically 2-3 epics / feature developments per year, which you will conduct from the project / product definition phase to the commercial promotion of the implemented result. For that, you will collaborate with the project director, who will provide you with application level requirements and guidance.

During your work, you will actively collaborate with other software development engineers, firmware engineers, and power electronics engineers. Sometimes, you will also actively exchange with customers, typically during larger projects.

RESPONSIBILITIES AND MAIN DUTIES

- Developing low-level, multi-threaded bare-metal applications in C++.
- Implement complex FPGA designs through simulation, synthesis, and deployment.
- Develop and maintain embedded Linux distributions using a Yocto-based environment.
- Implement data exchange between the CPU and the FPGA on AMD/Xilinx SoC.
- Evaluate and select external hardware components and peripherals based on system requirements. Interface with both high-speed peripherals and traditional communication buses.
- Perform hands-on board bring-up, validation, and debugging at the hardware-software boundary using oscilloscopes, logic analyzers, and standard lab equipment.

REQUIREMENTS AND QUALIFICATIONS

Education and experience: MSc degree in Electrical Engineering or in a related field.

Seniority: Typically junior, but senior profiles are welcome as well.

Technical skills:

- Proficiency in C++, VHDL.
- Experience with AMD/Xilinx Zynq System-on-Chip. Familiarity with Yocto-based environment.
- Demonstrable background in complex FPGA designs.
- Experience with HLS tools.

Language: Good command of English, both written and spoken. Other languages are a plus.

THIS POSITION WILL SUIT YOU IF

- You appreciate a young and friendly environment that is also rigorous and demanding.
- You are interested in a role that isn't just about coding or testing, but rather focused on leading projects from start to finish, with some project management responsibilities.
- You are capable of putting yourself in the shoes of a typical customer, i.e. a researcher in power electronics. You are interested in bringing such a perspective to your work.

HOW TO APPLY

Please send a complete application to jobs@imperix.ch, including:

- Your CV,
- Substantial evidence that you possess the required technical skills,
- A personalized cover letter, through which we can see that you have understood who we are, where we are located, what we do, and what our firmware does. Please also indicate what you imagine that you could bring to the team,
- Proof that you already have a working permit in Switzerland or that you're entitled to get one,
- Information about prior developments, with links to the source code, is also appreciated.

We read every application carefully and reply within 10 days to profiles that interest us. We correspond only with applicants who provide a complete application as described above. Generic or obviously machine-generated letters will not be considered.