



## Software Engineer

### About picoChip

picoChip Designs Limited was founded in Bath in 2000 and has built a world-class team of over 100 employees to become a leading wireless technology provider producing chips, tools and reference designs for wireless communications infrastructure. At the heart of our products is the picoArray, an array of fully-programmable processing elements developed by picoChip for high-performance signal processing: this offers our customers unrivalled benefits in terms of cost, development time and flexibility.

picoChip strives to be an employer of choice and in so doing offers a flexible, professional and friendly environment that facilitates excellence through empowerment, continuous development and valuing staff.

### Role Description

A position is available within the Software Infrastructure Group. This group has two main responsibilities, for the picoTools Development Tool suite used to program the picoArray and for the Board Support Package (BSP) that resides on an embedded host processor.

The picoTools Development Tool suite is used to program all applications on the picoArray device which is a multi-core device with many hundred cores per device. This has been developed under Linux using a combination of C++ and Tcl/Tk. The suite consists of a Vhdl compiler, a C compiler (based on GNU GCC), a partitioning tool, a placement and routing tool, a simulator and a system debugger.

The BSP consists of an operating system (currently Linux based), board specific drivers and various utilities. The utilities allow user's host applications to interact with picoArray applications and allow picoArray debugging tools to operate.

In both of these areas the aim is to develop and maintain robust software to perform these tasks and to support the users of this software to allow them to efficiently develop their solutions.

### **Key responsibilities/tasks in this role will be:**

The responsibilities are primarily to work on the picoTools product but may include aspects in the BSP. The following are tasks that may be required:

- Development, testing and maintenance of the applications with picoTools.
- Interaction with system developers to specify, implement and test methods and features for improving debugging productivity.
- Development of C++/C applications.
- Testing of picoTools applications within an in-house verification framework.
- Development and maintenance of interface software to allow picoArray debugging.
- Development of picoTools and BSP support for new picoArray devices.
- Provide training on advanced features of picoTools to internal users.

### **Key attributes:**

- A good understanding of design and coding methods.
- The ability to work independently or as part of a team.
- The flexibility to work on many areas of activity within the group.
- Some knowledge of the hardware/software interface.

### **Desirable attributes:**

- C++/C knowledge.
- Development within a Linux based environment.
- Good presentation skills.
- Understanding of parallel/multi-threaded systems.
- Scripting experience e.g. Tcl or Perl.

### **Qualifications**

The successful candidate is likely to have a degree in Computer Systems Engineering/Computer Science or a related discipline and will either be a new graduate or have 1-2 years experience in software development.