

Hardware Development Engineer, Full-Time, Bristol UK

Graphcore has created a completely new processor, the Intelligence Processing Unit (IPU), specifically designed for artificial intelligence. The IPU's unique architecture means developers can run current machine learning models' orders of magnitude faster. More importantly, it lets AI researchers undertake entirely new types of work, not possible using current technologies, to drive the next great breakthroughs in general machine intelligence.

We believe our IPU technology will become the worldwide standard for artificial intelligence compute. The performance of Graphcore's IPU is going to be transformative across all industries and sectors whether you are a medical researcher, roboticist or building autonomous cars.

This position will require extensive practical work in the lab, bringing up, debugging and validating designs. Expertise in the use of high speed digital oscilloscopes, logic analyzers and signal generators is required. Experience working in a small team in a start-up environment, which requires a wide range of skills, an eagerness to participate in all parts of the development cycle from concept to testing in the lab and supporting manufacture and customers.

Responsibilities

- Development of production systems and test boards for Graphcore's family of processors
- Product system definition & specification
- Graphcore Integrated Circuit device interface requirement definition
- Third party device selection, supplier relationships, sample procurement & evaluation
- Schematic entry, PCB design requirement and constraint definition, PCB layout supervision, signal & power integrity simulation, liaison with thermal and mechanical engineering
- Prototype production support, prototype bring up, evaluation & system test, prototype validation.
- Support of reliability engineering
- Support of transfer to mass production
- Early Customer support.

Requirements:

- Five or more years' experience in high speed digital circuit development, with a deep understanding of signal and power supply integrity
- Knowledge of high speed circuit design requirements to ensure signal integrity and robust rejection of interference and cross-talk is essential. Experience of high frequency (multiple GHz) SERDES design is an advantage
- High speed processor system design with experience in processor interfaces such as PCI, DDR, FLASH, Ethernet, USB, I2C, SPI, JTAG etc.

- Detailed knowledge of high-current, multi-phase DCDC voltage regulators, linear regulators and PCB design requirements for efficient power delivery
- Experience in Mentor (or similar) PCB design flow for schematic capture, design constraints, PCB layout.

A rigorous approach is required to make sure designs will work correctly the first time. Independent working and the taking of responsibility, with excellent cooperative and communications skills to work in a small team environment.

We welcome people of different backgrounds and experiences and are committed to building an inclusive work environment that makes Graphcore a great home for everyone. We are an equal opportunity employer and want to build a work environment where everyone is happy, productive and respectful so they can do their best work. If you have a disability or additional need that requires accommodation, just let us know.