

Principal electronics and embedded systems engineer

£70,000 - 90,000 + stock options, London

Keywords: electronics, firmware, Embedded C, FPGA, SystemVerilog, ADC, DAC, microcontrollers, system architecture, R&D

Company information

Cortirio's mission is to save lives by developing low-cost, portable brain imaging.

Medical imaging is typically non-portable and expensive, causing delays to treatment and costing lives. The problem is even more acute in low income countries: two-thirds of the world's population lack access to basic medical imaging.

Cortirio are developing a low-cost, portable headset that enables brain imaging at the bedside or roadside. Our cutting edge technology uses infrared light to image blood at high resolution and automatically detect injuries.

Role description

You will work closely with the CTO, from the high-level system design to low-level implementation. Working in R&D within a cross-functional team of engineers, doctors and scientists, you will push the state of the art in lightweight, high-sensitivity electronics to produce life-saving products. We have proven the technology on the benchtop and are developing a prototype for clinical testing.

We are looking for multidisciplinary engineers who will design and build prototype electronics and firmware systems (both FPGAs and microcontrollers), including schematic capture and board bring-up. This is very much a role to make your own. We are working at the cutting edge, so you will have a wide scope to test your own ideas.

We like to think deeply about complex problems, and the effect any solution will have on other parts of the product and the team. Your role will include specifying requirements and options, rapidly iterating on potential solutions and thoroughly testing/debugging your trialled solutions. We'll encourage you to innovate while giving you the support you need to do so.

Why join Cortirio?

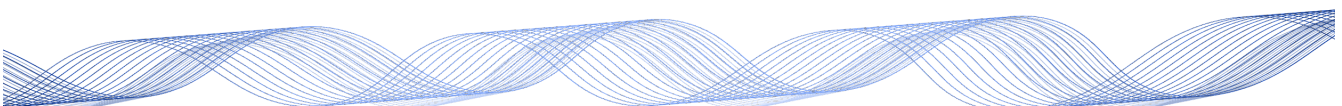
We're a small group of perpetual learners and innovators with a flat company structure looking for engineers who want to grow with us, take on responsibility and help create a technology that will make a difference. As an early stage startup, we wear many hats to get the job done. You'll get an overview of all areas of the product, as we don't work in silos.

We work on a flexible, hybrid model with some remote working, and some time in the office near Langdon Park DLR (London, E14). We offer meaningful share options to all employees. Work life balance is important to us. Other perks are 33 days holiday, as well as weekly lunch in our co-working space.

If you want to work in a tight-knit team but have the autonomy to have a big impact on the product, the company and the world, we'd love to hear from you!

Required skills

- experience delivering projects with ownership/responsibility for high-level system design
- experience developing sensor-based products in an R&D environment
- embedded system architecture definition with board level high-speed IC interfacing
- circuit design and simulation
- schematic capture and PCB layout
- first-off hardware bring-up, debugging, and characterisation
- development of embedded systems using FPGA and microcontrollers
- languages: SystemVerilog and Embedded C



- version control using Git

It would be helpful but but not essential if you have experience with some of the following

- design and layout of high precision ADCs and DACs
- reducing EM interference and crosstalk in an high precision analogue acquisition chain
- work with small signals in a challenging signal-to-noise environment
- sensor array calibration and compensation
- digital signal processing experience with modulation/demodulation algorithms
- biological or sensor signals
- developing physics/mathematical models
- developing medical products

How to apply

Please email your CV to hire@cortirio.com

The hiring process

- 45 minute video call with our Head of Talent to learn more about you, your aspirations and tell you more about the role
- 1 hour video call covering cultural fit and your technical experience
- 3 hour in-person interview on design thinking and practical skills
- Reference checks

We are happy to provide details of the interviews in advance to help you prepare as best as you can. If you require any adjustments at any stage of the interview process please let us know and we will be happy to assist.



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