

XTA Electronics Ltd.

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Job Title: DSP Software Engineer

Department: Research and Development

Job Description

A: Purpose and Scope

- To play a major role within a small design team developing world class products for the professional audio market
- To specialise in DSP development, especially algorithms for sound manipulation and management that are effective, efficient and innovative as required.
- To understand and respond to customer requirements especially concerning audiophile quality expectation
- To assist with a wide range of other activities as needed to help develop successful products and meet business objectives

B: Responsibilities

- To develop audio DSP software
- To define cost (time) and performance targets and take due care to meet them
- To work with hardware and embedded designers to debug designs and develop effective software test strategies
- To document and archive data consistent with company practice
- To assist in the specification of hardware platforms
- Any other tasks that become necessary to ensure business needs are met

C: Organisation Relationships

- Reporting directly to the R&D Manager
- Working with Technical Director (for DSP), and engineering Project Leaders
- Working as a team member within the R&D department

Job Requirements

A: Education & Training

- HNC or degree qualified in maths, software or similar engineering subject.
- Some training in, or experience of, professional audio systems
- Understanding of DSP and FPGA architectures and data bus systems
- To have a practical and theoretical knowledge of office computing environments

B: Technical Requirements

Essential

- Comprehensive understanding of audio DSP algorithms and their coding
- Comprehensive understanding of DSP assembly language (ideally for SHARC)
- Good knowledge of C & C++
- Experience with real-time environments

Desirable

- Exposure to audio data compression algorithms and codecs
- Experience with network/internet protocols and languages (TCP/IP, HTTP, HTML, JavaScript etc.)
- Experience with databases and their use via remote systems (e.g. via SOAP)
- Exposure to computer hardware interfaces such as USB, FireWire, PCI etc.
- Familiarity with scripting languages such as Perl or Python
- Familiarity with GNU toolchain

C: Experience

- 3 to 6 years in related industry
- Design of algorithms for professional audio applications
- Use of basic electronic lab equipment (oscilloscopes etc.)
- Teamwork and collaborative development