Software Engineer – Spacecraft Technology

STAR-Dundee Ltd. (www.star-dundee.com) technology is being used on spacecraft monitoring the Earth's land, oceans and atmosphere, exploring Mars, visiting and bringing back samples from asteroids, mapping the stars in our galaxy, providing GPS and communication services, preparing to resume human exploration of the moon, and on many more Earth observation, scientific, astronomy and exploration missions.

STAR-Dundee is a world leading supplier of spacecraft on-board network technology and electronic test equipment. To meet growing demand, we now seek to expand our research and development team to work on new products related to spacecraft on-board data-handling and avionics networks. We are looking for a Software Engineer to join our Research and Development team.

Job Specification

STAR-Dundee is seeking a Software Engineer to work on new products and technology for spacecraft applications. The successful candidate will join STAR-Dundee's engineering team and will work in one or more of the following areas:

- Drivers and APIs to access spacecraft test and development equipment;
- Graphical and command-line applications to configure and control spacecraft test and development equipment;
- Software for spacecraft embedded systems.

A candidate should have the following qualifications/skills/experience:

- A 1st class degree in computer science, electronics engineering or a related subject, or equivalent experience;
- Good knowledge and practical experience of C and/or C++;
- At least two years industrial experience;
- Good attention to detail;
- Ability to work from their own initiative with limited supervision, as well as alongside other team members;
- Ability to write comprehensive, detailed design documentation;
- Good verbal and written communication skills;
- Good mathematical skills.

Experience/skills in some of the following areas would be advantageous:

- Ability to develop software for Windows and Linux operating systems;
- Experience in using development environments such as Visual Studio;
- Experience in using a version control system such as Subversion;
- Experience in embedded systems development and debugging;
- Experience developing for real-time operating systems such as VxWorks;
- Experience writing device drivers for embedded systems, Windows or Linux;
- Good knowledge of C# and/or Python;
- Good knowledge of computer networking.

Further details are available at www.star-dundee.com/vacancies.

STAR-Dundee

STAR-Dundee is a successful SME in the aerospace engineering sector, which designs network technology for use on-board spacecraft. STAR-Dundee provides electronic test and development equipment and chip designs for spaceflight applications. STAR-Dundee concentrates on the design and support activities, with a highly skilled workforce; around 90% graduates and 40% PhDs. STAR-Dundee has a wholly owned subsidiary, STAR-Barcelona, based in Sant Cugat just outside Barcelona. All the company's manufacturing is carried out by suitably qualified subcontractors based in the UK.

The company has been operational for over twenty years, building up a global customer base that includes just about all the famous names in the aerospace industry and the world's leading space agencies (including NASA, ESA, JAXA and CASC). STAR-Dundee has distributors in the USA, Japan, China, and South Korea, serving Europe and the rest of the world directly from Dundee.

STAR-Dundee is a world leader in SpaceWire and SpaceFibre technology. SpaceWire is a computer network for use on board spacecraft, which connects together instruments, mass-memory, processors, the downlink telemetry, and other on-board sub-systems. SpaceWire has been a highly successful collaboration between European Space Agency (ESA), academia and industry. STAR-Dundee's Chief Technology Officer wrote the SpaceWire standard for ESA with inputs from international spacecraft engineers. The SpaceWire standard was published in 2003 and is now being used or designed into more than 100 spacecraft costing well over $50 billion. Space missions relying on SpaceWire technology include Earth observation, scientific, exploration and commercial spacecraft. STAR-Dundee chip designs are being used on many of these spacecraft and our test and development equipment is used during their design, integration and test.

Over several years STAR-Dundee has developed a new high-availability, high-reliability, multi-Gbit/s network technology for space applications, called SpaceFibre. SpaceFibre runs over electrical and fibre optic cable and is the next generation of spacecraft on-board network technology, featuring innovative quality of service and fault detection, isolation and recovery capabilities. The SpaceFibre standard was published by ESA's standardisation body in 2019 and is now being designed into several space missions and already flying on two experimental spacecraft.

STAR-Dundee is a major partner in a series of ESA and UK Space Agency projects to develop THz radiometer technology for space applications.

The highly qualified and experienced team of engineers in STAR-Dundee has well over 125 person-years' experience in spacecraft data-handling and microelectronic technology. In 2013 STAR-Dundee won The Courier Digital Business of the Year and overall Business of the Year awards and in 2014 it won the Scottish Chamber of Commerce Business of the Year award for companies with fewer than 25 staff. In October 2022, the Hi-SIDE Project Consortium, for which STAR-Dundee was a leading member, won the "Innovation in Space Award" from the European Space Forum for its work on future satellite data-handling chain electronic systems.

Other Information

Salary will be commensurate to experience. Please state your current salary when applying.

STAR-Dundee is an employee-owned company, with over 50% of the company shares owned by an Employee Ownership Trust on behalf of the employees. Staff are represented on this Trust and on the Board of Directors, and also benefit, when there is a dividend payment to the other shareholders, with a tax-free bonus.

Applicants must have the right to work in the UK. Please state in your application that you are a UK citizen or have UK Government EU settled status, or provide details of your right to work in the UK. **If this information is not provided your application will be rejected.**

Engineers working for STAR-Dundee are likely to travel internationally from time-to-time, to support our worldwide customer base.

Location

STAR-Dundee is located in a renovated 19th century town house in the heart of Dundee overlooking the Tay estuary. The building is adjacent to the University of Dundee and a few minutes' walk from the city centre. Dundee is a thriving University town in the heart of Scotland (50 miles north of Edinburgh), close (20 miles) to the Highlands and an ideal base for those who enjoy outdoor activities.

Dundee, Scotland's fourth largest city, was listed by Lonely Planet in 2018 as one of the top ten best European destinations to visit and praised for its 'head-turning' urban redevelopment.

Dundee was lauded for its growing cultural scene and the exciting transformation of the city's historic waterfront; a development spearheaded by the opening of the newest branch of the V&A in September 2018. Describing the city, Lonely Planet's writers praised a creative scene that "increasingly attracts some of the UK's most visionary talent", building on its selection by UNESCO as the UK's first City of Design in 2014. The city will be further enhanced by the opening of Eden Project Dundee, which is planned to be completed in 2025.

Lonely Planet's spokesperson and Editorial Director, Tom Hall, said: *"While visitors have always been assured of a friendly welcome, Dundee has often been overlooked by travellers to Scotland, but that should be set to change. The opening of V&A Dundee is a really exciting moment that marks the city out as well worth a visit, but throw in nationally important museums and attractions, and its dynamic, creative spirit, and travellers will find a city boasting plenty to discover."*

How to apply:

The closing date for applications is 26th May 2023.

To apply for this position please send your CV and contact details of three referees, along with a brief covering letter stating how you feel you meet the above criteria, and indicating your current salary to:

Carole Carrie

STAR-Dundee Ltd.

Email: carole.carrie@star-dundee.com