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## About Alén Space

Alén Space is a **New Space** company focused on the development of missions based on Nanosatellites as well as products and services related to them. Our mission is to help our clients to develop their business plan designing, manufacturing and operating satellites in order to execute the application they need.

While Alén Space is a new company, our team has been involved in several complete Nanosatellite missions, from specification to delivery, during the last **11 years**. Alén Space technical team is composed of systems engineers, electronic engineers, AIV engineers, software and operations engineers and project managers; with a large experience on IOD, communication, commercial and scientific missions, with private and public institutions such as the European Space Agency.

Alén Space's value proposition resides in the flexibility and expertise of our **team**. We utilize our design and testing methodologies, which allow the use of components from various suppliers, to create the most suitable platform for the requested mission. During the last 11 years, all our nanosatellites missions have been fully designed in house, following the same multi-provider approach, resulting on a 100% success rate in orbit, for all launched missions.

At Alén Space, **quality** and **flexibility** in the design, manufacturing and testing are hallmarks of the company. The quality of the process is achieved through meticulous testing and verification processes, keeping traceability of all the executed activities. The flexibility is achieved thanks to the proximity relationship with our clients and to our supplier agnostic approach. This relationship aims not only at easing the communication process but also at allowing our commercial clients to take an important role on the design aspects. In this line, we design the most flexible spacecraft platforms, to accommodate subsystem suppliers' changes without heavily impacting the overall mission. Our systems and AIV engineers work closely with the client, in order to take decisions and involve them in the process.

Our team has created what we have termed the **Alén Space Matrix**, a work method that applies the strict quality standards set by the European Space Agency (ESA) and the European Cooperation for Space Standardization (ECSS). All of our management, system engineering and AIV processes are based on those standards.

Quality, Flexibility, Scalability, Proximity, Expertise and Success define all Alén Space values.

**Do you want to orbit with us?** We offer the opportunity to join a challenging space project together with a self-motivated team with great experience in the design and manufacturing of satellites and with many missions of history!

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## Job Description

The candidate will work as part of a team of engineers to develop radio embedded solutions for space communications systems. She or he will support the implementation of DSP (Digital Signal Processing) algorithms in programmable devices (FPGAs) and embedded Linux environments.

## Position Tasks and Responsibilities

The following tasks will be assigned to the candidate:

- Design digital communication systems using platforms including software defined radios (SDRs) and FPGAs.
- Functional modelling of DSP algorithms and their implementation in RTL (Verilog/VHDL) or high-level languages (C/C++).
- Integration of programmable cores within a SoC with an embedded Linux system.
- Support the evolution of our custom space-tailored radio platforms.

## Candidate qualifications and skills

The candidate must have a Bachelor or Master's degree in Telecommunication, Computer Science, Software or equivalent engineering degree.

The **required** experience and skills are:

- The applicant must be fluent in English
- Strong wireless modem architecture and digital communications foundation
- Understanding of DSP algorithms.
- Experience with software radio applications.
- Hands-on experience with FPGA design flows.
- Familiarity with embedded Linux systems.

It will be also **desirable** the following qualifications and skills:

- Knowledge of coding theory and techniques: LDPC, Turbo codes
- Familiarity with software defined radios and GNURadio is a plus

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- Development of custom embedded Linux systems with Buildroot/Yocto
- Knowledge of SoC architecture, bus fabrics (AMBA/AXI) and arbitration
- Experience with Xilinx SoC platforms (Zynq, RFSoc)
- Some experience with Python or other scripting languages is desirable.

The applicant must have good communication skills and must be able to work autonomously in an effective manner; while cooperating in a potentially international and culturally diverse team.

Moreover, the applicant must have good analytical, organizational and reporting skills; together with a proactive attitude to solve problems individually and an interest in technology development.

The applicant must be eligible to work and live in the EU.

## Conditions

We offer a full time 6 months contract, with an option to extend it to an indefinite term contract.

- ❖ Location: Vigo area (Spain)
- ❖ Starting date: Immediate

If you are a proactive person and want to commit yourself to a present and future project, **we hope to receive your CV** in one of the following URLs:

[English] <https://alen.space/careers/>

[Spanish] <https://alen.space/es/trabaja-con-nosotros/>