

FPGA/VHDL Design Hardware Engineer

Job offer



University Space Center of Montpellier (CSUM)

The CSUM has recognized expertise in the field of design, development, testing and operation of nanosatellites and their subsystems, as well as in management and product assurance of university space projects.

With 25 full-time engineers, the CSUM has AIT (Assembly Integration and Tests) resources, a 200m² ISO8 clean room and an ISO5 tent, a CIC (Concurrent Engineering Center), a vacuum thermal chamber [-170°C;+150°C], a 58 kN vibrator and a VHF/UHF and S band transmission/reception ground station. It has developed its own 1U format nano-satellite platform technology ROBUSTA-1U, 3U, 6U and 12U with the support of the Van Allen Foundation, French and European space agencies.

COMETES project

CSUM and the Van Allen Foundation (FVA), a foundation of the University of Montpellier overseeing the management and financial support of CSUM, were awarded a call for projects on future skills and profession, alongside 25 other training and space industry stakeholders from the Grand Sud region of France (COMETES project).

The COMETES project (funded by the National Research Agency with €20M over five years) aims to foster the emergence of talent and accelerate the adaptation of training programs, from vocational certificates (CAP) to doctorates, to meet the skill needs of the space industry.

Main mission

The main responsibility is to provide expertise in FPGA hardware engineering, including designing, implementing, and verifying FPGA blocks. The role involves working on system architecture and integration, and collaborating with a multidisciplinary team to support FPGA design and system development. You will be responsible for documenting design specifications, running tests, and supporting board-level verification activities. The position also requires proficiency in key communication protocols and embedded systems, alongside hands-on experience with various lab equipment and version control systems.



Skills & qualifications

Main ones

- Bachelor's or Master's Degree in Electrical/Electronics Engineering, Embedded Systems Engineering, Telecommunications Engineering (with an electronics ou embedded systems focus), Aerospace Engineering (with a focus on electronic ou embedded systems).
- Experience in FPGA development, including RTL design using VHDL or Verilog.
- Proficient in the full FPGA design flow, including synthesis, place & route, timing analysis, and lab-based verification.
- Skilled in creating technical documentation, such as specifications, design descriptions, and test plans.
- Eperience with lab equipment, including oscilloscopes, logic analyzers, and signal generators.
- Knowledge of system architecture and embedded systems, including microcontrollers and SoC integration.

- Familiarity with communication protocols such as CSP (Cubesat Space Protocol), CAN Bus, and CCSDS.
- Experience with PCB design support, including interpreting schematics and working alongside hardware layout engineers.
- Comfortable working in multidisciplinary teams, contributing to both hardware and software aspects of projects.
- Version control experience, with tool like Git.
- Proficiency in technical English (reading, writing, and speaking).
- Ability to work effectively in teams

What can we offer?

- Dynamic and challenging environment. Participating to the whole lifetime of a nanosatellite's project. Fully equipped facilities (mission control center, UHF antennas, S band antennas, cleanroom, TVAC, shaker, workshop)
- Contract: 1 year (CDD)
- Salary: : 2130 € to 2645 € gross monthly
- Holydays: 30 to 46 days per year
- Possibility of partial remote work
- Preferred starting date: autumn 2025

How to apply?

We accept young graduate. Send your resume and cover letter via the following form:

<https://csum.umontpellier.fr/en/jobs-job-offers/>

