

# Senior hardware RF Engineer

## Work environment

Since more than 20 years, EmTroniX is designing and producing advanced electronics and embedded software for NewSpace applications. We are gathering seven fields of expertise in-house gathering unique experiences and extended technical knowledge in electronics, embedded software, digital signal processing and telecommunication systems design. Recently, EmTroniX has decided to focus on the development and commercialisation of its new products portfolio. This role of Senior RF Engineer will directly contribute to this purpose. The position will allow the candidate to imagine, develop and validate complete RF products or RF solutions under customer specifications. Internal design, prototyping and testing facilities will be available to facilitate the validation of each new design. EmTroniX is an energetic, human-sized and innovative engineering company with more than 30 international employees.

## Key responsibilities

- Design, implement and validate RF/Microwave passive and active electronics circuit such as filters, power divider/couplers, PA, LNA, High Purity Clock generator, transceivers chains, up/down converters chains, etc.
- **Analyse** and **simulate** high frequency systems
- Optimize new and existing design to facilitate manufacturing, assembly and testing.
- Implement and follow-up prototypes manufacturing and assembly
- Develop test methodology and verification plans for all analogue functional blocks and all associated documentation.
- Perform **tests** in laboratory and other specific test facilities
- Analyse test results and **debug** the assembly circuits.
- Implement design correction and prepare for batch production

## Job requirements

- Experience with circuit analysis and design, CAD schematic tools, circuit simulation tools, and design evaluation
- Deep knowledge in high-quality clock signal generation, perfectly managed phase noise and complex PLL design.
- Deep measurement experience using following equipment: spectrum and signal analysers, signal generators, vector network analyser.
- Experience with block diagrams of up-converter and down-converter superheterodyne topologies.
- Experience with RF and microwave design and measurement systems up to Ka-band

- Experience with ADS and CST/HFSS simulation tools or equivalent.
- Ability to work in a fast-paced environment with multiple and sometimes conflicting priorities

### Preferred skills

- Previous records of design and implementation RF transceiver chain
- Know-how in Software Defined Radio and Digital Signal Processing
- Knowledge in antenna design
- Familiar with EMI/EMC constraints, design mitigations and tests
- Ability to perform EMC tests such as emission and susceptibility, and to propose solutions in case of problems
- Python script knowledge

### Who are we looking for?

- Graduate with Master's or Ph.D. Degree or equivalent work experience in Electronic Engineering
- Excellent communications skills both written and oral
- Strong analytical and problem-solving skills
- Must be able to work collaboratively in a multi-disciplinary team environment
- Fluent in English (French is a strong asset and optionally German)
- Over 5 years of demonstrated experience in RF/Microwave design
- Radio Amateur is a plus

**Interested in this job offer? Don't hesitate to send us your resume at [info@emtronix.lu](mailto:info@emtronix.lu)**