

OPEN POSITION: RF SYSTEMS ENGINEER

ALCAN is a start-up company working towards a future where every moving vehicle (cars, ships, trains, planes) has broadband connection by using ALCAN's groundbreaking liquid crystal based smart antennas. ALCAN's patented technology enables ultra-thin, lightweight flat panel antennas which can track satellites fully electronically without any moving parts.

We are looking for enthusiastic individuals who want to be a part of this exciting change and work towards developing these antennas to make a global impact by enabling communication easier for every human being.

We have an open full time position for an **RF Systems Engineer** in Darmstadt, Germany.

ALCAN offers a generous relocation package to cover the moving costs if the employee is outside of the southern Frankfurt Rhein-Main area.

JOB DESCRIPTION

The **RF System Engineer** will be involved with the entire RF system of the antenna. Thus, the candidate needs to have solid technical understanding of RF/microwave circuits, a track record of developing various kinds of RF hardware and ability to do systems analysis. The engineer will work on design, simulation, prototyping and test of phased array antennas which use liquid crystals (LC) as tunable material. More specifically, LC based phase shifters and amplitude tuners, RF planar structures, polarization agile structures, receive and transmit antennas will be developed. Beam steering response time will be optimized according to the application.

The **RF System Engineer** will work closely with an internal inter-disciplinary team, and outside partners to drive key aspects of product definition, execution and tests. He/she must be responsive, flexible and able to succeed within an open collaborative peer environment.

Responsibilities

- Defining system, subsystems and test requirements for smart antennas
- Perform sub-systems and systems architecture trade-offs and performance analysis
- Analysis and decomposition, system modeling and simulation, hardware and software trade studies and verification
- Perform multi-radio coexistence mitigation (including RF link budget planning and issue debugging) for satellite communication applications
- Conceptualize, design, develop, integrate, test and document RF/microwave circuits, components and systems, e.g. feed networks, waveguide components, antenna elements
- Analysis for determining the design feasibility in terms of time, cost, power and any other additional parameters (e.g. size, weight, EMC)
- Perform enhancements, improvements, innovations, shortcuts and cost savings to the existing designs, technology and processes
- Program planning to include budget estimates, schedule planning and scope definition
- Meet with vendors and technology suppliers for hardware selection of the complete system
- Support product development team for compliance testing, operator testing, ramp up and sustaining

Experience

- Master's Degree in telecommunication, electronics or comparable discipline + 5 years industry experience or Bachelor's Degree in a similar program + 8 years industry experience
- Excellent technical understanding of satellite RF systems or communication systems
- Expertise in RF/microwave domain, RF components, modules, RF PCB layout design
- Experience in satellite network system (DVBS standards) and of operational guidelines for the Satellite Networking
- Experience in waveform trade-offs
- Experience with FCC, ITU and Federal Acquisition Regulations (FAR)
- Experience of satellite access tests
- Experience with VSAT networks
- Excellent organization and communication skills
- Working knowledge of signal processing concepts of digital modulation
- Program planning to include budget estimates, schedule planning and scope definition
- Management experience is a plus

Key Competencies

- Ability to think out-of-box, problem solving, and adapt quickly to new technical areas
- Analyze the trade-offs between performance, manufacturability, cost and user experience
- Capable of interact in a cross-functional technical team
- Experience with RF test instruments and setups such as VNA, spectrum analyzer, anechoic chamber, etc.
- Competency in using EM simulation tools like ADS, CST, HFSS, AWR and programming with MATLAB
- Understanding of phased array theory and electronically steerable arrays is a plus
- Track record of generating innovative solutions, successful hardware releases (patents are a plus)
- Familiarity with 2D/3D mechanical design is a plus
- Experience in design and implementation of active circuits is a plus
- Confidentiality
- Team member
- Adaptability

Please send us relevant documents via e-mail: career@alcansystems.com



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