

## OPEN POSITION: COMMUNICATION SYSTEMS ENGINEER

ALCAN is a fast-growing company working towards a future where every moving vehicle (cars, ships, trains, planes) has broadband connection by using ALCAN's ground-breaking 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 a **Communication 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 **Communication Systems Engineer** will be involved with the entire RF system of the antenna and its baseband communications. Thus, the candidate needs to have a track record of developing communication systems and solid technical understanding of RF/microwave circuits. The engineer will work on system requirements definition, system and subsystems design, development, integration and will support testing of RF Payloads and Communications Systems.

### Responsibilities

- End-to-End communications systems test experience, conduct and/or support of design reviews, requirements verification, environmental testing, and test procedure analysis.
- Design of RF circuits such as tracking receiver
- Perform coordination tasks for RF systems and interface with other third parties and agencies (e.g. satellite modem integration) to provide system direction of design and business development efforts
- Perform radio frequency interference and compatibility analysis for space-based communication systems.
- Receive and interpret RFI/RFPs to break down requirements into architectural concepts.
- Work with antennas, antenna polarization, power spectral density & spectral roll-off, power flux density, noise density, DVB-S2 standards
- Perform analysis and simulations using software's such as MatLab, Simulink or Python

### 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
- Possess knowledge of digital communications, RF system analysis, FEC coding, and communications engineering
- Excellent technical understanding of closed-loop satellite tracking methods such as sequential lobing, monopulse and step tracking.
- Excellent technical understanding of communication systems such as digital modulation schemes, signal detection, signal and interference analysis, baseband filtering

- Excellent technical understanding of System Engineering Processes, Best Practices and Requirements including System Analyses, Trade Studies, Risk & Risk Management, Specifications, Design Definitions, Verification & Test
- Active participation in communications subsystem integration test activities
- Systems engineering support in evaluating external systems specifications and design documentation.
- Provision of inputs to the project management staff as needed

### **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 interacting with a cross-functional and international technical team
- Experience with RF test instruments and setups such as VNA, spectrum analyzer, anechoic chamber, etc.
- Competency in programming with MATLAB or Python
- Knowledge of different communication standards like Bluetooth, WLAN, LTE, DVB-S2 etc. preferable
- Understanding of phased array theory and electronically steerable arrays is a plus
- Competency in using EM simulation tools like ADS, CST, HFSS, AWR is a plus
- Track record of generating innovative solutions, successful hardware releases (patents are a plus)
- Experience in design and implementation of active circuits is a plus
- Team member

Please send us relevant documents via e-mail: [career@alcansystems.com](mailto:career@alcansystems.com)