OPEN POSITION: COMMUNICATION 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 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

ALCAN's R&D team works 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 are being developed.

The **Communication Systems 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 communication systems analyses. The engineer will work on system requirements definition, system and subsystems design, development, integration and will support testing of RF communications systems and subsystems.

Responsibilities

- End-to-End communications systems test experience, conduct and/or support of design reviews, requirements verification, environmental testing, and test procedure analysis.
- Perform radio frequency interference and compatibility analysis for space based communication systems
- Determine the performance of RF communication links and create link budgets using analytical methods or by applying analysis to simulation tools
- Perform coordination tasks for RF systems and interface with other third parties and agencies to resolve interference issues
- Analyse, and document results for discussions
- Work with antennas, antenna polarization, power spectral density & spectral roll-off, power flux density, noise density and DVB-S2 standards
- Perform analysis using software such as MatLab and Simulink
- Perform other duties as required.

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 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
- 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)
- 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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