



## Vacancy: Modem Engineer

**Celestia Satellite Test & Simulation BV (C-STS) provides innovative high-tech solutions to the international space community to support spacecraft development, AIT and post launch services. The company operates from Noordwijk, The Netherlands.**

**Our core activities include the design/development and support of high-complexity electronics based systems for Simulation & Test (EGSE) Products, TTC & TM/TC Systems, High-Rate & TTC Modems and Data Processing Systems.**

Due to company's current growth, we are searching for a **Modem Engineer**. The individual will be responsible for cutting-edge engineering focusing on design, implementation and support of Modems used for the modulation, demodulation and signal processing of Satellite Communication links.

This role will include involvement in defining modem system architectures, DSP Algorithms and system operations from initial architectural design through to finished products. The role includes hands-on development and support both with C-STS engineers and customers.

He/she shall Analyse, Model, Design, Develop and Validate Modems that satisfy SATCOM requirements in terms of Performance and Quality and market demands for cost and development Time. Primarily he/she should be able to support both legacy and new modem designs throughout the complete project lifecycle.

### **The main tasks of the candidate will be:**

- Gathering system requirements, deriving and issuing specifications
- Resolving system design trade-offs
- Interacting with system engineers, as well as VHDL and FPGA specialists and SW designers
- Organizing and handling Firmware outsourcing regarding Modem and FEC solutions
- Supporting TT&C and High Rate legacy products
- Supporting Verification and Validation Lab benches and procedures
- Preparing formal documentation for project or/and product oriented activities
- Contributing to proposals regarding innovative Satellite Communications technologies
- Analysing, Modelling and Simulating DSP algorithms

### **Required key qualifications, skills and experience for the candidate:**

- Electrical or Computer Engineering (Diploma, B.Eng., MSc, PhD)
- B. Eng degree +5 years of experience, or
- MSc/equivalent +3 years of experience, or
- PhD degree on the general area of Telecommunications and DSP
- Telecommunications Theory and Signal Processing
- Knowledge of architectural design implications on Noise Figure, Sampling effects and Phase Noise
- Knowledgeable in ECSS, CCSDS, ITU, ETSI and relevant standards relating to modems
- Digital Modulations and multiplexing schemes (e.g. GMSK, OQPSK, QPSK, PSK-8, APSK-M, etc.)
- Ability to work under tight project and time constraints
- English language skills (ability to communicate and work in English)
- Should be familiar in simulating VHDL using ModelSim or/and Active-HDL



- DSP programming and Embedded SW Technologies
- FEC (trellis, convolutional codes, BCH codes, LDPC, turbo codes etc.)
- Implement in VHDL RTL following design rules and constraints for device, area and speed
- Should be familiar in synthesis and targeting to FPGA devices (e.g. ALTERA)
- Good verbal and written communication skills in international project teams

**It is highly desirable that applicants are experienced in:**

- Model-Based Design methodology and Simulation Tools (C, C++, Matlab, Simulink, etc.)
- HW/SW platform prototyping development

**For a practical and motivated individual, this position will offer an exciting challenge where they can contribute directly in the growth of this quality-driven, dynamic SME organization.**

**If you are interested please contact us via email [employment@celestia-sts.com](mailto:employment@celestia-sts.com)**

**For further information related to the company, its products and activities refer to [www.celestia-sts.com](http://www.celestia-sts.com).**