

# Senior Hardware Engineer

(Hardware and Firmware Designer of Control Loop technology – Space Power)

## Projects description

One of our major business is to provide turnkey systems and solutions for **satellite testing**. These test systems are to be used during the different phases of assembly, integration, verification and test of the various subsystems of a satellite (radio frequency - RF, telemetry and telecommand - TM/TC, power supplies - PWR, payload and instruments).

The test systems are designed, configured, assembled, integrated and tested in our labs and finally delivered to our customers (major satellite manufacturers) and commissioned at their premises. The test systems comprise of our own products for satellite protection and interface testing. They are fully controlled by our test software. Some of our equipment accompanies the satellite to its launch site and is used to verify the satellites proper functioning via umbilical cables till lift-off. The projects are usually run in multicultural teams.

## What are my responsibilities?

- Responsible for design, improvement and maintenance of control loop HW/FW of switch mode power electronics AC/DC (VRB), DC/DC (DAB and MPB)
- Solid knowledge of filter techniques (kalman, FFT,...)
- Development of algorithms for switched mode power systems
- Ability to translate the control technology into VHDL and DSP (C++) code
- Active involved into verification and validation of signal processing considering the HW limitations using MATLAB, Simulink and Gecko tools
- ISO 26262/9001 compliant development
- Strong documentation skills for the design description
- Good understanding of EMI and EMC behavior of switch mode power electronics
- Working with JIRA and Confluence for daily tasks report

## Which qualifications do I need?

### Know-how:

- Knowledge in control theory of switch mode power electronic
- Knowledge in VHDL digital control loops and analog signal conditioning electronic circuits
- Tools: VHDL, Gecko, MATLAB, Simulink, LTSPICE
- Laboratory tools: DSO, MSO, Logic Analyzers, Counters, DMM
- Solar controllers with MPPT, battery charge control, load management, state monitoring and remote interface

### Professional Experience:

- Experience in control technology designing for power electronics with digital and analogue functional blocks incl. production ramp up or related field

### Soft Skills:

- Take ownership and responsibility
- Intercultural cooperation, team player
- Analytical and solution orientated
- English min. level B2

### Contact:

#### Dr. Günther Lackner

VP, GM & Global Head of BU Space & Avionics Big  
Data & Security - Mission-Critical Systems Head of  
Business Development Space Domain Public Sector &  
Defense  
guenther.lackner@atos.net

[www.atos.net](http://www.atos.net)