



GNC & Pointing Systems Engineer

Axient Systems, Delft

At Axient Systems, we are shaping the future of sovereign space capability. Based in Delft, at the heart of the Dutch aerospace ecosystem, we develop advanced satellite systems that support critical commercial and government missions. Our solutions enable secure communications, defence, security, and resilient infrastructure where performance and reliability are essential.

As a growing and ambitious organisation, we offer professionals the opportunity to contribute directly to innovative space projects that make a real impact on society, security, and technological progress.

We are looking for a GNC and ADCS systems engineer who owns where a satellite points, how well it knows it, and how steadily it holds it.

The project

You will own the guidance, navigation and control of a high-performance optical satellite. The platform avionics and control hardware come from a supplier as a modular kit; the pointing performance that results from our configuration is ours to design, budget and prove.

What you will own

- The pointing error budget: absolute pointing error, relative pointing error and stability per measurement interval, built up from star tracker noise, reaction wheel disturbance, thermal drift, alignment errors and control loop performance.
- The pointing knowledge chain: attitude and orbit determination accuracy, time tagging, and their contribution to the geolocation budget.
- The space vehicle agility and responsiveness optimal capability, essential for operational performance.
- The ADCS configuration trade against the supplied kit: reaction wheel class and balancing grade, star tracker performance class, magnetorquers, sun sensors and GNSS, assessed against the stability requirement set by imaging performance.
- The control modes and their transitions: detumbling, safe, nominal imaging, slew and orbit maneuver, and what each demands from power, thermal and data handling.
- The GNC simulator: build it, run it per design cycle, and use it to prove that the modes and the budgets close on the current design.
- The technical oversight of the supplied GNC hardware and its flight software: what we specify, what we accept, and what we verify ourselves.
- The GNC case at the design reviews, including slew performance, settling behaviour and the margins in the pointing budget.

You set the pointing performance and prove it. Our imaging performance systems engineer sets the stability requirement you design against, and our micro-vibration engineer owns the disturbance side of the same budget.



You have the following demonstrable competencies

- You can build a pointing error budget from first principles and defend every contributor in it.
- You are comfortable with estimation and control theory in practice, not only in theory: sensor noise, actuator limits, sampling and delay.
- You translate a control requirement into what it demands from structure, thermal, power and data handling, and negotiate that with those disciplines.
- You work with a supplier's control hardware and software: specifying, challenging and accepting rather than rebuilding it yourself.
- You keep your simulator and models under configuration control and can explain what changed between two design cycles.

Essential qualifications

- Eligible for a Dutch VGB-B clearance.
- Engineering degree in aerospace, control engineering, physics or comparable.
- 5+ years in spacecraft GNC or ADCS engineering, with demonstrable ownership of a pointing budget or a control design on a real mission.
- Modelling and simulation craftsmanship in Matlab/Simulink, Python, or comparable, including closed-loop performance analysis.
- Working knowledge of attitude determination and control hardware: star trackers, reaction wheels, magnetorquers, gyros, GNSS receivers.
- Fluent English.
- Comfortable in a multidisciplinary, transatlantic team.

Desirable qualifications

- Earth observation missions with demanding pointing stability and agile slewing.
- Experience with ESA pointing error standards (ECSS-E-ST-60-10) and their application to a real budget.
- Micro-vibration and jitter analysis, and the interaction between structure and control.
- Orbit determination and precise attitude knowledge for geolocation without ground control points.
- GNSS-denied or degraded navigation, and alternative orbit determination methods.
- Experience with a supplied bus or avionics kit rather than an in-house platform.
- Experience with orbit control and station keeping.
- Experience with "STK/ODTK, GMAT, Orekit, PEET or similar tools.
- Fluent Dutch.

What we offer

- Ownership of the performance that decides whether the images are where and as sharp as they should be.
- Competitive, market-aligned salary and benefits, real ownership of your discipline, and room to grow as the organisation scales.
- On-site work in Delft, limited hybrid working possible.

**Particularities**

This role requires Dutch security screening. You will need a VOG (Certificate of Conduct) to start, which is quick to obtain and lets you begin work on the project immediately.

You might also need a VGB-B clearance. This takes longer, and we support you through it. It is required for some aspects of the role, so you must be eligible for it and willing to undergo the screening, but you do not need to have it in hand to join us.

Interested?

Apply via the vacancy on LinkedIn or the registration form on our website.

In your application, include a short description of one pointing budget or control design you owned: the dominant contributor, the margin you had, and what in-orbit or test data later showed. Applications without this description will not be reviewed.