

ECS Electronics is an internationally operating company with offices in the Netherlands, Vietnam, the United Kingdom and Switzerland. The head office is located in Breda. Characterized by an informal corporate culture and with more than 30 years of experience, this family business has developed into the European market leader in the field of towbar wiring. From production locations in the Netherlands and Vietnam, more than 20 of the largest automotive brands are supplied all over the world.

***Do you want to be part of this fast-growing company with big ambitions?
Then we are looking for you!***

TEST ENGINEER HiL/ViL/ENV

JOB DESCRIPTION

We are seeking a Test Engineer to develop and execute Hardware-in-the-Loop (HiL) and Vehicle-in-the-Loop (ViL) test campaigns for our module product line, spanning OEM development programs and aftermarket channels. The successful candidate will design test cases in Vector CANoe, configure and operate Vector VT System test benches, and produce verification and validation (V&V) evidence aligned with ISO 26262:2018 Part 3 (concept phase) and Part 4 (product development at the system level). The role also covers planning and coordinating EMC compliance testing to UN ECE Regulation 10 (R10) and environmental/mechanical qualification testing to the ISO 16750 standard.

TASKS

- Develop, script, and maintain automated test cases in CANoe (CAPL) ECU verification and validation.
- Design and configure HiL/ViL test environments using the Vector VT System, including I/O mapping, load simulation, and fault injection setups.
- Translate technical safety requirements (TSRs) and safety goals into executable, traceable test cases.
- Execute functional, fault-injection, timing, and environmental (voltage/temperature) test suites across product variants.
- Plan, specify, and coordinate EMC testing (emissions and immunity) in accordance with UN ECE Regulation 10, including liaison with accredited test labs and disposition of non-conformances.
- Define and oversee environmental and mechanical qualification test campaigns per ISO 16750 (Parts 2-5): electrical loads, mechanical loads, climatic loads, and chemical loads.
- Produce verification and validation reports, including requirements traceability matrices, suitable for internal review and OEM/assessor audits.
- Collaborate with hardware, firmware, and functional safety engineers to close out test findings and disposition design review items.
- Support continuous improvement and reuse of test assets across current and next-generation (48V, zonal/SDV-compatible) product platforms.

DESIRED SKILLS AND KNOWLEDGE

- Demonstrated hands-on experience developing test cases in Vector CANoe, including CAPL scripting.
- Practical experience configuring and operating Vector VT System hardware for HiL/ViL test benches.
- Proven ability to set up complete test environments: DUT integration, load/fault simulation, signal conditioning.
- Working knowledge of ISO 26262:2018 Part 3 (hazard analysis and risk assessment, safety goals), Part 4 (technical safety requirements, system-level verification) and part 5 (Hardware integration tests).
- Working knowledge of EMC testing requirements under UN ECE Regulation 10 (emissions and immunity for road vehicles and electrical/electronic sub-assemblies).
- Working knowledge of ISO 16750 (road vehicles - environmental conditions and testing for electrical and electronic equipment), including relevant parts for electrical, mechanical, climatic, and chemical loads.
- Experience authoring and executing verification and validation (V&V) test plans with documented traceability.
- Bachelor's degree (or equivalent experience) in Electrical Engineering, Automotive Engineering, or a related discipline.

PREFERRED QUALIFICATIONS

- Working knowledge of embedded C, sufficient to read and reason about firmware behavior (state machines, interrupt-driven I/O) when designing tests.
- Background in automotive E/E systems: CAN/LIN networks, multi-voltage architectures (12V/48V).
- Familiarity with automotive functional safety audit processes and OEM assessment expectations.

OUR OFFER

- Varied position in an international environment
- Market-conform salary
- Secondary employment conditions
- 27 vacation days per year with full-time employment
- Home working options & flexible working hours
- Good career and growth opportunities

GET CONNECTED!

If the vacancy appeals to you and you recognize yourself in the required knowledge and skills, we look forward to receiving your application via pz@ecs-electronics.nl.

For more information about the vacancy, please contact:

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