Job title:
Hardware/Qualification Engineer

Location:
Fareham, Hampshire

Reports directly to:
Engineering Team Manager

Strategic business unit:
Meggitt Avionics located in Fareham between Southampton and Portsmouth on the UK's south coast, designs and manufactures flight deck avionics, data acquisition systems, instrumentation and life support equipment.

Meggitt Avionics has been a market leading supplier of secondary flight display systems (SFDSs) for more than 20 years. Meggitt Avionics designs and manufactures aircraft sensors, displays and systems across three product groups: flight deck avionics, data acquisition systems and life support.

Read more about our flight displays through this link - http://www.meggitt-avionics.co.uk/products/flight_displays.aspx.

The Hardware/Qualification Engineer will spearhead hardware packages across a number of global projects from USA to China; working in a hardworking, collaborative team on customer funded projects. In this whole lifecycle product position the successful candidate will be working for three to twelve months on a project and hold the satisfaction of seeing a project through to completion. Variety is key motivator in this team; working from customised design to product support it will test your abilities and challenge you daily.

Purpose:
To support the Funded Projects and Support team by providing expertise in the specific areas of hardware design, hardware test, fault finding and hardware qualification testing.

Specific responsibilities:
- To investigate and provide solutions to problems found with existing products during manufacturing and test
- To provide fault diagnosis and solutions to hardware issues related to existing products
- To work with the systems and software engineers within the FP&S team to provide hardware solutions for new customer variants of existing products
- To be responsible for the control of own work to meet agreed technical, quality, process, cost and schedule requirements.
- To document design activities, ensuring traceability of design to requirements, whilst also ensuring adherence to relevant project, company and regulatory standards
- To plan and manage hardware qualification activities and specify, design, commission and verify equipment test solutions
- To produce qualification test plans, test procedures, test case design, set-up test equipment and conduct post-test analysis and reporting
- To support sales enquiries, working with the team manager and systems engineers, providing hardware solutions and estimates for work, especially in the area of hardware qualification requirements

Primary working relationships & interfaces:
- The hardware engineer will report directly to the Engineering Team Manager

- The hardware engineer will be required to work closely with the systems and software engineers in delivering customer funded programmes to cost, quality and schedule.

Key skills and competencies required:
Experience with hardware design, hardware test, fault finding
- Micro-processor
- digital circuity
- analogue circuity
- EMC and/or lightning protection
- Low voltage power supply and/or power switching techniques

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Experience of the aerospace or space sector is essential
Detailed knowledge and skill in hardware qualification activities
Experience of managing subcontracted qualification test activities (test houses)
Proficient in writing plan and procedures and test result documents
A history of providing fault diagnosis and solutions for hardware issues
Assist with hardware aspects of new business enquiries experience
Experience of working in a multi-disciplined team supporting hardware across programmes

Desirable Skills
Ability to drive and manage PCB layout through sub-contract
Detailed knowledge of environmental and EMC qualification test methods
Detailed knowledge and experience with working to RTCA DO-160 and equivalent military standards, MIL-STD-810, MIL-STD-704 and MIL-STD-461
To be experienced in the commissioning and verification of analogue and digital circuits in accordance with defined requirements specifications, including cost and reliability targets
Detailed knowledge of environmental and EMC qualification test methods
Experience with requirements management tools such as Reqtify or DOORS
Experience in working to RTCA/DO-254
Experience using OrCAD schematic capture, Allegro PCB Editor, LT Spice, pSpice
Familiarity with hardware data bus standards such as RS-232/422, I^2C, SPI, ARINC429, MIL-STD-1553
To understand and implement the requirements for certification of safety critical products to the specified development assurance level requirements and processes
Experience of keeping engineering documentation up to date and under configuration control in preparation for formal qualification and certification
Familiarity with developing high integrity designs, preferably in the safety critical domain
Experience of working (and tracking/reporting) to cost and timescale constraints
Capable of managing multiple tasks to maintain an overall schedule and meet design targets and milestones.
Experience in analysis of existing designs, following circuit diagrams and proposing modifications to resolve problems
Experience in fault diagnosis with microprocessor-based equipment

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