

Hardware Engineering

Hardware engineering covers the functions of electronic and electrical engineers, both of which work at BAE Systems Rochester. It is one of the key roles on the site which forms a fundamental part of every step of a products lifecycle. From initial specifications to final validation and verification of products, hardware engineers are required in every project at Rochester.

As a Hardware Engineer at Rochester you will work as part of a multi-discipline team on complex high reliability electronic systems. Our leading-edge capabilities in micro-electronics, image processing and high integrity systems are second to none, making us a world leader in defence avionics. Specific roles of a Hardware Engineer include decision making regarding electronic product content, optimising hardware and software design concepts and synthesising design from a range of components and advanced technology options. There are other aspects to these roles as well, from developing sophisticated design processes through to developing and testing complex and intelligent products.

Within these roles you can expect to be involved with a large range of design activities including:

- Hardware architecture
- High speed digital design
- FPGA design
- Analogue/mixed signal board design
- PCB layout
- Design for EMC/EMI
- Design for safety
- Design to cost (DTC)
- Design for manufacture (DFM)

Hardware Engineers require good communication skills as they are in constant contact with other engineering functions and departments on site. This could be within a project team working along side Systems and Software Engineers or with groups outside of the project such as procurement and manufacturing.

As a graduate Hardware Engineer you will be given the opportunity to learn to use the latest Electronic Design Automation (EDA) packages including:

- Mentor Graphics Design Architect
- Mentor Graphics ModelSim
- MathWorks MATLAB
- Synopsys Saber

There are no boundaries to the projects a graduate hardware engineer can get involved with. At Rochester, projects include flight control systems, head-up displays, helmet-mounted displays and active interceptor sticks for both civil and military aircraft. The most recent project added to our portfolio is the Hybrid-electric drive systems for the London hybrid buses and military vehicles.

Our electronic solutions can be found on the Eurofighter Typhoon, Lockheed Martin F-35 Lightning II, Lockheed Martin F-16 Fighting Falcon, Airbus A320, Boeing 777, Boeing 737, Panavia Tornado, Lockheed Martin/Boeing F-22 Raptor, Boeing C-17 Globemaster, KAI T-50 Golden Eagle, Sikorsky UH-60 Black Hawk, Sikorsky CH-53 Super Stallion, Saab JAS 39 Gripen, Eurocopter Tiger and SEPECAT Jaguar aircraft.