Platform Solutions at Rochester

ELECTRONICS & INTEGRATED SOLUTIONS

BAE SYSTEMS
REAL CAPABILITY, REAL ADVANTAGE.

www.rochesteravionicarchives.co.uk
BAE Systems is an international company engaged in the development, delivery, and support of advanced defence and aerospace systems in the air, on land, at sea, and in space. The company designs, manufactures, and supports military aircraft, combat vehicles, surface ships, submarines, radar, avionics, communications, electronics, and guided weapon systems. It is a pioneer in technology with a heritage stretching back hundreds of years and is at the forefront of innovation, working to develop the next generation of intelligent defence systems. BAE Systems has major operations across five continents and customers in some 130 countries. The company employs nearly 90,000 people and generates annual sales of approximately £15 billion* through its wholly owned and joint venture operations.

The Electronics and Integrated Solutions (E&IS) Operating Group of BAE Systems designs, develops and manufactures a wide range of electronic systems and subsystems for both military and commercial applications.

The E&IS Operating Group has more than 17,000 employees working at more than 50 sites in the U.S., U.K. and Israel.

*On a pro forma basis, assuming BAE Systems had owned Armor Holdings for the whole of 2006.
Organised for success

Through three distinct business areas, we are capturing and exploiting the potential of our transatlantic capability. Our market-facing business areas bring all of the capabilities of Platform Solutions to bear on the needs of our customers, enabling us to more thoroughly understand the market, harness our customer relationships, and ensure execution of our programmes.

Defence Avionics

UK and Middle East Fixed-Wing Avionics

Our UK and Middle East fixed-wing organisation focuses on serving the needs of our defence customers in the UK and Middle East. Even the most capable airframe in the world needs the right systems for it and its crew to perform their mission successfully. Providing mission-critical systems on major platforms, including Typhoon, Tornado, Nimrod and Hawk, we are working to ensure the best platform performance possible.

As well as being a provider of innovative solutions, we also ensure they continue to add value for our customers throughout the life of the platform. We provide a full range of innovative and adaptable support services, ensuring the equipment will be ready for action whenever needed.

US Fixed-Wing Avionics

The US fixed-wing organisation serves the needs of our major US markets around C-17, F-35 and other US platforms such as F-22. Working closely with our key customers, this market area draws capability from across Defence Avionics, in the UK and US, to deliver a reliable solution to our customers’ needs.

Avionics Products

Our Avionics Products team supports our market-facing business groups to fully understand the current and emerging needs of our customers. This group is then responsible for designing state of the art, business-winning solutions to meet or exceed these needs.

The Avionics Products group is split into four specialist capability areas that operate across all three Defence Avionics sites. This ensures we make full use of our technology across our product range and also ensures we develop long-term strategies.

Rotary-Wing Avionics

Servicing the needs of the rotary-wing market globally, this market area draws together our capabilities and technologies, allowing us to apply them to key rotary-wing platforms – such as UH-60, V-22, CH-47 and EH101 – and to grow our footprint and capability in this market area.

International Avionics

Our international avionics market area is a growing business, leveraging a strong presence in Asia. We are working to ensure we deliver real advantages through innovative defence systems, cutting-edge next-generation technologies, and unsurpassed support services, around the world.

Commercial Avionics

Our Commercial Avionics organisation at Rochester provides high-integrity, safety-critical solutions to the commercial aircraft industry on platforms such as the Boeing 777 and Airbus A320. We work closely with the aircraft designs to provide the optimum blend of high-performance, while maintaining outstanding value to the customer.

We pioneered the application of fly-by-wire flight controls to the commercial market, as well as the application of head-up displays to the airline community.

BAE Systems has a strong environmental record and has used its technology to help reduce harmful emissions from road traffic. Vehicle Systems operating out of Johnson City in New York State are a world leader in the design and delivery of Hybrid Electric Drive Systems. Their proven systems are being widely used in New York City, Toronto and other US cities as well as military applications. This technology and knowledge is being passed to Rochester to allow the transfer of the Hybrid Electric Drive Systems into the UK and Europe.

Work is taking place with a leading UK bus manufacturer to produce a number of Vehicles for the UK market. Other markets are also being reviewed to determine the suitability of the systems for these markets.

Vehicle Systems

BAE Systems has a strong environmental record and has used its technology to help reduce harmful emissions from road traffic. Vehicle Systems operating out of Johnson City in New York State are a world leader in the design and delivery of Hybrid Electric Drive Systems. Their proven systems are being widely used in New York City, Toronto and other US cities as well as military applications. This technology and knowledge is being passed to Rochester to allow the transfer of the Hybrid Electric Drive Systems into the UK and Europe.

Work is taking place with a leading UK bus manufacturer to produce a number of Vehicles for the UK market. Other markets are also being reviewed to determine the suitability of the systems for these markets.

Defence Avionics is responsible for the design, manufacture and support of electronic and information systems that make the platforms more capable.
A history of firsts

1933 – Rochester Airport Site set up by Rochester City Council.
1938 – Work commenced on building extensions for the Stirling Bomber production line.
1948 – Work commenced on the remote flight guidance and control systems for the Jindivik and drone variants of the Canberra, Sea Vixen and Meteor.
1954 – Britain’s first supersonic combat aircraft has Elliott’s first automatic flight control system.
1961 – First head-up display developed. Used in the Buccaneer and gave reliable service for 30 years without requiring an update.
1967 – First digital head-up display developed, setting new standards of accuracy and maintainability.
1978 – Developed the fly-by-wire quadruplex digital system for the Jaguar.
1979 – First use of “off the shelf” dissimilar microprocessors in a civil flight critical application.
1990 – First computer-generated holographic head-up display developed.
2001 – Awarded the world’s first contract for active inceptor systems on the Joint Strike Fighter.
2002 – Awarded the Queen’s Award for Innovation for Helmet-Mounted Displays.
2006 – Quantum head-up display developed – the next-generation of head-up displays.

One factor that has remained constant at Rochester has been the high degree of innovation in avionics. This innovation is achieved through the hard work and dedication of our employees, who work relentlessly to provide our users with the solutions they require, now and into the future.