Communication & Integrated Systems

Enabling the Network

To enable the networked battlespace Ultra provides its clients and partners with the required capabilities for situational awareness and secure data exchange.

Through the secure networking of sensors, platforms and systems, operational decision makers are able to co-ordinate and maximise battlefield effects.

Ultra Electronics, Communication and Integrated Systems is a key supplier of the enabling technologies that optimise the war fighters effectiveness, by facilitating the secure, timely dissemination of situational awareness and communications data across the battlespace.

Ultra prides itself on working closely with clients and partners to ensure the cost-effective delivery of capability, on time and to budget.

The Ultra Electronics group of companies employs over 4000 people worldwide and specialises in the design and manufacture of electromechanical systems, products and components for defence, security, aerospace and transport applications.
Ultra has a proven track record in the delivery of 'best of breed' technology solutions that are market leading in each of the capability domains in which it operates.

**Data links**

Ultra have been developing secure data link systems since the early 1990s and has supplied in excess of 1000 tactical data link systems and products worldwide.

Ultra’s **Multi Link Processor (MLP)** family of products provide a versatile solution to single or multiple tactical data link operations and are approved for use across NATO. Ultra’s IP enabled MLP supports Link-11, Link-16, Link-22 and IDM.

The **High Integrity Data Link (HIDL)** provides robust command and control capabilities to multiple UAVs and associated ground stations. HIDL also delivers secure full motion video transmission, relay capability for beyond line of sight operations and weapon data transfer in a networked environment. Its unique waveforms and functions ensure secure multi-way communications with a low probability of interception, detection or Jamming.

Our **Video Data Link (VDL)** video technology is currently installed on the Litening Pod system for the UK Typhoon and Tornado platforms and on Merlin counter-piracy helicopters. The VDL provides PAL or NTSC video formats and has optional AES 256 encryption. VDL also provides proven interoperability with leading Remote Video Terminals enabling the secure sharing of enhanced situational awareness data and imagery with mounted and dismounted ground components.

**ISTAR**

Ultra recognises the importance of generating an accurate and useable situational awareness picture and is able to bring together complex ‘systems of systems’ that encompass sensors, data links and networking to deliver a true ISTAR systems capability. Whether based on inhabited or uninhabited systems, ISTAR capabilities are becoming increasingly important and are seen as significant force multipliers. Ultra recognise this, and based on its competencies, are successfully delivering such systems into service.

An example of Ultra’s success in this area is the UK’s Litening III targeting pod for which it is prime contractor. Litening systems continue to be extensively used in current operations and recently exceeded 30,000 flying hours on UK Tornado aircraft with 99.8% mission availability being achieved.

**Information assurance**

Ultra has been designing, developing, manufacturing and supporting secure communications equipments since the 1950s, making Ultra one of the most trusted and respected cryptographic systems providers in the world.

As a result Ultra has built up an enviable track record in the provision of certified End Cryptographic Units (ECUs) and key management technologies to both national and international customers. Ultra is currently supporting crypto modernisation initiatives in both the UK and the US, delivering the next generation of high grade programmable cryptographic devices into service.

In addition to the supply of interoperable cryptographic products to customers of NATO, Ultra has significant experience in the development of secure system architectures and the integration of cryptographic equipment onto platforms such as UK Watchkeeper.

**MISSION CRITICAL SECURE NETWORKS AND SYSTEMS**