Ultra has designed, delivered and proven the High Integrity Data Link (HIDL) providing robust command and control to multiple UAVs and associated Ground Stations.

The versatility of the HIDL system also delivers secure full motion video transmission, relay capability for beyond line of sight operations and weapon data transfer.

The HIDL unique waveforms and operation deliver high grade encryption, low probability of interception and detection and networked secure multi-way anti-jam communications.

Key capabilities delivered through HIDL include:
- command and control of multiple UAVs or weapons
- secure anti-jam network communications
- secure full motion video transmission
- relay capability for beyond line of sight operations
- low probability of detection or interception
- fully configurability and scalability
- secure high grade encryption
- optional AES 256 encryption
Ultra offers a unique, configurable data link providing a proven solution for a range of airborne applications including manned and unmanned air vehicles and complex weapon systems.

The system has now been selected and proven on both the UK Watchkeeper UAV and Loitering Munitions programmes. It is also being tailored to deliver cost effective command and control for wider missile applications as well as providing secure datalinks to remote video terminals to offer flexible system solutions to our customers needs.

HIDL also provides safe operation in line with latest thinking on requirements for flying UAVs in civil airspace. HIDL uses a unique, highly adaptable noise like multicarrier waveform providing resilience to RF interference, deliberate jamming and RF multipath effects. The features are particularly important when used in a hostile environment

The system:
■ is designed to: operate in a rugged environment to support airborne operations e.g. UAV installations.
■ is available in a 150Km long range single box configuration (4.5kg) or in a 1.6kg short range configuration with separate power amp for extended range as required.
■ has typical power requirements of approx 80W and 28V.
■ utilises Ethernet/RS422 for data exchange
■ is a software defined radio that can easily be configured to alternate waveforms with data rates up to 11 Mbps and range up to 150Km.

■ has a flexible and modular design delivers options for size, weight and power reductions.

As a leading data link technology, HIDL is now being considered as the basis for a new NATO UAV Command and Control standard STANAG 4660 to provide (1) a command and control uplink and telemetry downlink for multiple UAVs, (2) a narrow band downlink for sensors such as electro optic or infra red cameras and (3) a network enabled capability to support communication with multiple nodes.

Ultra continually develops its unique and secure data link technologies to deliver solutions to the challenging demands of secure networked data transfer in the diverse modern battlespace.