Enhancing Network-Centric Operations for Land, Air and Maritime Forces

Cubic’s comprehensive data link products provide Intelligence, Surveillance and Reconnaissance (ISR) capabilities for land, air and maritime military operations. The data links allow military commanders to obtain real-time images and sensor data to precisely locate and identify enemy targets – anywhere, at anytime – in a network-centric environment. Consisting of an air data terminal and ground data terminal, Cubic’s tactical data links provide secure, air-to-ground transmission of streaming video, radar, laser, infrared, and other sensor information. Our advanced digital Common Data Link (CDL) products feature high-bandwidth, spectrally efficient CDL-standard waveforms. The data link terminals are lightweight, cost-effective and expandable. Leveraging technologies and skills from the 20-year Joint STARS program, Cubic’s CDL products feature an open-standard, field-proven design to ensure interoperability among multiple platforms. The data links are adaptable to a variety of configurations for Unmanned Aircraft (UAs), manned fixed wing, rotary wing, shipboard operations and surface terminals.

Key Features
- Software-defined using field programmable gate array and integrated general purpose processor technologies
- Conducts secure, robust ISR communications in near real time
- Provides high-throughput, versatility and jam-resistance
- Interoperable with other vendors’ equipment, and adaptable to multiple platforms
- Implemented as an open-standard architecture
- Cubic’s waveform libraries include Standard CDL (STD-CDL) and Bandwidth Efficient (BE-CDL) waveforms up to 274 Mbps
- Operates in a complex and hostile environment
- Performs instantaneous video streaming and data transmission
- Application-specific hardware, ranging from man-portable, lightweight configurations to large dish surface mount systems

Data Link Configurations

TEADS
The Tactical Edge Analysis and Display System provides an adaptive, scalable solution that dramatically improves the dissemination and exploitation of Reconnaissance, Surveillance and Target Acquisition (RSTA) full-motion video from UAs over multi-user networks. Developed by Cubic and partner 2xTech, TEADS interconnects ISR data links with existing tactical communications networks to bring video and other critical ISR data to the tactical warfighter.

MMT
Cubic’s Multiband Miniature Transceiver is a small, lightweight, easily-integrated digital data transceiver providing voice, data, and imagery transport for airborne and ground applications. It is capable of receiving and transmitting video and telemetry data across UHF, S, L, C, and Ku frequency bands, though in a very small, lightweight, low-power package.

RQ/MQ-8B Fire Scout CDL
Cubic’s Tactical Common Data Link (TCDL) serves as the wireless link between Northrop Grumman’s Fire Scout UA and control stations aboard littoral combat ships. The high-speed data link provides up to 10.71 Mbps throughput to transfer data from the Fire Scout’s video, laser and infrared targeting sensors to the ship.

VideoScout-MC2
The VideoScout-MC2/Digital system provides mobile units, Special Forces, intelligence teams, and dismounted personnel with an “all-in-one” solution to receive, manipulate, and disseminate critical video data. Cubic and L-3 Interstate Electronics are providing the system, which enables warfighters to easily create and share intelligence video that is relevant to their mission.

NAVY AN/USQ-167 CDLS
This system is the U.S. Navy’s state-of-the-art communications data link. It is the first Navy CDL that can support all standard CDL network interfaces. It is faster, lighter and more cost-effective than previous shipboard CDL systems. All CVN Nimitz Class carriers are fitted with a dual dish, dual channel CDLS.

UK Watchkeeper CDL
WATCHKEEPER is the UK military’s first network-enabled UAV system. Cubic is supplying the primary data link (TCDL) for this network. TCDL encrypts, multiplexes, encodes, transmits, receives, demultiplexes and routes the ISR data to and from the Hermes 450 UAVs for complete situational awareness.

Sentinel NLDS
Cubic’s broadcast data link technology is incorporated into the Sentinel system – the UK Ministry of Defence’s new, highly sophisticated, airborne surveillance system. Sentinel is an advanced air-ground surveillance system, jointly operated by the UK’s Royal Air Force (RAF) and the British Army. It provides 24-hour, all-weather, continuous intelligence, surveillance and reconnaissance capability for peacekeeping, warfighting and homeland security.
TACTICAL DATA LINKS
SECURE & ROBUST COMMUNICATIONS FOR MODERN NET-CENTRIC WARFARE