Advanced Tactical Airborne System (ATAS)
Airborne Tactical Interoperability System
Combine the maturity and adaptability of Ultra's certified tactical data link software in flight-qualified COTS enclosures.

Key Benefits

- **Unmatched capacity**
  Line-of-Sight (LOS and Beyond Line-of-Sight (BLOS) simultaneous communication

- **Flexible connectivity**
  Link 16 support using a variety of radio types

- **Complete solution**
  Includes a real-time tactical situation display

- **Robust**
  Supports up to 16,000 air, surface, subsurface and ground surveillance and electronic warfare tracks and points. Certified to 5,000 entities.

- **Adaptable**
  Operator defined configuration

- **Supportable**
  100% COTS solution that meets MIL-STD-810/461/704z

Overview

Equipped to meet the most demanding and rapidly changing mission requirements, the Advanced Tactical Airborne System (ATAS) provides the user with the unprecedented flexibility to choose among various tactical interfaces and software/hardware configurations. ATAS includes the maturity and adaptability of Ultra's certified tactical data link gateway software only distribution, coupled with a flight-qualified COTS enclosure, or coupled with existing platform equipment. ATAS interfaces to the most common MIDS, JTIDS, JTRS, SATCOM, and small form factor airborne-capable Link 16 terminals for MIL-STD-3011A/C, Satellite TADIL J, MTC, and CoT. ATAS provides interfaces for Link 11, VMF, CMF, and SADL for connectivity with coalition forces.

ATAS supports single or multi-link operations. When operating with multiple tactical data links, the ATAS concurrent link operations capability allows the operator to establish redundant circuits that automatically failover from a higher-priority interface to the next best available interface. ATAS primary purpose is to provide data link forwarding capability.

The integrated TacViewC2™ tactical situation display application provides a high-performance real-time display with selectable Heading up or North up screen orientations.

ATAS uses the certified ADSI® Tactical Data Link Gateway (TDLG) as the primary software component enclosed in several COTS form factors including cPCI, VPX, cPCI, Com Express modules. The scalability and configurability of the ATAS allows the operator to establish networks with redundant paths, while connecting units within a theater of operations. With its concurrent link operations capability, Intelligence broadcast, radar interfaces and its ability to serve multiple remote workstations, ATAS allows Airborne C4ISR mission specialists to establish and maintain a complete tactical picture.

ATAS is a flexible command and control system for use on a fixed and rotary wing aircraft. It uses flight qualified, conduction cooled components to ensure the highest level of operational availability while still taking advantage of the advances and cost savings associated with COTS technology. ATAS has growth potential by utilizing various form factors for system upgrades. The operator can control the ATAS using the provided user interface applications or host the user interface applications on an existing aircraft computer.

System Specifications

ATAS is the most versatile and cost-effective airborne command, control and interoperability tactical data link gateway system available.

System Hardware

- ARINC-404A compliant Half-ATR, Serial, IP, 1553, ATDS
- VPX, PCI, cPCI, Com Express small form factors
- xU server

Power Requirements

- 28 VDC

Sensor

- SeaVue AN/APS-134

Link 16 Line-of-Sight

- MIL-STD-1553B dual redundant bus
- MIDS LVT-1A (MIL-STD-1553B or Ethernet)
- MIDS LVT-1N (MIL-STD-1553B)
- MIDS LVT-3
- MIDS JTRS CMN-4
- JTIDS Class 2 F-15
- JTIDS Class 2 Navy Air
- Small Tactical Terminal (STT)
- TacNet Tactical Radio (TTR)

Link 16 Beyond Line-of-Sight

- Multiple RS-449/RS-530/ RS-232 SATCOM interfaces
- Ethernet interfaces
- MIL-STD-3011 Joint Range Extension Application Protocol (JREAP)
  - Appendix A - satellite communications net controller alternate net controller net participant
  - Appendix B - point to point serial
  - Appendix C - Internet protocol (IP) TCP client or server UDP unicast and multicast
- Satellite TADIL J interface:
  - Satellite TADIL J Gateway Controller (STGC)
  - Satellite TADIL J Alternate Gateway Controller (Alternate STGC)
  - Satellite TADIL J Gateway User (STGU)
- Legacy Ethernet (Socket)
  - Link 16 Interfaces
  - Multi-TADIL Capability (MTC)

Link 11

- MIL-STD-1397 NTDS/ATDS interfaces for HR or UHF

Intel

- TDIMF (CTT/HR, MATT), ENTR/TRS, serial/IP

Other

- Link 22 single NV
- Automatic Identification System (AIS)

Operational Use

- MQ-8 Firescout
- MQ-4C Triton
- P-8 Poseidon
- US Navy P-3 since 2004
  - Adds Link 16 capability
  - Link 11 capable
  - Provides a Single Operational Picture for the user
  - Communicates with other A/C interfaces including: GPS, ISR, Radar, 1553 and IP
- International customers
  - Hardware/Software or Software-only delivery
  - Unique/Repeatable baseline configuration management
  - Low cost implementation
  - Upgradeable to Link 22

Airborne Tactical Interoperability (ATI) for fixed and rotary wing aircraft

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