Advanced Tactical Airborne System

Airborne tactical interoperability

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 terminals

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

- **Robust**
  Supports up to 4,000 air, surface, subsurface and ground surveillance and electronic warfare tracks and points

- **Adaptable**
  Operator defined configuration

- **Supportable**
  100% COTS solution that meets MIL-STD-810, MIL-STD-461 and ARINC-404A requirements

Features

Ready 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. The ATAS combines the maturity and adaptability of Ultra’s certified tactical data link software in a flight-qualified COTS enclosure. The ATAS interfaces to the most common MIDS and JTIDS airborne-capable Link 16 terminals and supports MIL-STD-3011A SATCOM Link 16 as well as Satellite TADIL-J. Additionally, the ATAS provides a Link 11 interface for connectivity with coalition forces.

The 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. The ATAS can also act as a data link forwarder.

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

Operation

The ATAS uses the certified Air Defense Systems Integrator (ADSI)® Multi-Link Interface Unit (MLIU) as its primary software component enclosed in an ARINC-404A compliant Air Transport Rack (ATR). The scalability and configurability of the ATAS allows the operator to establish networks with redundant paths, while connecting units within a theater of operations. Such networks are built even if unit addresses and track numbers are not coordinated. With its concurrent link operations capability, Intelligence broadcast, Radar interfaces and its ability to serve multiple remote workstations, the ATAS allows Airborne C4ISR mission specialists to establish and maintain a complete tactical picture.
Uses

The 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. The ATAS has growth potential with open CompactPCI® slots 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.

The ATAS is the most versatile and cost-effective airborne command, control and interoperability system available.

Description

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

Dimensions

- 8” (h) x 6.75” (w) x 15” (d)
- 20.32 cm (h) x 17.15 cm (w) x 38.1 cm (d)
- 18.4 pounds (8.35 kilograms)

System hardware

- ARINC-404A compliant Half-ATR
- 5-Slot conduction-cooled CompactPCI
- 2 1.7 GHz Duo Pentium® Ruggedized Processors
- 16-GB removable storage (8-GB per processor)
- ATDS PCI Mezzanine Card (PMC)
- MIL-STD-1553B CompactPCI card
- 4-Channel synchronous/asynchronous communications PMC card

Power requirements

- 90 Watts, 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
- JTIDS Class 2 F-15
- JTIDS Class 2 Navy Air

Link 16 Beyond Line-of-Sight

- Four RS-449/RS-530/RS-232 SATCOM interfaces
- Ethernet interface
- MIL-STD-3011 Joint Range Extension Application Protocol (JREAP)
  - Appendix A - satellite communications net controller
  - alternate net controller
  - net participant
  - 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 ATDS interfaces for HR or UHF

Intel

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

Other

- Automatic Identification System (AIS)