



+ Air Defense Systems Integrator ADSI®

Certified joint tactical data link forwarding and control

Benefits

- Combat-proven command and control
- Real time situational awareness
- Multiple communications and radar interfaces (JTIDS, SADL, satellite, *EPLRS)
- Multiple data links, including Link 16 and Link 11
- Extensive message filtering
- Supports multiple remote workstations
- COTS hardware provides affordable decrease in Size, Weight and Power (SWaP)
- Expert support, available 24 hours
- World class training and reference media

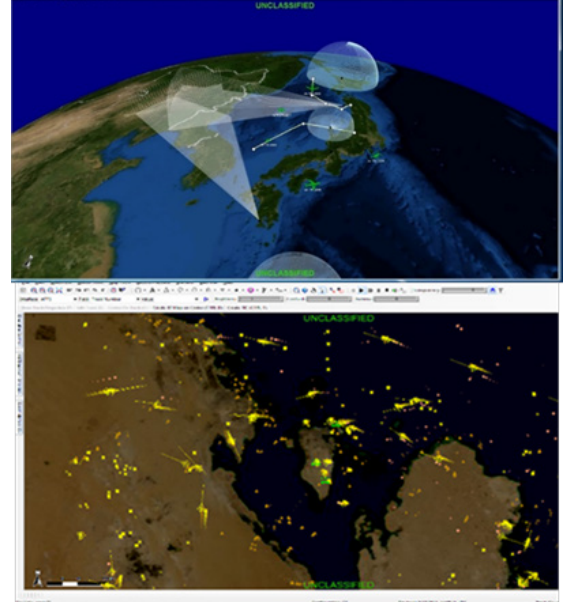
Overview

The Air Defense Systems Integrator (ADSI®), is the most interoperable, real-time, tactical command and control system offered anywhere. With more than 2,000 ADSI products installed worldwide, the combat-proven ADSI remains unmatched in its ability to provide joint-certified tactical data link forwarding software combined with an unparalleled number of tactical data link, radar and electronic intelligence interfaces.

For the last 30+ years the U.S. military has relied on the ADSI during every major crisis. Today, it is used on aircraft carriers and command ships, in tactical and air operations centers, in airspace integration systems and in joint command centers around the world. The ADSI supports critical missions by integrating land, air and sea domains, providing command and control of tactical units and reporting real-time sensor information across the battlespace.

Scalable architecture and hardware (available in 2U, 3U and 4U)

The system can be easily tailored to your mission requirements, whether there are only a few tracks in the system or a few thousand.



Simultaneous interconnectivity

- Joint Tactical Information Distribution System (JTIDS) Class 2 and 2M (shipboard, airborne and land-based)
- Multifunctional Information Distribution System (MIDS) Low Volume Terminal (LVT) 1, 2, 3, 4, 6, 7 and MOS Mod
- MIDS JTRS
- USQ-125, MX-512P, USQ-130
- Joint Range Extension Application Protocol (JREAP) MIL-STD-3011 Appendices A, B and C
- Satellite TADIL J (S-TADIL J) (WSC-3, PSC-5D, LST-5D, PRC-117F, ARC-210)
- Legacy Ethernet (Multi-TADIL Display System [MTDS], Multi-TADIL Capability [MTC])
- Legacy Serial Link 16
- Standard Interface for Multiple Platform Link Evaluation (SIMPLE) 16
- SIMPLE 11
- Interoperable Data Link (IDL)
- Army Tactical Data Link (ATDL)-1 MIL-STD-6013
- NATO Link 1
- Forward Area Air Defense (FAAD) data link
- Cursor on Target (CoT)
- Situation Awareness Data Link (SADL)
- Global Positioning System (GPS) (NMEA-0183, DAGR, PLGR)
- Navigation data sources (PC-NAV)
- Area Air Defense Commander (AADC)



Multiple radar formats and capabilities

- Common Digitizer-2 (CD-2) (US)
- NATS (UK)
- SDO-1000 (NATO)
- ASTERIX
- ADS-B
- Accepts a wide variety of radar inputs (military and commercial)
- Initiates tracks automatically
- Combines tracks from a large number of radar ports into a Single Integrated Picture (SIP)
- Correlates radar tracks with tracks from tactical data links
- Reports tracks on tactical data links
- Registers multiple radars automatically

ADSI

The latest version of ADSI system significantly increases the warfighter's interoperability with 32 simultaneous and dynamically reconfigurable data links—tested and reliable—with an increased track capacity of 16,000 tracks. Most importantly, the completely revamped user interface greatly improves the entire ADSI user experience, from system configuration to system operation.

Now, the system can be reconfigured without downtime.

The configuration wizards safeguard the system from inadvertent operator error. Persistent system and interface status are shown graphically. With its strict adherence to all relevant military standards, including the latest MIL-STD-6016, the ADSI system ensures reliable interoperability.

Most importantly, the completely revamped user interface greatly improves the entire ADSI user experience, from system configuration to system operation.

New Features

- Dynamic link reconfiguration
- 32 simultaneous – tested and reliable – data links
- Increased track capacity up to 16,000 tracks
- Quick access to a Link 16 RF network in just four mouse clicks
- TacViewC2™ – 3D situational awareness and C2 display
- Certified digital air control
- Certified Variable Message Format (VMF) interface
- Robust IA functionality

A Windows-based system manager provides a multi-featured, user-friendly configuration and monitoring application.

Key Features

- Dynamic Link Reconfiguration – Add/delete/edit interfaces while the system is running without interfering or disrupting other interfaces
- Drag-and-drop Configuration Wizard – An intuitive user interface for making rapid and reliable changes
- Windows-based System Manager –
- A multi-featured, user-friendly configuration and monitoring application
- Wizard-based filters – Easily access, define and enable data link filters
- Wizard-based Link 16 Terminal Control Application – Access a Link 16 RF network in just four mouse clicks
- Full Digital Air Control – Perform handovers, mission assignments, vectors, controlling unit change, correlation and target sorting
- Autostart – Configure the start function to boot automatically or with just two mouse clicks
- MIL-STD-6011, MIL-STD-6016 and MIL-STD-6020 compliant – Provides the latest functionality and standards compliance
- Robust Information Assurance (IA) functionality – Create/configure secure network connections while maintaining persistent data availability
- Updated operating system support for Microsoft® Windows®10 and Red Hat® Linux

Virtual ADSI

The certified, combat-proven advanced tactical data link capabilities of the ADSI software is now available on a Virtual Machine (VM), providing serial and Ethernet Link 16 and Link 11 communications in a secure networked environment.

The ADSI virtual software is hosted on a VMware® ESXi server with the vSphere hypervisor client software installed locally. Two VMs host the ADSI virtual software; a Microsoft® Windows® 10 Enterprise VM and a Red Hat® Enterprise® Linux VM. Ultra's robust TacViewC2™ software is the C2 and situational awareness display on the Windows VM.



Virtual ADSI *continued*

Virtual ADSI is offered in three configurations. The core virtual offering provides Link 16 Ethernet links as well as Ethernet Intel and secondary links. The Link16 serial option provides Link 16 serial links through the SyncNet8 serial-to-IP conversion appliance. The virtual ADSI software supports up to eight serial data link connections to the SyncNet8 appliance via a single Ethernet connection.

The Link 11 option uses the PowerNet appliance and provides Link 11 connectivity via the IXI Technologies PowerNet ATDS or NTDS Bridge system.

All of the ADSI functionality is available in the virtualized version, including Dynamic Link Reconfiguration, the drag-and-drop Configuration Wizard and Windows-based System Manager.

With strict adherence to all relevant military standards, including the latest MIL-STD-6016, the ADSI virtual software ensures reliable interoperability.

The ADSI Virtual Machine (VM) is hosted on a VMWare ESXI server with the VSphere Hypervisor client software installed locally. Other VM configurations may be supported upon request.

ESXI Hardware Requirements

- Supports only LAHF and SAHF CPU instructions
- Requires the NX/XD bit to be enabled in BIOS
- Refer to www.vmware.com for full requirements

Linux Segment Dedicated Hardware Requirements

- 3.4+ GHz Core i7/i9 or Xeon Quad Core Processor
- 32 GB RAM
- 120 TB Hard Drive
- One or more 1 GigE or 10 GigE Ethernet controllers
- Dedicated Ethernet controllers required for SyncNet8 and PowerNet appliances

Windows Segment Dedicated Hardware Requirements

- Same as Linux segment plus dedicated graphics accelerator with 2 GB video memory

Ultra reserves the right to vary these specifications without notice.

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Ethernet Data Link Core Offering

- Link 16 JREAP 3011C
- Link 16 MTC
- Link 16 MTDS
- Link 16 SIMPLE
- Link 11 SIMPLE
- MIDS on IP (LVT-1D, LVT-2J, LVT-11, STT or TTR)
- Intel data links including: FDL, OTH-T, CMF and USMTF
- Secondary data links including VMF
- MTC D

Serial Data Link Offering with Ultra's SyncNet8 Appliance

The SyncNet8 appliance is Ultra's interface conversion device that transports serial communications over an Ethernet Local Area Network (LAN). The network device converts a full duplex synchronous, asynchronous or HDLC serial data stream to a UDP/ IP packet stream.

- JREAP A
- JREAP B (synchronous and asynchronous)
- S-TADIL J
- MTC
- MTDS Serial J
- Link 16 SIMPLE
- Link 11 SIMPLE
- Link 11 Indianhead
- Link 11B
- NATO Link-1
- ATDL-1



Learn more about Ultra's Command and Control Systems at ultra.group/intelligence-communications or by emailing us at system.sales@ultra-ats.com