



# TCG ASE

## Adjunct Simulation Engine: Data Links Simplified

### Affordable Realistic Training

As worldwide defense budget pressures increase, full-scale military exercises are not always feasible or even desirable. Conversely, multi-faceted, highly realistic training is vital for effectively countering today's asymmetric threats. Curtiss-Wright's [TCG Adjunct Simulation Engine](#) (ASE) injects high fidelity, real-time, and configurable simulated tactical data link (TDL) information into an operational or training environment, enabling you to affordably simulate highly realistic, real-time, and scripted TDL networks. In addition to transmitting, receiving, processing, and displaying surveillance and other TDL information, TCG ASE can automatically transmit, receive, and respond to command and control (C2) messages. TCG ASE provides virtual assets and scripted C2 for real world sorties.

### TDL Network Simulator

TCG ASE can create, inject, and display Link 16 tactical data link messages into both live and virtual environments. Leveraging the TCG Battlefield Operations Support System (BOSS®) simulation capability and tactical display, virtual TDL objects may be placed within an area of operations and transmitted through a host system to an external network where they are received and acted on by the live or virtual network players. Full, simulated C2 capabilities are also included, providing a complete, interoperable, high fidelity tactical data link simulation system

Curtiss-Wright is the leading global supplier of TDL software solutions for military communication systems. Curtiss-Wright's comprehensive portfolio of TDL testing, training, simulation, and battlefield operations solutions provides warfighters with proven multi-link communication capabilities that optimize performance and increase mission effectiveness, and is the leading TDL solution set used by militaries around the globe.

### Host Interoperability

TCG ASE is fully interoperable with hosts such as TCG BOSS®, TCG GTS®, ADSI®, JRE, NATO CSI, and others. Curtiss-Wright can also provide a host system to connect to Link 16 MIDS, JTRS, STT, and TTR equipment.

### Key Features

- Affordable Link 16 simulation
- Real-time or scripted simulation
- C2 message support
- Host interoperability
- Link 16, JREAP, SIMPLE, and DIS support
- Full Link 16 J-Series message support

### Applications

- TDL network simulation
- Link 16 message simulation
- Range training

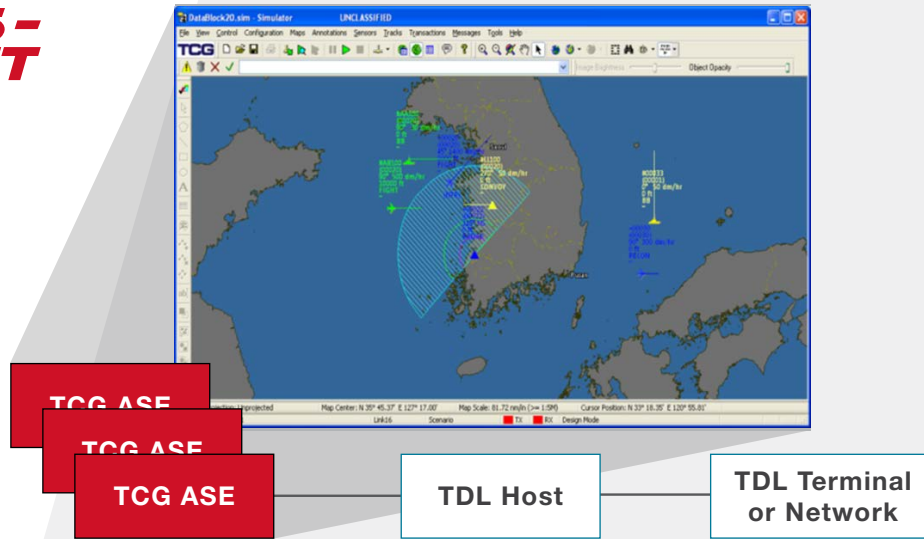


Figure 1: TCG ASE

## Full Featured Capabilities

Built from TCG BOSS, TCG ASE is the light weight alternative for programs that don't require Link 16 terminal control and management, and have a limited number of tracks to display. Leveraging TCG BOSS's simulation and message processing capability, TCG ASE also includes the Range Training Officer (RTO) features, message display, analysis, record/playback tools, and support of the latest message standards and change proposals.

TCG ASE includes software for communicating with an operational host system. Also, by deploying additional TCG ASE's, multiple TDL networks can be simulated.

TCG ASE is available in multiple configurations and can be installed on a variety of hardware platforms from commercial grade desktop computers and laptops to ruggedized custom systems.

- The ASE-RE implements the Joint Range Extension Application Protocol (JREAP).
- The ASE-SMPL implements the Standard Interface for Multiple Platform Link Evaluation (SIMPLE).
- The ASE-DIS implements the Distributed Interactive Simulation (DIS) Entity State and Transmitter and Signal PDUs.
- The ASE-IMG adds Link 16 Imagery J16.0 support.
- Custom configurations are also available.

TCG ASE provides out of the box TDL network simulation.

## Ordering information

Contact Curtiss-Wright for ordering information

## TCG ASE

## Specification Summary

### Minimum System Requirements

- Multi-Core Intel Processor
- 16 GB RAM
- 500 GB Disk Space
- Ethernet
- 2 GB Professional Graphics Card
- Windows 11

### Optional Interfaces and Networks

- JREAP A, C
- Serial J
- Socket J
- DIS
- Link 16 Imagery
- SIMPLE 16

### Data Link Standards

- MIL-STD-6016 B, C, D, E, F, G (Link 16)
- MIL-STD-3011 (JREAP A, C)
- STANAG 5516 (Ed 3 and 5)
- STANAG 5602 (SIMPLE)
- ATDLP-5.16 Ed 3