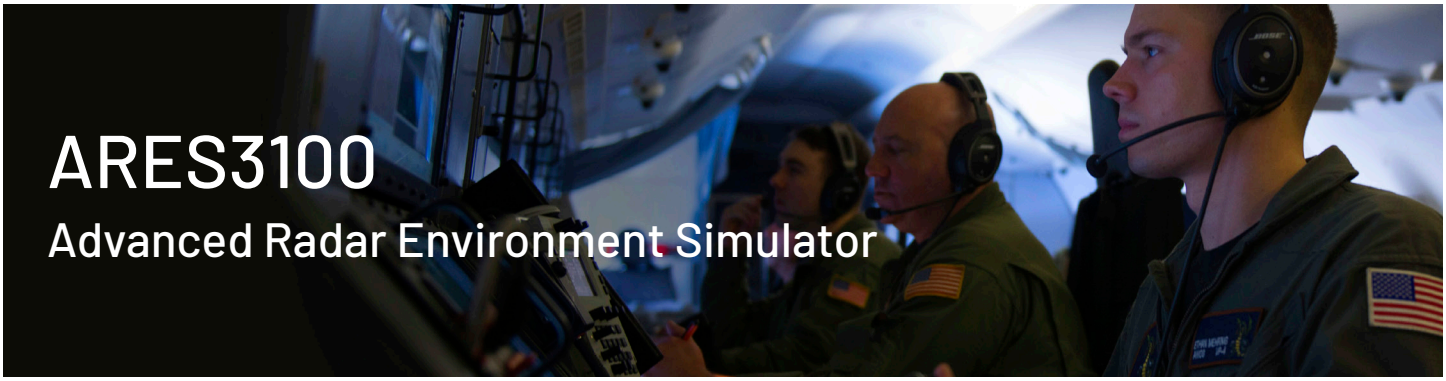
mercury



ARES3100

Advanced Radar Environment Simulator

Delivering industry leading performance out of the box

- Configurable up to 4 simultaneous channels and 8 targets per channel
- Robust, user-friendly GUI and real-time operation
- Options for EA techniques for real-world jamming imitation

The ARES3100 advanced radar environment simulator brings Mercury's proven DRFM-based technology to an out-of-the-box simulator system. By applying the latest in multi-target and complex threat emulation technology to a standard product, the ARES3100 minimizes program cost and schedule without sacrificing performance. This creates a system that requires significantly shorter development times yet produces more rapid and thorough radar system testing overall.

FEATURES

Supports free-space test environments

Modular/configurable design

Windows-based graphical user interface (GUI)

Comprehensive BIT and calibration included in software

Operation

Up to 4 simultaneous channels

Up to 8 targets per channel

Each channel can be a target, ECM, clutter or chaff simulation

Wide variety of ECM techniques and target modulation

Instantaneous bandwidth of 850MHz

Output power level base system equal to 0 dBm, other output levels available upon request

Controllable output power range of 100dB, with 0.25 dB resolution

Hardware in the loop (HWIL) with facility control

Real-time external or local host control

Real-time, runtime displays of SUT, targets, ECM, etc.

High-speed scenario update rate

High reliability

Data logging for post-test correlation

Applications

Free-space test configurations

Radar performance evaluation

ECM vulnerability assessment

Radar production testing

ECCM training/tactics development

Air defense personnel training

Receiver/processor development

Scenario

Standard 1 channel, options to 4 channels

Up to 8 targets per channel

Up to 32 targets per scenario with 4 channel option

Standard targets, jammers, ECM or EA, weather, and chaff options supported

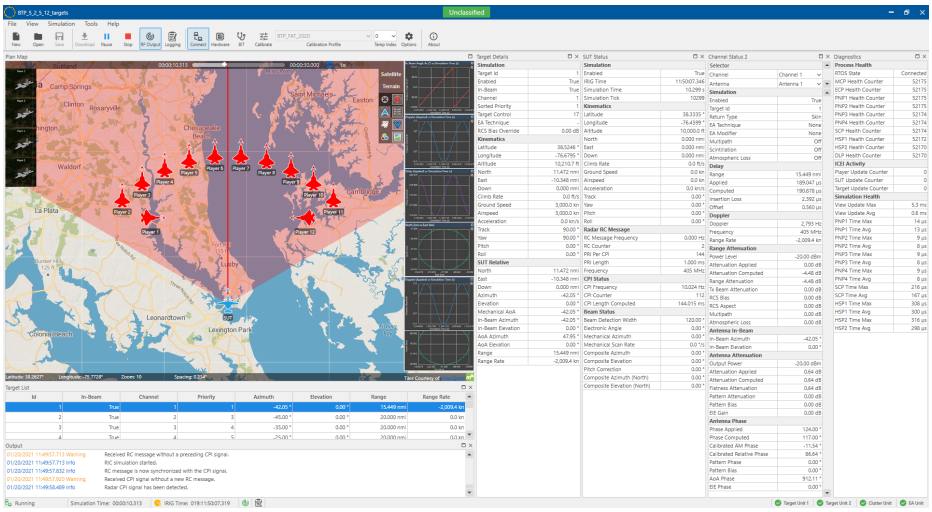
Clutter models available

Available Interfaces

External computer control

Jammer in the loop interfaces

IRIG A/B/G for synchronization



RES GUI Screen

Signal Fidelity

Operation frequency coverage of 2-18GHz, standard, <2GHz and >18GHz supporting options available

A/A doppler shift of >±2 MHz

Range and doppler ambiguities are correct for all PRFs

Output noise floor <–108 dBm/Hz with signal output power of -10 dBm

Options

Geometry modeling 6DoF, Aspect dependent RCS & JEM optional

External jamming assets

Combination coherent and non-coherent

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Learn more

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