

# DESIQ™ TECHNOLOGY



## DYNAMICALLY ENHANCED STREAMING I/Q SYSTEM

Textron Systems' DESIQ™ technology is a high-fidelity simulation tool designed for real-time generation of streaming In-Phase and Quadrature (I/Q) data using hardware acceleration. It is particularly beneficial for cognitive electronic warfare (EW) testing and training, enabling coherent real-time streaming I/Q generation and stimulating onboard equipment by emulating a tuner/receiver. The DESIQ system emulates a receiver by producing data packets for I/Q based on simulated RF signals in the specified tuning window. DESIQ is scalable, allowing for the addition of more units or storage/computation components to meet various industry needs.

[TextronSystems.com](http://TextronSystems.com)



**TEXTRON** Systems

► PUSHING PAST POSSIBLE

# EXPAND THE DIGITAL CHAIN BEFORE THE NEED TO INTRODUCE RF

DESIQ™ can be effectively leveraged in simulation environments for test or training systems by pairing it with FORTRIS™ Force On-Force Reactive Tactical Readiness IADS simulator to generate streaming I/Q input. This setup creates realistic and dynamic signal environments, essential for effective testing and training. The streaming I/Q input ensures that the simulation environment closely mimics real-world conditions, enhancing the accuracy and reliability of the testing and training processes. By emulating a tuner or receiver, DESIQ stimulates onboard equipment, providing a realistic environment for cognitive EW applications.

## KEY FEATURES:

- > Real-time generation of streaming I/Q using external bitstream sources.
- > Emulation of a receiver by producing data packets for I/Q based on a given tuning window.
- > Playback of pre-recorded I/Q data for signals.
- > Scalable design that allows the use of one or more DESIQ units or the addition of more storage/computation components to meet various industry needs.
- > Ability to meet future Cognitive EW Test or Training needs.
- > Capability to train at speed and depth with coherent real-time streaming I/Q generation.
- > Stimulation of onboard equipment by emulating a tuner/receiver.
- > Ability to bypass the RF processing chain.

