Frontier Electronics Systems Corp. has been designing, manufacturing and integrating Automated Test Equipment (ATE) for aerospace and maritime electronic systems since 1989.

- Designed, qualified, and manufactured for US and foreign aircraft, maritime, missile, UAS, and space customers.
- Supporting systems operations, repair centers, and factory production.
- Our design maximizes the use of Commercial-Off-The-Shelf (COTS) hardware and graphics based software products to enhance affordability while minimizing development cycle time.

Closed-Loop Simulation for Global Hawk and Triton UAV

We are the supplier of choice for the collaborative development, production, and integration of Closed-Loop Simulation (CLS) Systems for Northrop Grumman’s Global Hawk and Triton UAV programs and has been since their inception. The innovative technology integrated into these programs has ensured that RQ-4A, RQ-4B, and MQ-4C UAVs are 100% mission ready prior to air operations. Four Single String CLS (SSCTS) systems have been delivered to Northrop since 2001 for Flight Computer Software development. The latest version consists of two equipment racks with embedded electronics processing 1,800 platform signals. Five Dual String CLS (DSCTS) systems have also been delivered over the past 14 years for “Real Time Simulation of UAV Flight & Mission Profiles.” The Dual String CLS processes more than 3,200 signals and comes in both a three-rack configuration for USAF support and a “Hot Bench” configuration for USN support.
Interface Test Adaptors (ITA) for PAC-3

Frontier Electronic Systems was selected for the production of the Interface Test Adapters (ITA) for PAC-3 missile depot missile test systems in 2003. The program began as a “build-to-print” program only, but expanded to include design for manufacturing because of Frontier engineering initiatives focused on improving both quality and efficiency in the build process. The ITAs produced for this program connect the customer’s Units Under Test (UUT) to the Flexible Test and Measurement System (FTMS). Following the completion of the initial sets of ITAs for this program, Frontier was selected to design, qualify and manufacture a suite of Factory Acceptance and Test (FAT) equipment for the PAC-3 circuit card production facility. The purpose of this FAT is to verify circuit card electronics performance during environmental stress screening and vibration testing. FES continues to provide customer software support for this system.

Reliable Test Set Engineering

The design, development, manufacture, and integration of ATE systems is a core technology focus for FES. Our engineers have designed and manufactured complex flight line test systems for military aircraft such as the F-15, F-18, C-17, B-1, B-52 and OV-22 aircraft. In 1994, FES developed the Common Core Test Set to test space systems electronics for the Defense Support Program (DSP).

This open-architecture, high-reliability electronics test set has been upgraded over the last 20 years with new hardware and graphics-based software to accommodate the complex testing requirements associated with the International Space Station Rotary Joint Motor Controller and other satellite electronics.