Avtron’s Data Acquisition System – ADAS

is the computerized “front end” for your test bench or mechanical fixture.

A stand-alone data acquisition and control system that can be connected to multiple test cells, ADAS provides high-speed, multi-channel system data acquisition to record and plot pressures, flows, temperatures, position, velocity, drive current, and various signals as required by the test procedure for the Unit Under Test (UUT).

Aircraft Component Test Capabilities

- Linear/Rotary Actuators
- 3-way and 4-way Servo Valves
- Brake Valves
- Engine Driven Pumps
- Hydraulic Motors
- AC Driven Pumps
- Flight Controls
- Relief Valves
- Thrust Reversers
- And More!

The ADAS can also provide data acquisition for non-Avtron test systems or can be used in conjunction with small mechanical fixtures testing non-hydraulic components. Regardless of the application, through the use of adaptation, Avtron’s data acquisition system has the capability to provide the following measurement types:

- Temperature
- Voltage
- Current
- Strain
- Load
- Pressure
- Resistance
- Power

ADAS offers a National Instruments LabVIEW based software package combined with state-of-the-art PC-based data acquisition hardware. No previous programming experience is necessary. Users can be easily trained to create or modify test programs using a point-and-click programming interface. Test Programs can also be created and purchased from Avtron.
Programming Features

- Real-time data and graphical user interface with end user customization capabilities.
- Pre-programmed test routines eliminate operator error and provide for precise, repeatable testing.
- Test procedures are filed by CMM number and revision level, for complete configuration control of test setup files. Automatic programs can also be stored by UUT type (e.g. Actuator, Solenoid Valve) and UUT part number.
- Existing tests programs can be quickly copied using the “save as…” feature and used as a template for fast development of new test capability.
- Adjustable Data acquisition rates, programmable limit values per channel, plotting/viewing subdivision lines and axis values can all be varied per test.
- Includes programmable plot overlays for quick “pass/fail” analysis of test data.
- An offline version of ADAS is included which allows for data review and programming to be done on any Windows PC.
- Test reports are stored using Microsoft Excel compatible format.

Next Generation ADAS Configuration Options

Avtron’s Next Generation ADAS consoles offer the same proven software interface you know and love, with the added flexibility of allowing you to choose only the amount of capability you need. All options are field upgradable, allowing for additional capability to be added as needed.

- **ADAS Option 1 (Model D750-1)** Provides basic data acquisition suitable for testing simple UUT’s such as actuators, hydraulic fuses, and relief valves
- **ADAS Option 2 (Model D750-2)** Provides all the capability of Option 1, but adds the ability to support selector valves, brake valves, and other UUT’s which require solenoid stimulus
- **ADAS Option 3 (Model D750-3)** Provides all the capability of Options 1 and 2, but adds the ability to support 4-way and 3-way electrohydraulic servo valves
- **ADAS Option 4 (Model D750-4)** Provides all the capability of Option 1, 2, and 3, plus the added capability to test some of the most advanced UUT’s, including Power Control Units (PCU) and other flight controls

Next Generation ADAS Add-On Features

- **Dual monitor option** is now available to allow for simultaneous viewing of digital test procedure documents while executing a test
- **Calibration and Self-Test Adapter** is now available to provide diagnostic testing of the ADAS system and simplifies the calibration process
- **ADAS Legacy Adapter** is now available to provide backward compatibility for customers migrating connections to older ADAS units over to the Next Generation ADAS

ADAS units can be provided to military customers as specified by NSN 4920-01-529-4368, 4920-01-613-4231