

TEST CONTROLLER

1 to 500 channels test controller for aerospace testing



At Moog, we understand that your investment in aerospace prototypes are high. That's why you need a dependable, proven test controller to help you be more productive and to protect both the test article and the test data.

The Moog Aerospace Test Controller incorporates our unique force loop technology to handle general purpose tests of up to 500 servo channels. Its operator flexibility, high-performance handling of complex testing formulas and ability to run with offline external software make it an indispensable tool for aerospace testing labs.

ADVANTAGES

- Loop update rate 2,500 Hz for ultimate response/ higher if required
- Optimized control loop technology for faster, more accurate testing
- Pseudo channels capability to meet the most complex test requirements
- Distributed system architecture

TEST APPLICATIONS

Moog offers servo controllers that provide static and fatigue testing, ranging from complete aircraft to sub-assemblies to components.

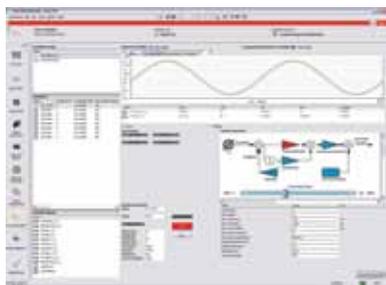
- Aircraft/airframe structural tests
- Iron bird tests
- Landing gear tests
- Helicopter airframe, rotor head and blade tests
- Fuselage and cockpit pressurization
- Engine casing tests
- Fin actuation loading tests
- Hydraulic system tests
- Load calibration tests
- Spacecraft structural integrity
- Testing of wind energy components



SPECIFICATIONS

The Aerospace Test Controller was designed based on input from customers from leading aerospace test laboratories, making it the ideal choice for simple, efficient operation in an array of testing applications.

The Aerospace Test Controller can handle up to 500 channels. Users can now expand test rigs easily, run more tests faster and increase test accuracy while keeping the tested specimen totally safe using the real-time hardware platform recently introduced in the Moog test controller. The control loop technology can be used in manual control, constant amplitude tests and has the capacity to apply complex aerospace test spectra.



KEY FEATURES

- Advanced control that is expandible up to 500 channels
- Unique control loops (e.g. force, displacement) for faster and more efficient testing and reduced set-up time
- Simple operation that allows you to add just the functionality you need for cost-effective integration
- Flexibility with any hydraulic, electric or pneumatic actuators
- Plug and play for cost-effective, immediate integration of test modules
- Pseudo channels capability allowing the user to create online calculated channels using formulas and other inputs, offering greater flexibility and cost savings for the lab
- Matrix control provides measurement and control flexibility for more efficient testing
- Bumpless switching (e.g. position, force) to take advantage of the full range of application
- Scripting for digital and analog I/O as well as limits and peak detectors makes set up and running of tests easier
- Test-oriented TestBAR user interface
- Fast graphics capabilities for a large number of signals
- Display engineering units, zoom option

Servo controller	<ul style="list-style-type: none"> • 2.5 kHz multi channel control loop • Moog unique control loop • Two feedback control possibilities (Force, Position) • Bumpless instant mode switching between force and position mode
Standard Inputs (per channel)	<ul style="list-style-type: none"> • 2x high resolution (0.03 %) with selectable gain and bridge excitation. • Pot meter input (0.03 %) (± 5 V 5 mA) or LVDT input (0.03 %) with LVDT excitation (5 V RMS @ 3.5 kHz) • Encoder, absolute (SSI) maximum 32 bit or relative 10 bit • 16 bit input (± 10 V)
Standard Outputs (per channel)	<ul style="list-style-type: none"> • 16 bits ± 100 mA valve driver output, with a limit in software from 0 to 100 % or (hardware selectable) ± 10 V output • 2x 16 bit D/A converters, ± 10 V

Real-Time computer	<ul style="list-style-type: none"> • Intel chipset from single to quad core technology • Clock frequency up to 2.8 GHz • Local Ram up to 2 GB • Hard-Drive up to 250 GB
Software	<ul style="list-style-type: none"> • Aero Test software suite • Conversion tools
Power requirements	<ul style="list-style-type: none"> • 95 - 132 VAC / 190 - 240 VAC; 47 - 63 Hz
Optional items	<ul style="list-style-type: none"> • Digital I/O board containing 8 inputs and 8 outputs • Analog Input board containing 16 single ended inputs or 8 differential inputs • Analog Output board containing 16 outputs • TestMODEL for faster testing • Ethernet interface to third-party DAQ measurement devices • TestPDA for remote control and tuning

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