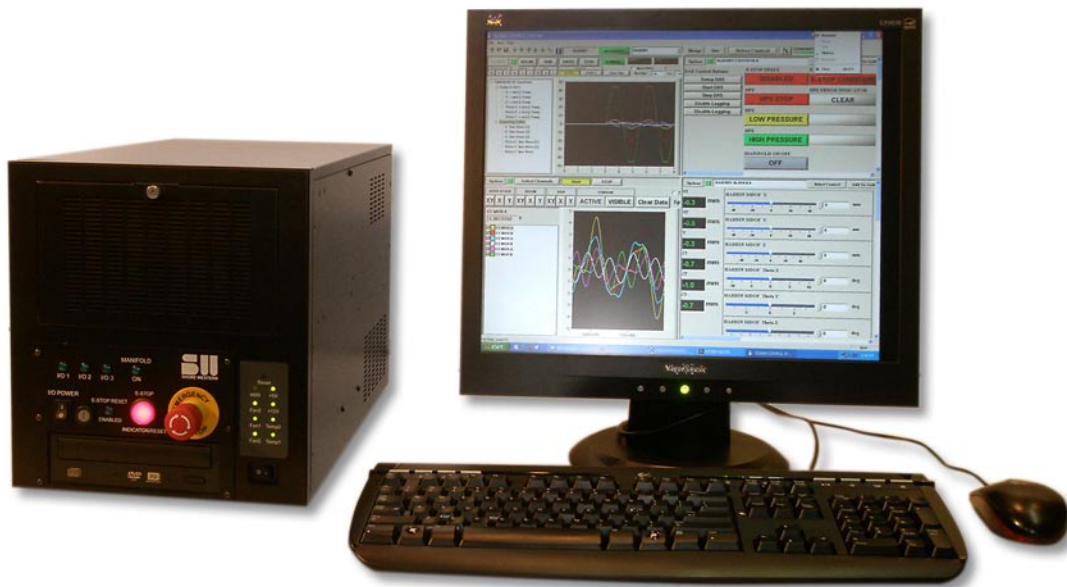


## SC6000 Control System



Designed and developed to address the needs of modern testing laboratories, the SC6000 Servo Controller key attributes include versatility, ease of use and safety while supplying the functionality required in today's complex experiments and simulations. The SC6000 can accept a wide range of transducers and drive popular brands of servo valves while offering a software package that makes setting up a system and running experiments simple.

The versatility of the SC6000 based control system comes from its ability to easily make both hardware and software reconfigurations. A distributed computing philosophy permits a large number of control and data acquisition channels to interconnect forming a seamless control and data acquisition system.

Servo Suite Software makes defining and redefining different system configurations straightforward. Each configuration can consist of multiple computers with servo and data acquisition cards. Custom programming is available to solve complex problems and special conditions.

### Software

- Single channel component test
- Multi-channel component test
- MAST table test suite
- Road data replication
- Civil Engineering test suite
- Seismic Simulation

### Features

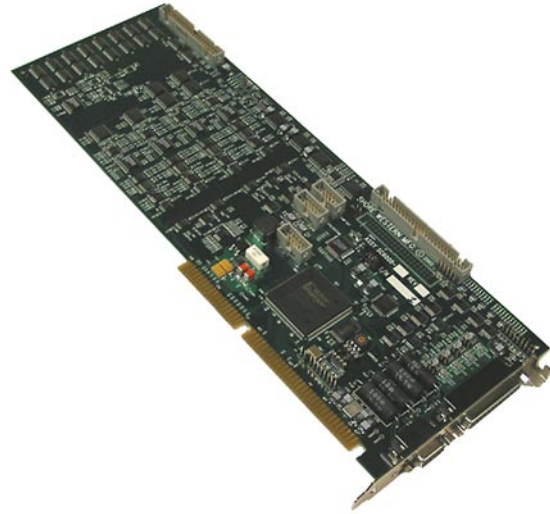
- Two servo amplifiers per controller card
- Two servo valve drivers per controller card
- Ethernet connectivity
- Two internal function generators per controller card
- Either voltage or amperage valve drive signals
- Servo-loop user configurable control card block diagram
- Four transducer amplifiers per controller card
- Integrated data acquisition
- Ethernet connectivity

### Benefits

- Digitally supervised analog control
- User configurable software and hardware
- Configurable user interface and screen views
- Hardware expandable by adding up to 8, two channel control cards
- Controller expandable by linking an unlimited number of controllers

## Hardware Specifications

- Dual channel servo boards that can be operated either independently or synchronously.
  - Each of the boards represents a test station that will start and stop independently.
  - Each board has 2 servo amplifiers, 2 each two-stage valve drivers and 4 transducer amplifiers and 24 channels of digital I/O.
  - The four transducer amplifiers can be configured to either DC or AC amplifiers. Transducer amplifiers are all controlled from the computer.
  - The DC amplifiers can be configured for load cells, pressure transducers, high-level voltage inputs or standard 4-20 mA inputs.
    - DC amplifier has a gain setting for low or high level inputs ( Manually Selected)
    - DC amplifier has gain ranges: 0.5x, 1x, 2x, & 4x, software programmable
    - DC amplifier has excitation 0-10 V software adjustable
    - DC amplifier has polarity software adjustable
    - DC amplifier has an offset +/- 2.5 V, software adjustable
  - The AC amplifiers are used with LVDT and RVDT type transducers, and include independent carrier frequency selection, and demodulator phase adjustment.
    - AC amplifier has four gain ranges: 0.5x, 1x, 2x, & 4x.
    - AC amplifier excitation frequency is 2.5 or 10 K Hz switchable
    - AC amplifier excitation amplitude 0-20 V peak to peak adjustable
    - AC amplifier polarity is software selectable
    - AC amplifier filter has a 3 pole filter
    - AC amplifier has an offset +/- 2.5 V, software adjustable
  - Servo amplifiers are configurable for P, PD PID, or PIDF type with selectable inputs for the command. Differential pressure stabilization is available as part of the control circuit when used with one of the 4 transducer amplifiers.
  - All control is digitally supervised analog control. Digital outer loop control is optional. This allows for a high bandwidth yet allows the processor to be used for compensation and outer loop calculations.
- 
- Dither frequency is selectable for multiple frequencies between 100 and 1000Hz.
  - Valve balance range is 20% of maximum servo valve current level.
  - The selectable input for driver amplifier permits bumpless transfer between feedback inputs but requires two servo channels per drive channel.
  - The controller can also accept an external input for operation from an external source.
  - 2 software programmable controlled monitor points are available per card for monitoring up to 2 specific locations in the analog circuit.
  - Error detects on the AC/DC amplifier outputs and monitor points.
  - Discrete I/O for all on-off control sequences, including valves, pumps, chambers, and other test related on/off devices.
  - I/O may be sequenced as part of a test sequence in a graphical block program.
  - Connectors, power sources, and cables are provided as required for:
    - Servo valve
    - LVDT/LDT
    - Load cell/differential pressure sensor
    - HPS, HSM
    - Digital I/O
    - Data Acquisition



Represented by:



**Shore Western Manufacturing, Inc.**  
 225 W. Duarte Rd., Monrovia, CA 91016  
 Phone (626) 357-3251 / FAX (626) 303-1582  
 email [sales@shorewestern.com](mailto:sales@shorewestern.com)  
[www.shorewestern.com](http://www.shorewestern.com)