

## Digital Control Center Model 900 Series

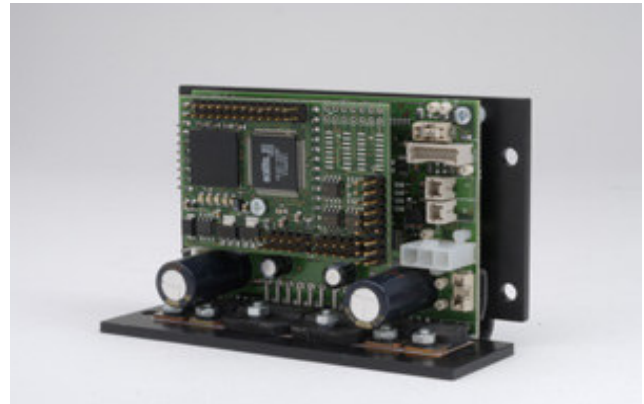
### Single Axis Digital Servo Drive Electronics

#### Architecture and Benefits

- State-of-the-Art DSP Based Galvanometer Control for Maximum System Performance, Ease of Integration and Long Term Stability
- Model Based State Space Algorithm for Speeds Beyond Analog PID Servos
- Simulation-Based Pre-Filtering Algorithms for Motion Control Optimization
- Stand Alone Self-Tuning and Calibration on Power Up—No Computer Required
- Galvo Parameter Identification and Fitting for Closed Loop Positioning Accuracy
- 16 Bit A/D and D/A Resolution for System Accuracy
- Bridge Amplifier Output for Full Galvo Small and Large Angle Speed
- Flexible Analog or Digital Input Command Configurability
- Configured for Cambridge Technology's Complete High Performance 62XX Series of Galvanometers

*Cambridge Technology introduces the latest breakthrough in scanning technology. The Digital Control Center 900 (patent pending) is a breakthrough in galvanometer control, performance levels and ease of use.* Based on comprehensive galvo models, system identification capability, system simulation and state-of-the-art DSP State Space algorithms, the Digital Control Center achieves the absolute maximum performance allowed by the laws of physics, material science and available power.

*Designed with performance and flexibility in mind, the Digital Control Center Model 900XX can be configured for optimal performance with Cambridge Technology's entire line of closed loop, galvanometer based optical scanners and your scanning load. In conjunction with Cambridge Technology's patented position detection technology, the DC900's DSP-control, 16 bit resolution and bridge Amp outputs provides the higher*



**Digital Control Center Model 900 Servo Driver**

system bandwidths and accuracy required for next generation laser system applications. Self-tuning and start-up calibration provide reduced system manufacturing cost, reduced field service and support costs while increasing system up-time. Flexible power supply configurations, integral mounting hardware, low profile connectors and overall size make the DC900 Servo the ideal choice where high levels of accuracy and speed are required.

**At Cambridge Technology, we take great pride in the performance of our products. Our high standards in research and development, manufacturing and customer satisfaction guarantee the performance consistency that you need to design the high quality systems demanded in today's competitive marketplace. Call us today to discuss your scanner and electronics requirements.**

# Digital Control Center Model 900XX

## General Specifications

*All angles are in mechanical degrees. All specifications apply after a 1 minute warm up period.*

|                               |  |
|-------------------------------|--|
| Analog Input Impedance:       | 400K +/-1% ohms (Differential)<br>200K +/-1% ohms (Single Ended) |
| Analog Output Impedance:      | 1K +/-1% ohms (for all observation outputs)                      |
| Position Input Scale Factor:  | 0.50 volt/degree (40°system), 0.67volt/degree (30°system)        |
| Analog Position Input Range:  | +/- 10 volts max   |
| Position Output Scale Factor: | 0.5 volt/degree  |
| Power Supply Requirements:    | +/-15 to +/-32VDC configurations available                       |
| Maximum Drive Current Limit:  | 10 amps peak, 2.5 amps rms<br>(power supply and load dependent)  |
| Operating Temperature Range:  | 0 - 50 °C  |
| Size:                         | 2.6" x 4.125" x 1.75", 5.14cm x 10.48cm x 4.45cm                 |

