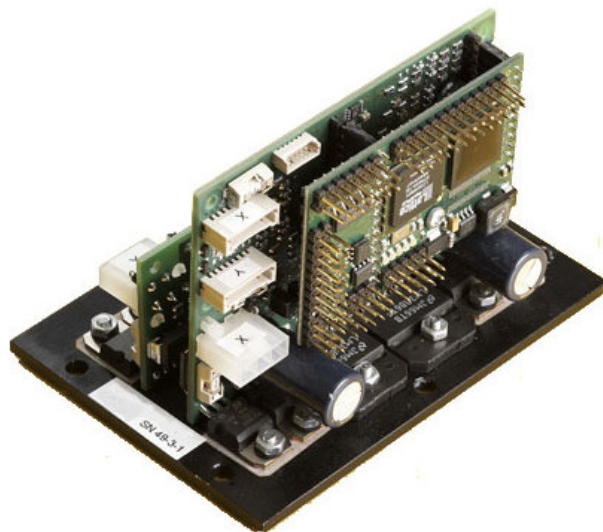


Digital Control Center Model 3000 Series

Low Noise Dual Axis Digital Servo Drive Electronics

Architecture and Benefits

- Compact Cost-Effective Dual-Axis Package
- Automatic Self-Tuning, no computer required
- State-of-the-Art DSP Based Galvanometer Control for Maximum System Performance, Ease of Integration and Long Term Stability
- Ultra low-noise architecture
- **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 D/A Resolution for System Accuracy
- Bridge Amplifier Output for Full Galvo Small and Large Angle Speed
- XY2-100 or High Speed Serial Digital Input Command
- Configured for Cambridge Technology's Complete High Performance 62XX and 83xx Series of Galvanometers



Digital Control Center Model 3000 Servo Driver

Now with Improved Dither Performance

Cambridge Technology introduces the latest breakthrough in scanning technology. The Digital Control Center 3000 patented technology achieves new levels in galvanometer control, performance, 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, ease of use, and flexibility in mind, the Digital Control Center Model 3000 can be configured for optimal performance with Cambridge Technology's 62xx and 83xx lines of closed loop galvanometer based optical scanners and your scanning load. In conjunction with Cambridge Technology's patented position detection technology, the DC3000's DSP-control, 16 bit resolution and bridge Amp outputs provides

the higher 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 DC3000 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 3000

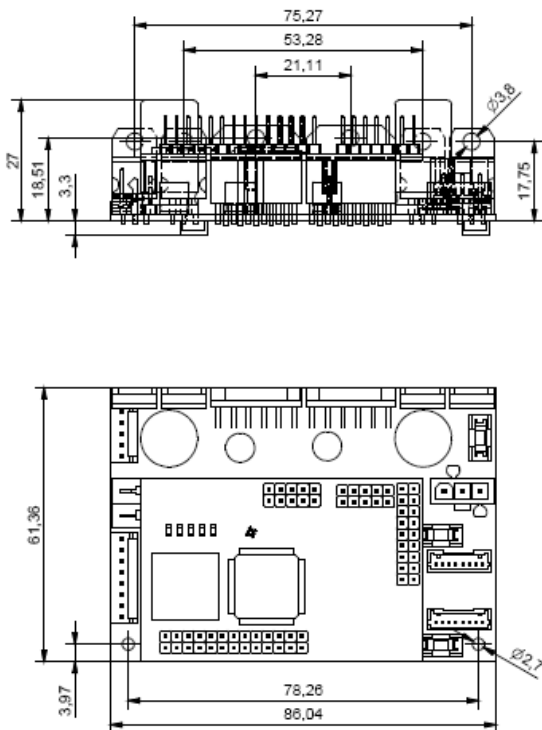
General Specifications

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

Command Input	XY2-100 or High Speed Serial Digital
Analog Output Impedance:	The un-terminated output of OPA2227, $<1\Omega$
Position Output Scale Factor:	0.333V/degree non-differential
Power Supply Requirements:	+/-15 to +/-32VDC configurations available
Maximum Drive Current Limit:	10 amps peak, 2.5 amps rms Per Axis (power supply and load dependent)
Operating Temperature Range:	0 - 50 °C
Size:	Base board: 8.6cm x 6.14cm x 2.7cm 2nd Axis Amplifier: 8.6cm x 3.43cm x 2.25cm

Outline Drawings

Base Board



2nd Axis Amplifier Board

