

- **Microradian** Level Accuracy And **Maximum** Frequency Response
- Dual Axis, Compact Size For Easy Integration
- Flexible For Use With All Cambridge Technology Scanners
- Position and Velocity Output Signals
- Very Fast Small Angle and Large Angle Step Times
- Input Scale And Offset Adjustment
- Signal Conditioning And Status Monitoring



## The MicroMax<sup>®</sup> 673XX Dual Axis Servo Driver

Cambridge Technology's MicroMax<sup>®</sup> Model 673XX Dual Axis Analog Servo Driver provides an extremely compact, high performance and fully featured servo package at a very attractive price. Our advanced servo topology offers high bandwidth, high performance output amplification, advanced notch filter and power supply configurations to provide the ultimate in closed loop galvanometer system bandwidth, step response times, size and cost. The 673XX supports peak current of up to 10 amps allowing movement of large loads and angles at the highest level of speed in servo technology.

Designed with flexibility in mind, the MicroMax Model 673XX can be configured to drive most of Cambridge Technology's extensive line of precision, closed loop, galvanometer based optical scanners. Featuring automatic gain control, low noise system damping, linearity compensation, integrating or non-integrating servo loop configurations, error and/or slew rate input signal conditioning and high stability components, the 673XX servo provides extremely accurate positioning for applications that demand the best repeatability, linearity and stability. Integral mounting hardware, low profile connectors, convenient placement of system tuning and setup adjustments, as well as the dual axis design allow for compact system designs and ease of integration. This combination of size, performance and flexibility make the MicroMax Model 673XX the ideal choice where the highest levels of accuracy and speed are required in a compact scanning system application.

The fully featured MicroMax 673XX SMT Servo, when used with Cambridge Technology's patented galvanometer position detection technology, provides

excellent time and temperature stability - without the need for thermal compensation. System monitoring of galvanometer position and velocity output signals make the integration of the MicroMax 673XX easy and accurate in complex scanning system applications.

Status monitoring and system conditioning during power up, power down and all angle moves ensure complete and reliable system control to guard against potential system damage. Several error states can be detected including over-position, excess RMS current, loss of position detector signal, and loss of power. In the event that a fault is detected, the electronics will immediately signal a fault condition and shutdown the system in a safe and controlled manner. Input scale and offset adjustments provide an additional level of performance customization and integration. Single-ended or differential analog inputs, flexible output amplifier and power supply configurations from +/- 15 to +/- 28 volts allow for optimization of system positioning, accuracy and speed - while keeping costs at a minimum.

*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.*

Analog Input Impedance	200K +/- 1% ohms (Differential) 100K +/- 1% ohms (Single Ended)
Analog Output Impedance	2K +/- 1% ohms (for the Position Output and Current Monitor observation pins) 4.75k +/- 1% ohms for all other observation pins
Position Input Scale Factor	0.5 volt/mechanical degree (2 degrees/volt), other configurations available
Position Input Range	+/- 10 volts max
Position Offset Range	+/- 2 volts
Position Output Scale Factor	0.5 volt/degree
Velocity Output Scale Factor	Analog output (scaled and bandwidth limited by position differentiator gain)
Fault Output	CMOS output with 4.75k ohm in series. High level = 11.5V, low level = .05V
Temperature Stability of Electronics:	20PPM per degree C
Power Supply Requirements	+/- 15 to +/- 28VDC
Maximum Drive Current Limit	10 amps peak 5 amps rms (power supply and load dependent)
Operating Temperature Range	0 - 50 °C
Size	3.05" x 3.95" 7.75 cm x 10 cm

