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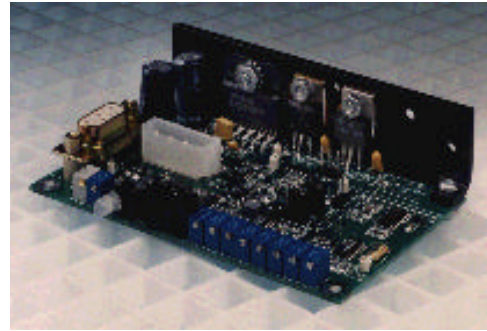
Fax: 617-497-8800 scanners@camtech.com

MicroMax™ Model 670XX

BOARD LEVEL
SINGLE AXIS SMT DRIVE ELECTRONICS

Features:

- **MICRO-Radian Level Accuracy and MAXimum Frequency Response**
- **Flexible for Use with all Cambridge Technology Scanners**
- **Compact Size for Ease of Integration**
- **Position, Error, Velocity and Fault Output Signals**
- **Input Scale and Offset Adjustments**
- **Analog or Digital Input**
- **System Conditioning and Status Monitoring**



Cambridge Technology's MicroMax Model 670XX surface mount technology (SMT) driver provides an extremely compact, high performance and fully featured servo package at very attractive OEM prices. Using a Class 1 error integrating servo configuration and Cambridge Technology's advanced servo topology, the MicroMax utilizes error integration, automatic gain control and low noise system damping sources to yield extremely repeatable movement and ultra-high positioning accuracy and stability. A high performance output amplifier and optional bandwidth enhancement module further extends system bandwidth and positioning speeds to new levels with the MicroMax. Integral mounting hardware, convenient placement of system tuning and setup adjustments and overall servo size allow for compact system designs and ease of integration. Designed with flexibility in mind, the MicroMax can also be configured to drive any of Cambridge Technology's extensive line of precision, closed loop, galvanometer based optical scanners. This combination of size, performance and flexibility makes the MicroMax the ideal choice for your highest accuracy and speed, small profile, scanning system applications.

The Fully Featured MicroMax 670XX SMT Servo includes system monitoring of galvanometer position, error and velocity output signals for an easy and accurate integration into complex scanning system applications. Input scale and offset adjustments provide an additional level of performance customization and integration.

High stability components, AGC and Cambridge Technology's patented position detection technology provide excellent time and temperature stability without the need for the complications and limits of thermal compensation. Differential analog inputs, digital input options and flexible power supply configurations allow for optimization of system positioning accuracy, speed and cost.

System Conditioning and Status Monitoring ensures complete and reliable system control during integration and operation. The MicroMax conditions and controls system positioning during the power up, power down, and all small and large angle moves. To guard against potential system damage, several error states can be detected including over-position, excess RMS power, loss of position detector signal, and loss of power. If a fault is detected, the electronics will immediately signal a fault condition and shutdown the positioning system in a controlled manner. An active and fault LED is also included as an additional measure of verifying system status.

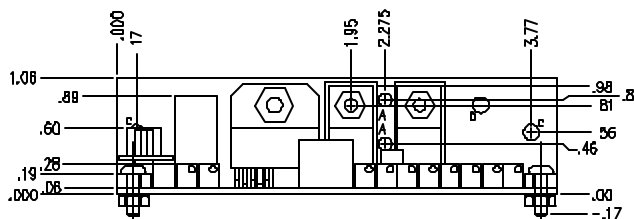
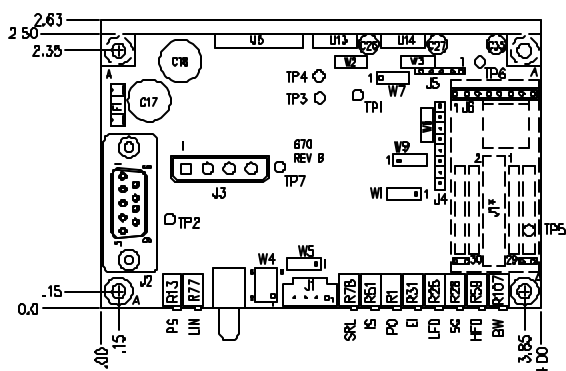
At Cambridge Technology, we take great pride in the performance of our products. Our high standards in manufacturing guarantees the performance consistency that you need to design the high quality systems demanded in today's competitive marketplace. Call us today to further discuss your scanner and electronics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

GENERAL SPECIFICATIONS

MicroMax Model 670XX Board Level Electronics

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

Analog Input Impedence	200K +/-1% ohms (Differential) 100K +/-1% ohms (Single Ended)
Analog Output Impedence	1K +/-1% ohms (for all observation outputs)
Position Input Scale Factor	0.5 volt/mechanical degree (2 degrees/volt)
Position Input Range	+/- 10 volts max
Digital Position Input Range:	2 ¹⁶ dac counts
Non-Linearity of 16 Bit Digital Input:	0.006% of full scale, max.
Position Offset Range	+/- 2 volts
Position Output Scale Factor	0.5 volt/degree
Error Output Scale Factor	0.5 volt/degree
Velocity Output Scale Factor	analog output (scaled by position differentiator gain)
Fault Output	Open Collector: 1K ohm output impedance (pulls down to -15V), with 10mA sink capability
Temperature Stability of Electronics:	20PPM per degree C
Input Voltage Requirements	+/-15 to +/-28VDC (current varies with motor configuration)
Maximum Drive Current Limit	10 amps peak 5 amps rms (power supply and load dependent)
Operating Temperature Range	0 - 50 °C
Size	4.00" x 2.5" (2.63 with heatsink bracket) x 1.06" 10.16cm x 6.35cm (6.68cm) x 2.69cm
Weight	3.07 ounces / 87 grams



HOLE	QTY	SIZE
A	6	φ 125 THRU
C	2	φ 145 THRU
D	3	φ 125 THRU, φ 250 C'SNK FARSIDE

To specify configuration in ordering use servo base numerical Model # followed by the central two digits of scanner Model #.

Example: A MicroMax 670XX driver configured for use with a 6870 would be specified as 67087.
A MicroMax 670XX driver configured for use with a 6450 would be specified a 67045.