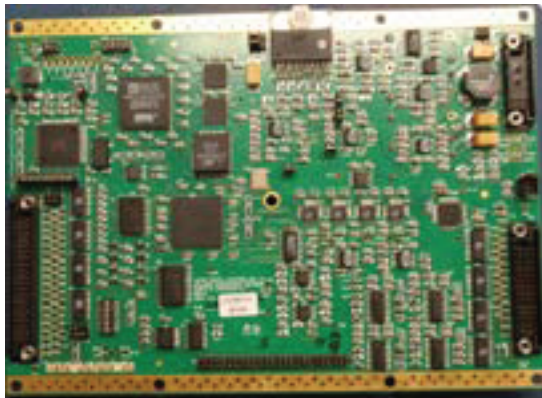


# Model SPS-2840 Micro Digital Controller for Precision Positioners

The MDC is a custom 2-axis servo control board suitable for military application. The DSP-based, single-board processor is supported by 128 KByte Flash and 64 Kbyte RAM memories plus a serial EEPROM and operates at 400 MFLOPS. The card has 4 channels of 16 bit ADC, 4 channels of 16 bit DAC, 32 bits of Digital I/O, and 4 channels of R/D conversion. Communications with the MDC is via 2 Hi-Speed serial RS-422 and 2 Standard serial RS-232/422/485 interfaces. The MDC is designed to add an Ethernet interface daughterboard for Hi-Speed communications.

The MDC is configured as an ATR or 1/2 ATR enclosure or it may be provided as a 5" square package suitable for mounting in the base of a gimbal. Small Micro Series PWM servo amplifiers can also be mounted in the gimbal for a complete turnkey gimbal/control solution whereby the customer need only supply power and communication inputs. Functionality of the MDC is completed with the software including loop closures, compensation filters, mode control, gain control, BITE, and communication protocol.



## FEATURES:

- Operation from 120 or 220 VAC, 1 $\phi$  or 3 $\phi$  and 28 VDC
- Brushless 3 $\phi$ , sinusoidally driven servo amps, available in a variety of power levels
- RT Linux operating system
- Tailored to a software interface specification
- Uses high reliability components including VICOR power supplies
- Provided with a variety of accessories - joystick, auto video trackers, VGA monitors, recording media, time code generators, video annotation and stabilization components (gyros)
- Includes EMI/EMC suppression
- Programmable modes of operation including BIT, payload control, calibration and set up
- interfaces with a wide variety of dad pick-offs; resolver inductosyn, gryo's, optical encoders and resolvers
- MIL capable custom Servo Control Board (MDC) for compact MIL requirements

# Model SPS-2840 Micro Digital Controller for Precision Positioners

## Configuration

<b>POWER:</b>	• 28 VDC
<b>ENCLOSURE:</b>	• 1/2 ATR Case
<b>WEIGHT:</b>	• < 18 lb.
<b>INTERFACES:</b>	• Serial RS-232 / 422

## Environmental Specifications

<b>TEMPERATURE:</b>	<ul style="list-style-type: none"> <li>• -55° to +70° C (with heaters)</li> <li>• -40° to 70°C (without heaters)</li> </ul>
<b>SHOCK:</b>	• 10 g (half sine 11 msec, 3 axis)
<b>VIBRATION:</b>	• 4.3 grms (functional)
<b>RELATIVE HUMIDITY :</b>	• 98% condensing

