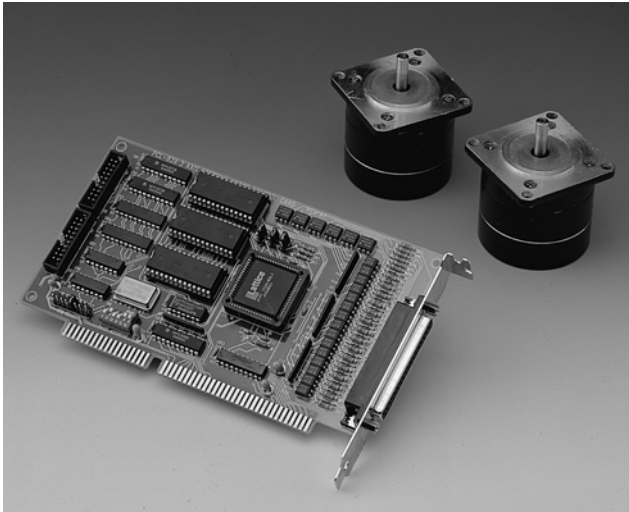


PCL-839

3-axis Stepping Motor Control Card



Features

- Independent, simultaneous control of three stepping motors
- Direct access to the card's controller registers
- Linear and circular interpolation
- Optically-isolated outputs
- Five isolated digital inputs per axis for limit switches
- Half-size PC add-on card
- Up to 16 Kpps step rate
- 16 DI and 16 DO

Introduction

The PCL-839 three axis intelligent stepping motor control card turns your IBM-compatible PC into a 3-axis motion-control station. The card's three PCL-AK intelligent controller chips can execute a variety of motion-control commands. For advanced applications, we supply function libraries which you can link to your C program.

Programming the PCL-839

You can control each axis directly through the card's I/O registers, but we recommend use of the card's high-level interpreter. This interpreter reads high-level commands from a text file to perform specific tasks.

We also supply function libraries which you can call from your C program. The libraries come with 'Turbo C' source code which you can recompile if you want to access the libraries from other C compilers.

Applications

- X-Y table control
- Rotary machine control
- Robotics control
- Precision position control using stepping motors

Specifications

- **No. of Axes:** 3, independent
- **Max. Step Count:** $\pm 262,143$ steps
- **Max. Step Rate:** 16,382 pps
- **Acceleration/Deceleration:** automatic trapezoidal, ramping, programmable start run and sampling rate
- **Output Pulse Signal:** two pulse (CW/CCW) mode or one pulse (pulse, direction) mode. Optically coupled with 10 KW pull-up resistor

- **Output Driving Capability:** 20 mA @ 0.4 V (sink)
- **Output Polarity:** positive/negative, programmable
- **Limit Switches:** five per channel (home, forward/reverse end limit, forward/reverse high speed limit)

DIO and Interrupt

- **DIO:** 16 digital inputs and 16 digital outputs, TTL compatible
- **Interrupt:** IRQ 2, 4, 5, 7, 11, 12 or 15 for limit switches, jumper selectable

General

- **I/O Addresses:** 16
- **Power Consumption:** 5 V @ 300 mA max.
- **Operating Temperature:** 0 ~ +60° C (32 ~ 140° F)
- **Storage Temperature:** -20 ~ +70° C (-4 ~ 158° F)
- **Operating Humidity:** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **Connectors:** DB-37 for limit switches and pulse output; 20-pin flat cable for general DIO
- **Dimensions:** 185 mm (L) x 100 mm (H) (7.3" x 3.9")

Ordering Information

- PCL-839:** Intelligent 3-axis stepping motor control card, user's manual and driver CD-ROM (cable not included)
- PCL-10137-1/2/3:** DB-37 cable assembly, 1, 2 and 3 m
- ADAM-3937:** DB-37 wiring terminal for DIN-rail mounting