AMTECH technical data

AMT 002/004-S 2 OR 4 AXIS STEPPER CONTROL

TECHNICAL SPECIFICATION

This is a PC/XT/AT board for controlling up to 4 stepper motors. An option card allows closed loop stepper control via incremental encoders. Also servo motors can be controlled. You can mix steppers and servos without limit. Several cards can be used in the same system.

A great deal of attention has been paid to RFI immunity. High specification opto isolators are used with 2500 volts isolation.

The board layout is such that no signals from the outside world are placed near any PC bus signals.

Step, Direction and uncommitted outputs. These signals are driven by the open collector output from a Toshiba TLP504A opto isolator. This can be taken to a maximum of 55 volts and can sink a maximum of 50mA. External loads should be connected between the +ve supply and the output pin. When turned on the output will switch to 0VD. 24v logic signals can be controlled via a 4k7 pullup resistor. This is the normal input to stepper motor drives. You should use a reverse bias diode when switching inductive loads.

Uncommitted Inputs 1 to 16

These signals are connected to the input led of a Toshiba TLP504A opto isolator. The anode is connected to +VD supply pin via a 2K2 resistor. The input pin should be switched to 0VD via a normally open switch or an open collector output. With a 24v supply each input will take approximately 10mA.

Optional Encoder input signals

5v TTL level or differential receiver consisting of A,B and Index. Each channel can be linked for TTL or differential line receiver.

Maximum input frequency 250 KHz,(1,000,000 quadrature counts per second).

Internal 12 bit up/down counters used to maintain position registers.

Digital input filter to remove noise spikes.

When encoders are used, the top 8 uncommitted inputs are reserved for the encoder index pulses and AB signals of the 3rd and 4th axes.

Optional Analogue Outputs

Each analogue output is driven by an 8 bit DAC. The output range is +/- 10 volts.

The final drive current is supplied by ISO122P isolation amplifiers, each capable of supplying +/- 20 mA.

OPTIONS

- **Encoder input for closed loop operation**
- **Continuous contouring on all axis**
- **Full linear and circular interpolation**
- **GNC 16 full featured motion control software**
- **AMT 002-S 2 axis stepper control.**
- **AMT 004-S 4 axis stepper control.**
- **AMT 002-SE 2 axis stepper control with encoder feedback card.**
- **AMT 004-SE 4 axis stepper control with encoder feedback card.**
- **Servo control can also be added onto the encoder feedback card to allow servo and stepper control on the same card.**

APPLICATIONS

- **Motion control and positioning**
- **System Automation**
- **Process Control**
- **Robotics**
- **Automatic Welding Systems**
- **Profile cutting machines**
- **Woodwork Routing Machine**
- **Engraving Machines**
- **Drilling Machines**
- **Laser cutting machines**
- **Water jet cutting machines**
- **Glue laying machines**
- **Automatic stitching machines**
- **Lathes & Mills**

key features

- **4 axis stepper motor control (Step / Direction)**
- **8 uncommitted opto isolated outputs**
- **16 uncommitted opto isolated inputs**
- **On board 8253 counter with 2MHz crystal reference**
- **OPTO isolation voltage +/-2500 volts DC**
- **User selectable port address**
- **Multiple cards may be used in the same system**
- **Smooth continuous path motion**
- **Comprehensive software support**
- **DOS Library & Windows DLL**

order info

Simply call the number below to place your order.

The details of delivery and time can be obtained at the time of calling. There are two methods of payment, firstly by cheque or secondly you can open a credit account. Please contact us for more details.

AMTECH

Amtech Limited, Unit 2, Silverbirch,
Mylord Crescent, Camperdown Industrial Estate,
Newcastle upon Tyne, NE12 5UJ. England.
Tel: 0191 268 2022 Fax: 0191 268 2092.
If you are outside the UK Tel: +44 191 268 2022
or Fax: +44 191 268 2092
e-mail: sales@amtechltd.co.uk
website: www.amtechltd.co.uk