

# Pi-MOTION STEPPER CONTROLLER

NEW



## KEY FEATURES

- Fully Configurable
- Flexible User Interface
- Selectable screen Information
- Free Format Editing Facility
- Built in PLC
- DXF, PLT and CAD/CAM Interface
- Fully Integrated Control System
- Raspberry Pi quad-core ARM processor
- 7 Inch Touch Screen Display
- 4 axes of Stepper Control
- Profile path look ahead
- Smooth continues path motion
- Circular Interpolation
- Linear Interpolation on all 4 axes
- Helical Interpolation
- 16 Optically Isolated Digital Inputs
- 8 Optically Isolated Digital Outputs

## Pi-Motion Multi Axes Motion Controller

- Latest Raspberry Pi Technology
- Integrated 7 Inch Touch Screen
- Pi-Motion comes with FREE GNC Lite software. GNC is a proven motion control solution, which is used in hundreds of applications
- The Motion control has a fast 32-bit RISC processor with a floating point co-processor
- High Speed Ethernet 10/100 Mbps. communication
- No expensive interface boards or cables required

Pi-Motion is based on the latest Raspberry Pi technology using a quad-core ARM Cortex processor with a seven inch touch screen display and our ethernet based multi axes stepper motion controller. The motion controller is based on a fast 32-bit RISC processor and floating point co-processor with optical isolation providing a high level of protection against noise. Together with the GNC software and excellent price performance its offers a flexible and affordable solution for use in a wide variety of industrial applications.

The product has been both designed and manufactured in the UK.

## Applications

- Motion control and positioning
- System automation
- Process Control
- Robotics
- Automatic welding machine
- Profile cutting machines
- Woodwork routing machines
- Engraving machines
- Drilling machines
- Laser cutting machines
- Water jet cutting machines
- Glue laying machines
- Automatic stitching machines
- Tangential knife
- Glass cutting machines
- Lathes & Mills

## Options

### Pi-MOTION-8

- Upto 8 axes Stepper Control\*
- 16 digital inputs
- Upto 16 digital outputs\*

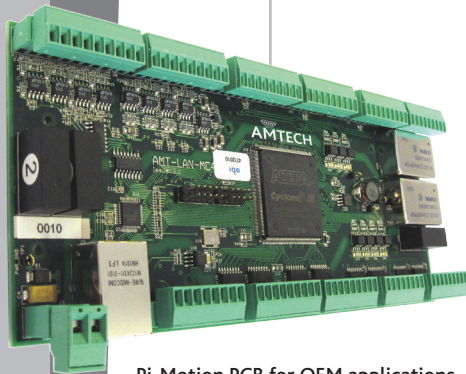
### Pi-MOTION-12

- 4 axes Servo Control
- Upto 8 axes Stepper Control\*
- 16 digital inputs
- Upto 16 digital outputs\*

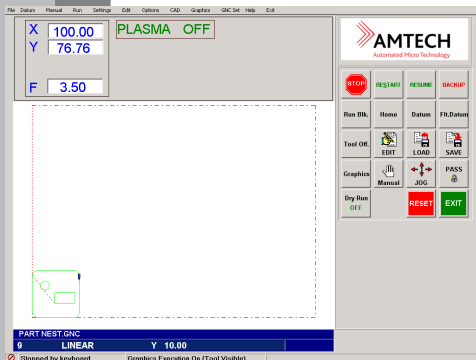
### 4A/I

- 4 analogue inputs option

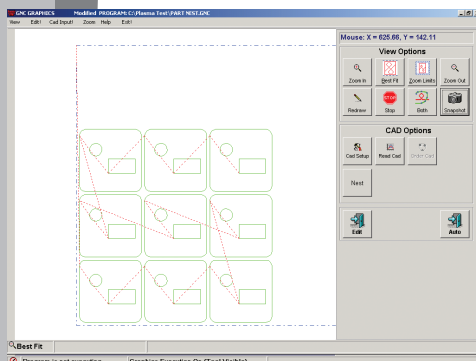
\* Each stepper axis used takes 2 digital outputs



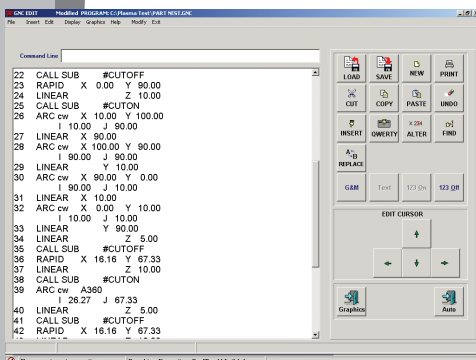
Pi-Motion PCB for OEM applications



GNC Execution Screen



GNC Graphics Screen



GNC Edit Screen

## TECHNICAL SPECIFICATION

### Analogue output specification

Four 16 bit DACs, with a +/- 10 volts signal. At power on DAC outputs will be at 0v. All DAC outputs can be updated simultaneously under software control.

### Encoder input

Four optically isolated input channels, each supporting 5 volt differential inputs for the A, B and Index signals.

Maximum input frequency on each of the A, B and index signals 4MHz (16,000,000 counts per second).

Internal 15 bit up/down counters used to maintain position registers.

Digital input filter to remove noise spikes.

### Analogue input

Up to 4 optional 12 bit ADC input channel.

### UART

A four wire optically isolated RS-232 interface. Operating up to 230 K baud.

### General

Operating temperature  
0 to +70 degrees C

PCB Board size  
210 mm long x 88 mm wide  
25mm tall

Din Rail Enclosure size  
212 mm long x 90 mm wide  
62mm tall