

# Euro 205

To meet demand from large OEM customers for an economical multi-axis motion controller with a small footprint, Trio has used advanced FPGA techniques to reduce the size of a four-axis servo/stepper controller to fit on a single Eurocard. A fifth axis can be added on an expansion connector which will take standard Trio axis and communications daughter boards. User

Programs are written in Trio's established Multi-Tasking BASIC and applications can be developed using the Windows based Motion Perfect environment. Complex motion profiles are available and these can be linked to a master encoder input for Slaving, Gearing and Cams.



The unit has 24 opto-isolated digital I/O (16 inputs & 8 outputs) on board. Ultra fast hardware registration inputs are available on each axis for highly accurate control of print and packaging lines.

The I/O count can be expanded using Trio CANbus Digital I/O and Analogue Input modules. The CAN link also allows peer to peer communication between controllers.

The Euro205 has two built in RS-232 ports. In addition, two further serial channels are available at TTL levels. External adapters are available to allow one of these serial ports to be linked to a full-duplex RS-485 channel and the second to be used to link to Trio Fibre Optic Network devices.

Up to 5 axes  
(8 in software)

Multi-Tasking BASIC  
programming

Linear and Circular  
Interpolation

Electronic Clutches,  
Gears and Cams

Software Feature Enable Codes

CAN Networking

160 x 100mm Eurocard Format

Motion Perfect Application  
Development Software



▶ **Trio Motion Technology** ◀

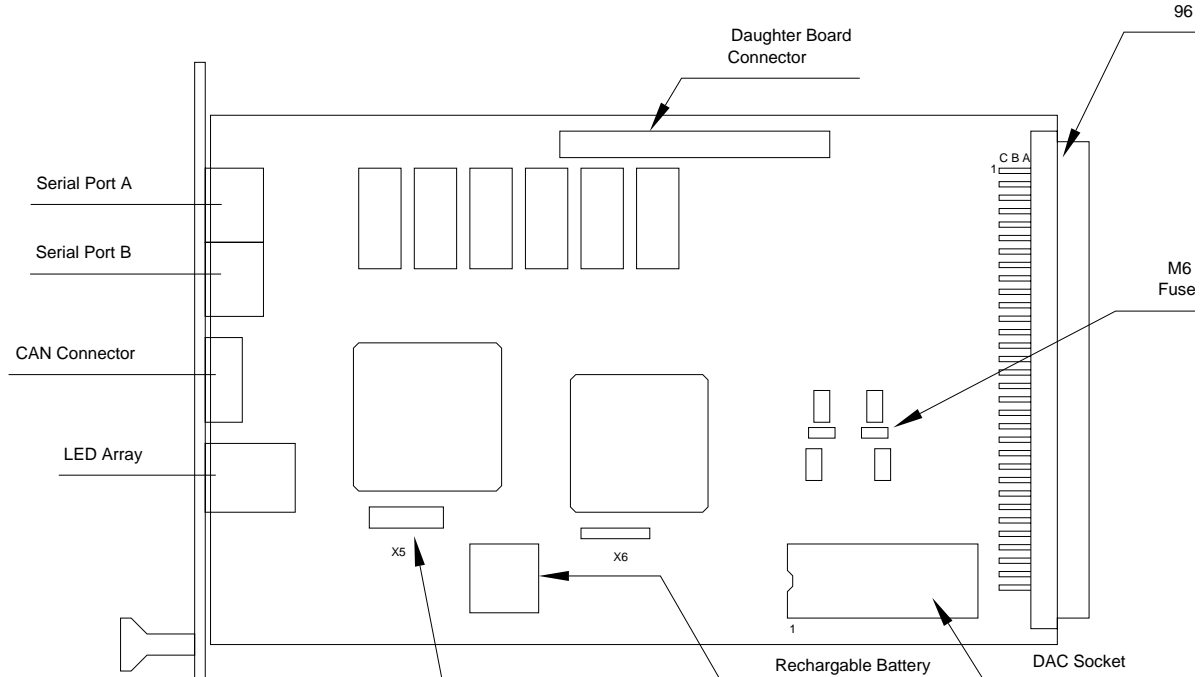
B R E A T H I N G   L I F E   I N T O   M A C H I N E S

## Axis Configuration and Feature Enable Codes

The Euro205 may be purchased as a stepper base card (P150), or a servo base card (P155). The servo base card is fitted with a DAC to generate the +/-10 volt signals for servo amplifier control. Additional servo or stepper axes may be specified up to a maximum of 4 axes. The controller can be supplied with any combination of axes pre-enabled, and has been designed to allow the user to upgrade at a later date by entering a special "feature enable code" to enable further axes (up to the 4 axis limit).

The gate array at the heart of the Euro205 design has facilities for 4 servo and 4 stepper axes built into every chip. The "feature enable codes" allow users to purchase only those facilities required for their configuration. Once entered onto the controller, the feature enable codes are stored in permanent flash memory. The feature enable codes are unique for each Euro205.

The Euro205 features a total of 8 axes in software. Any axes not having a hardware interface can be used as a "virtual" axis.



## Summary of Features Motion Coordinator - Euro205

Size	170 mm x 129 mm Overall (160mm x 100 mm PCB) 25mm deep
Weight	170 g
Operating Temp.	0 - 45 degrees C
Control Inputs	Forward Limit, Reverse Limit, Datum Input, Feedhold Input.
Communication Ports	2 RS232 Channels: 1200 - 38400 baud. + 1 RS485 Channel (using adapter) + 1 Fibre Optic Channel (using adapter) 1 CAN channel built on to motherboard
Position Resolution	32 bit position count
Interpolation modes	Linear 1-4 axes, circular, helical, CAM Profiles, speed control, electronic gearboxes.
Programming	Multi-tasking TRIO BASIC system, maximum 6 tasks.
Speed Resolution	32 bits. Speed may be changed at any time. Moves may be merged.
Servo Cycle	1ms default value
Memory	122 Kbytes battery backed + flash program memory.
Power Input	500mA at 5 V d.c. (+/-12v at 25mA required for DAC output)
Amplifier Enable Output	N/O relay contact rated 24Vdc @ 0.5A..
Digital Inputs	16 Opto-isolated 24v inputs

### EMC Compliant



- BS EN50082-2 (1995) Industrial Noise Immunity.
- BS EN55022 (1995) Class A Industrial Noise Emissions.

### Ordering Information:

P150 - Euro 205 Stepper base card  
P155 - Euro 205 Servo base card