motor technology
control in motion.com

TRIO
MOTION | TECHNOLOGY

MOTION COORDINATOR

DIN RAIL MOUNT

PRODUCT CODE: P136

MC206X

The MC206X *Motion Coordinator* is based on Trio's high-performance 32-bit floating point DSP technology, providing exceptionally fast computational speed, flexibility, and connectivity.

Advanced FPGA techniques enable 4 axes of stepper and servo circuitry plus a master encoder input to be enclosed in a compact DIN-rail mounted package.

An expansion connector is incorporated to add a fifth axis or any other optional Daughter Boards. Up to 8 axes may be provided using a SERCOS Daughter Board.

User programs are written in Trio's established multi-tasking BASIC language using the powerful *Motion* Perfect application development software.

Complex motion such as cams, gears, linked axes, and interpolation is made easy with Trio's comprehensive BASIC command set.
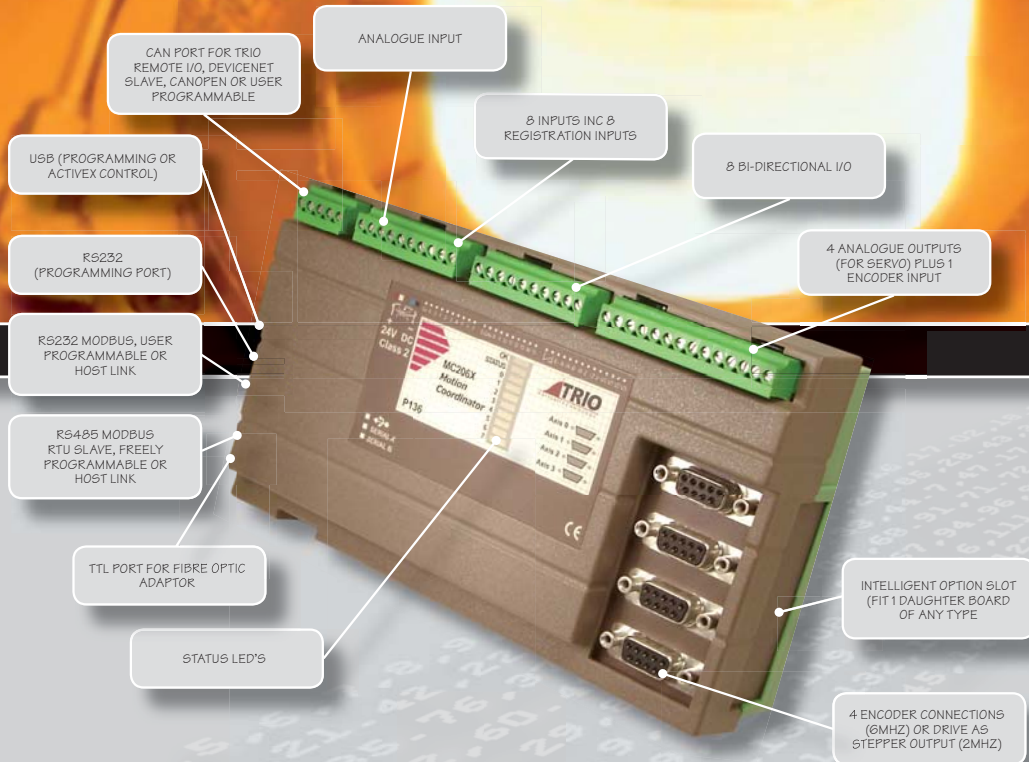
The MC206X has 16 opto-isolated 24V digital I/O (8 in, 8 bi-directional) built-in. Fast high speed hardware registration inputs are available for each axis where highly accurate control is required for applications such as print and packaging lines.

The I/O count can be expanded using Trio's remote I/O system with both digital and analogue modules.

Trio's MC206X offers wide communications capability with 2 RS-232 serial ports, 1 RS-485 port, 1 TTL serial port, 1 USB port and 1 CAN channel as standard.

CAN PORT FOR TRIO REMOTE I/O, DEVICENET SLAVE, CANOPEN OR USER PROGRAMMABLE

ANALOGUE INPUT

8 INPUTS INC 8 REGISTRATION INPUTS

8 BI-DIRECTIONAL I/O

USB (PROGRAMMING OR ACTIVEX CONTROL)

RS232 (PROGRAMMING PORT)

RS232 MODBUS, USER PROGRAMMABLE OR HOST LINK

RS485 MODBUS RTU SLAVE, FREELY PROGRAMMABLE OR HOST LINK

TTL PORT FOR FIBRE OPTIC ADAPTOR

STATUS LED'S

4 ANALOGUE OUTPUTS (FOR SERVO) PLUS 1 ENCODER INPUT

INTELLIGENT OPTION SLOT (FIT 1 DAUGHTER BOARD OF ANY TYPE)

4 ENCODER CONNECTIONS (6MHZ) OR DRIVE AS STEPPER OUTPUT (2MHZ)

An adaptor is available to convert the TTL port to Trio's fibre-optic network for adding Trio HMIs.

The MC206X has 8 available axes which can be assigned to the built in hardware or one of the 3 available digital drive networks by means of the appropriate daughter board option. Each board is capable of driving different numbers of axes. Any un-allocated axes can be assigned to the built in hardware or used as virtual axes.

When used with the MC206X, the different digital drive network daughter boards can have the following number of axes:

Sercos	CAN	SLM
Up to 8 axes* (2 Standard)	Up to 4 axes* (2 Standard)	Up to 3 axes (3 Standard)
P291	P293	P292

Extra axes added by P701, P702 and P704

Multi-tasking

- 7 simultaneous BASIC tasks

Feature Enable Codes

The MC206X is supplied as standard with axis 0 (servo or stepper) and axis 4 (encoder input) enabled. Software "Feature Enable Codes" can be purchased and then entered using *Motion* Perfect to enable axis 1, 2 and 3 for either servo or stepper operation. No extra hardware is required to update these additional axes.

I/O Capability

- 8 inputs and 8 bi-directional channels
- 1 x 10 bit 0-10V analogue input
- Expandable to 256 bi-directional channels and 32 analogue inputs.

Fieldbus Communication Options

CAN	Trio remote I/O, CANopen I/O, DeviceNet slave or user programmable
RS232	Modbus RTU slave, Hostlink or user programmable†
RS485	Modbus RTU slave, Hostlink or user programmable†
Option Slot	Profibus, CANbus, Ethernet or Ethernet IP

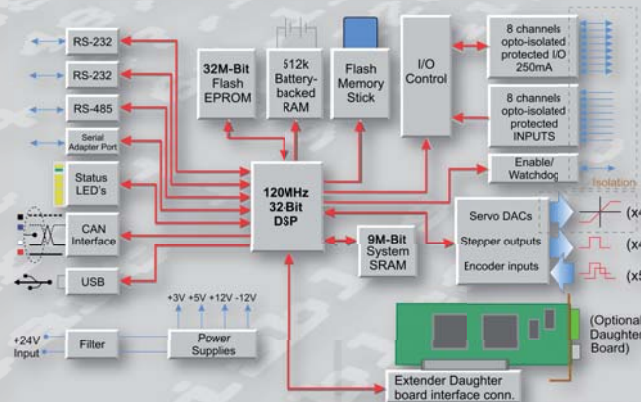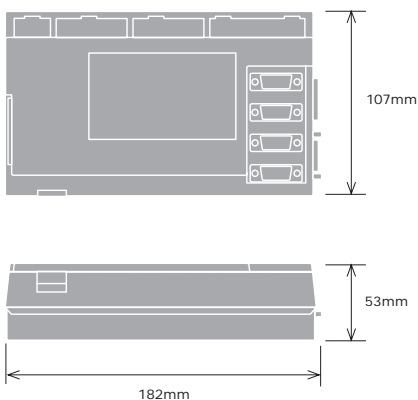†*Only 1 instance of a protocol can be used at a time. Option slot is limited to one daughter board.*

Axis Configuration *(without SERCOS / CAN or SLM)*

Axis 0	stepper / servo / encoder
Axis 1	stepper / servo / encoder
Axis 2	stepper / servo / encoder
Axis 3	stepper / servo / encoder
Axis 4	encoder only
Axis 5	Added by use of an axis option board fitted to intelligent option slot
Axis 6/7	virtual

Part Number	P136
Size	107mm x 182mm x 53mm
Weight	325g
Temperature Range	0-45 degrees Celsius
Power Consumption	24Volts @ 300mA
Maximum Number Of Axes	8
Built In Encoder Inputs	1 @ 6MHz
(Line Driver) RS422 Bi-directional Port	4 @ 6MHz (Encoder) or 2 MHz (Stepper)
Built in Analogue Outputs	4 @ +/-10V 16 Bit Resolution
Servo Cycle Time	1000us, 500us, or 250us
Built In Inputs	8 x 24V Opto-Isolated
Built In Outputs	None
Built In Bi-directional I/O	8 x 24V Opto-Isolated
Built in Analogue Inputs	1 @ 0-10V 10 Bit Resolution
Inputs Functions	Forward Limit/ Reverse Limit / Datum / F Hold
Watchdog Relay	1 Solid State - 24V @ 100mA Max Current
Serial Ports	RS232 (Programming) / RS232 / RS485 / TTL / USB
CAN Ports	1 @ 1MBAUD max
Daughter board Slots	1 Slot
User Memory	512kbytes
Table Memory	32000 values
Multi-tasking	2 Fast Tasks + 5 Normal Tasks
EMC Compliance	BS EN61000-6-2 : 2001 generic noise immunity standard for industrial environment
	BS EN61000-6-4 : 2001 generic emission standard for light industrial environment

Required to fit any daughter board to MC206X.

Overall Dimensions

107mm

53mm

182mm