

Accessories:

- P301 Axis Expander
- P355 2 Way System Ribbon
- P360 3 Way System Ribbon
- P365 4 Way System Ribbon
- P350 RS232 Serial Cable
- P435 Serial to Fibre-Optic Adaptor
- P315 CAN 16 I/O
- P325 CAN 8 Analogue Inputs
- Pxxx All Daughter Boards

MOTION COORDINATOR

PANEL MOUNT

PRODUCT CODE: P170

MC224

The MC224 is the fastest *Motion Coordinator* providing unprecedented computational speed, flexibility, and connectivity.

The MC224 is based on Trio's high performance 32 bit floating point DSP technology and provides up to 24 axes of control. The unit's flexibility is achieved using 4 axis slots in the MC224 module and up to three Axis Expander modules. The processor slots can be populated with any combination of axis, fieldbus and/or digital drive daughter boards and the axis expanders by any combination of axis daughter boards.

The flexibility of this system allows the MC224 to be configured for a broad range of machines from palletisers and coordinate measuring machines to flow wrappers and flexographic print machines. Each axis may run moves using linear, circular, helical or spherical interpolation, electronic cams and gearboxes.



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



- RS232 (MODBUS, HOSTLINK OR USER PROGRAMMABLE)
- RS232 (PROGRAMMING PORT)
- TTL PORT FOR FIBRE OPTIC ADAPTOR
- USB (PROGRAMMING OR ACTIVE)
- STATUS LED'S
- RS485 (MODBUS, HOSTLINK OR USER PROGRAMMABLE)
- EXPANSION BUS (CONNECTS UP TO 3 AXIS EXPANDERS, EACH WITH 4 STANDARD OPTION SLOTS)

- DAUGHTER BOARD SLOTS (0 - 3)
- 2 X ANALOGUE INPUTS
- CAN (FOR TRIO REMOTE I/O, DEVICENET SLAVE, CANOPEN OR USER PROGRAMMABLE) CANOPEN
- 8 DIGITAL INPUTS
- 8 BI-DIRECTIONAL I/O CHANNELS



- STATUS LED'S
- AXIS SELECTION
- 4 AXIS DAUGHTER BOARD SLOTS
- 24V POWER INPUT

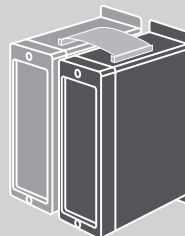
Complex motion such as cams, gears, linked axes, and interpolation is made easy with Trio's comprehensive BASIC command set. The MC224 has 16 opto-isolated 24V digital I/O (8 in, 8 bi-directional) and 2 x 12-bit, 0 - 10V analogue inputs built-in. The I/O count can be expanded using Trio CANBus digital and analogue modules or CANopen I/O modules.

The MC224 offers wide communications capability with two RS-232 serial ports, an RS-485 port, a TTL serial port, a USB port and a CAN channel as standard. Adapters are available to convert the TTL port to Trio's fibre-optic network.

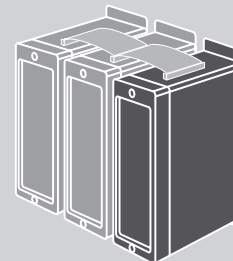
The base MC224 unit comes with 4 slots and Axis Expanders can be added to give a total of 8, 12 or 16 slots.



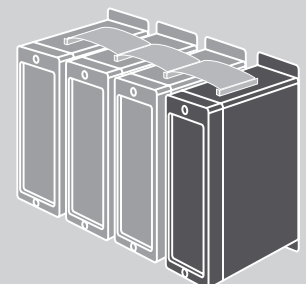
MC224 Base unit (4 slots)



MC224 Base unit + 1 Axis Expander (8 slots) + 2 way system ribbon



MC224 Base unit + 2 Axis Expanders (12 slots) + 3 way system ribbon



MC224 Base unit + 3 Axis Expanders (16 slots) + 4 way system ribbon

Part Number	P170
Size	263mm x 68mm x 197mm
Weight	750g
Temperature Range	0-45 degrees Celsius
Power Consumption	24V @ 450mA (Nominal) 800mA (Max)
Maximum Number Of Axes	24
Built In Encoder Inputs	None
Built in Analogue Outputs	None
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	2 @ 0-10V 12 Bit Resolution
Inputs Functions	Forward Limit / Reverse Limit / Datum / F Hold
Watchdog Relay	2 Solid State Relays - 24V @ 100mA
Serial Ports	RS232 (Programming) / RS232 / RS485 / TTL / USB
CAN Ports	1 @ 1MBAUD max
Daughter board Slots	4 Slots (Can be expanded via P301)
User Memory	1 Mbyte max
Table Memory	250,000 values
Multi-tasking	2 Fast Tasks + 12 Normal Tasks
EMC Compliance	BS EN61000-6-2 : 1999 generic noise immunity standard for industrial environment BS EN61000-6-4 : 2001 generic emission standard for light industrial environment



MC224 AXIS EXPANDER (P301)

MC224 axis expander provides an additional 4 axis daughter board slots to an MC224. Up to 3 axis expanders can be used per MC224 master. MC224 and expanders must be sited next to each other and connected using the appropriate Trio System Ribbon.



Note: P301 accepts any axis daughter board, but NOT digital drive or fieldbus daughter boards.

2 WAY SYSTEM RIBBON (P351)

Connects MC224 (P170) to 1 MC224 Axis Expander (P301).



3 WAY SYSTEM RIBBON (P360)

Connects MC224 to 2 MC224 Axis Expanders.

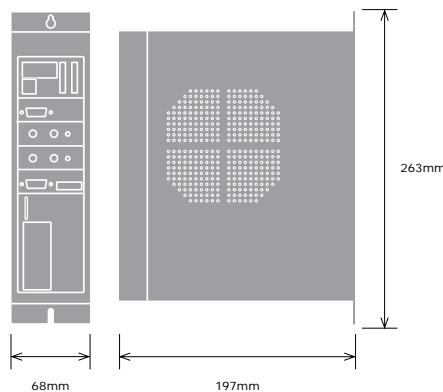


4 WAY SYSTEM RIBBON (P365)

Connects MC224 to 3 MC224 Axis Expanders.



Overall Dimensions
(MC224 and Axis Expander)



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