MC464

FEATURES

- Up to 64 Digital Drive Axes
- Up to 25 Axes Conventional Servo/ Stepper
- EtherCAT, Sercos, SLM and RTEX Digital Drive Interfaces
- Linear, Circular, Helical and Spherical Interpolation
- Flexible CAM shapes, Linked Motion
- EnDAT and SSI Absolute Encoder Supported
- Hardware Linked Outputs for Camera / Laser Control
- Ethernet-IP / Modbus TCP / Ethernet Interface Built-In
- Precise 64Bit Motion Calculations with 400MHz MIPS Processor
- Anybus-CC Module for Flexible Factory Comms Including ProfiNet/ Profibus
- IEC 61131-3 Programming
- Multi-tasking BASIC Programming
- Text File Handling
- Robotic Transformations
- SD Memory Card Slot
- CANopen I/O Expansion
- Backlit LCD Display
- RoHS, UL and CE Approved

The MC464 is Trio's highest performance and most flexible *Motion Coordinator* and is based on the 64bit 400MHz MIPS processor making it ideal for high axis count machines or robotic applications.

The MC464 supports up to 64 axes of motion with 64 bit integer position registers for ultra precise axis resolution. Using expansion modules the MC464 supports up to 64 networked digital drives, 24 analogue servo drives, 24 pulse and direction drives and 64 absolute and incremental encoders in any combination.

The built-in Ethernet port allows programming and connection of common HMI and PLC protocols directly to the MC464. User programs can be written in Trio's established multi-tasking TrioBASIC language using the powerful *Motion* Perfect v3 application development software making complex motion easy. Also available as an option are the industry standard IEC 61131-3 languages allowing a fully functional PLC programming system.

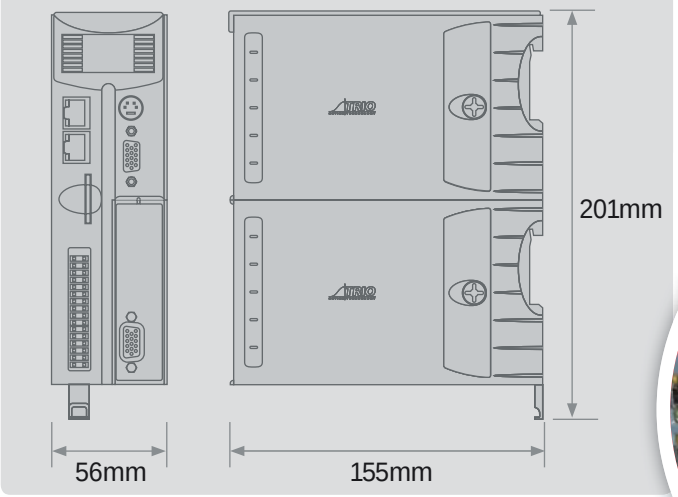
The MC464 features a total of 64 axes in software. Any axes not assigned to built-in hardware can be used as a virtual axis. Every axis can be programmed to move using linear, circular or helical or spherical interpolation, electronic cams, linked axes and gearboxes. The power of the controller allows for multiple robotic transformations to run simultaneously.

A bright easy to read backlit display enables the controller status to be easily determined, whilst the single piece metal cast backplate provides an integrated earth chassis to improve noise rejection in the industrial environment.

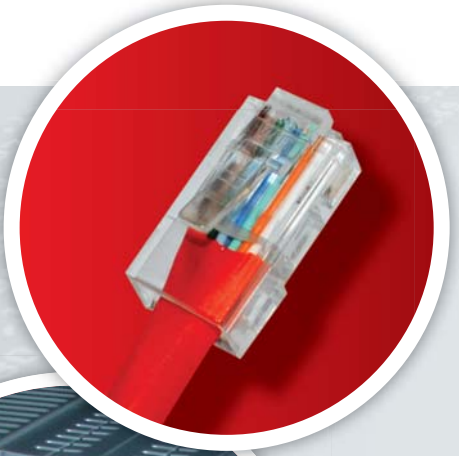
ACCESSORIES

P871	MC464 RTEX Interface
P872	MC464 Sercos Interface
P873	MC464 SLM Interface
P876	MC464 EtherCAT Interface
P879	MC464 FlexAxis 4 Interface
P874	MC464 FlexAxis 8 Interface
P381	MC464 FlexAxis Splitter Cable
P875	MC464 Anybus-CC Module
P878	MC464 Blanking Module
P701 - P732	Remote Axes FEC
P750	Kinematic Runtime FEC
P317 - P327	CAN Modules
P843 - P844	UNIPLAY 7" & 10" HMI's

OVERALL DIMENSIONS (INC EXPANSION MODULE)



MC464 PRODUCT CODE: P860



MC464 Expansion

Configure your application by connecting up to 7 half-height expansion modules or 3 full-height expansion modules.

Each module easily attaches to the controller with a high density bus connection and a uniquely designed screw integrates the earth planes of all modules and *Motion Coordinator* together. Trio's feature enable code system for axis activation allows the whole system to be scaled exactly to your requirements.

The P876, P872 and P871 all come equipped with two axes per module as standard. To add further axes, Feature Enable Codes can be purchased: P701, P702, P704, P708, P716 and P732 provide 1, 2, 4, 8, 16 and 32 axes.

MC464 EXPANSION OPTIONS

	P876	P872	P871	P873
Network	EtherCAT	Sercos	Panasonic (RTEX)	SLM
Network Speed	100Mbps	4, 8 or 16Mbps	100Mbps	SLM Standard
Topology	Chain	Ring	Ring	Star
Max Axes per Interface	64	16	32	6
Max Interfaces per MC464	7	7	7	7
Max Axes on MC464	64	64	64	42
Cable	STP Cat 5-e or better	Fibre Optic	STP Cat 5-e or better	RS485
Bus to MC464	32 Bit	32 Bit	32 Bit	32 Bit
Interpolated time based registration	8 x 24V Inputs	8 x 24V Inputs	8 x 24V Inputs	6 x 24V Inputs
Optically isolated registration inputs	Y	Y	Y	Y
Map any I/O to any Axis	Y	Y	Y	Y
Remote Registration	Y	Y	N/A	N/A

MC464 EXPANSION OPTIONS

P876	P878
CompactCom Modules...	Blanking module to ensure the system is "tied" together mechanically if there are any gaps in the build. There is no communication bus connection, but the P878 is required for the earth connection.
Profibus	
DeviceNet	
CANopen	
CC-Link	
EtherNet IP	
USB	
Modbus-TCP	
Modbus-RTU	
RS232	
RS485	
Profinet I/O	
Bluetooth	

MC464 Expansion

For use with Stepper, Analogue Servo and Piezo Motors with support available for SSI/Endat/Tamagawa Absolute encoders. Standard FlexAxis interface modules are available in 4 axis (P879) and 8 axis (P874) versions. An 8 axis SSI absolute encoder version (P881) is available as a special order.

P381 - Breakout cable to split the high density D-Type connectors to standard 9 way D type connectors.

MC464 EXPANSION OPTIONS

	P874	P879	P881
Axis 0	Core + AS	Core + AS	Core + SSI + AS
Axis 1	Core + AS	Core + AS	Core + SSI + AS
Axis 2	Core + AS	Extended + AS	Core + SSI + AS
Axis 3	Core + AS	Extended + AS	Core + SSI + AS
Axis 4	Extended + AS		Core + SSI + AS
Axis 5	Extended + AS		Core + SSI + AS
Axis 6	Extended + AS		Core + SSI + AS
Axis 7	Extended + AS		Core + SSI + AS
Max Interfaces per MC464	3	3	3
Max Axes on MC464	24	12	24
Connectors: Encoder	15pin HD D-type	15pin HD D-type	15pin HD D-type
Discrete Wiring	Removable terminal block	Removable terminal block	Removable terminal block
Bus to MC464	32 Bit	32 Bit	32 Bit
Registration Inputs*	Flexible registration on all axes	Flexible registration on all axes	Flexible registration on all axes
Position based registration	4 x 24V inputs	4 x 24V inputs	N/A
Bi-direction registration input/position switch output	4 x 24V	4 x 24V	4 x 24V
Optically isolated registration inputs	Yes	Yes	Yes
Map any registration input to any Axis	Yes	Yes	Yes
Independant axis Configuration	Yes	Yes	Yes
No of 16 bit DAC Outputs	8	4	8

***** N/A to absolute axes.

CORE AXES – can be configured in software as pulse and direction outputs to stepper or servo drives. They can also be configured for incremental encoder feedback or simulated encoder output.

EXTENDED AXES – in addition to the Core functionality these axes can also be configured for SSI, Tamagawa or EnDat absolute encoders.

AS - Analogue 'closed loop' Servo using built-in ±10V analogue output.