Press Release

Trio Motion adds EtherCAT interface expansion module to MC464

Motion Coordinator

- **EtherCAT provides one of the fastest system available – well suited to high speed, multi-axis motion and machine automation**
- **Open standard EtherCAT further increases customers' freedom to select from a rapidly growing list of manufacturers motor and drive combination**

Tewkesbury – UK – December 2010: Trio Motion Technology continues to add expansion flexibility for its **MC464 *Motion Coordinator*** motion and machine controller range with the launch of its new **EtherCAT Master** drive interface module. The new module provides tightly synchronised control for up to 64 slave axes on the MC464 – up to seven modules may be added, each providing eight 100 nanosecond registration inputs which can be mapped to any axis. With a choice of over fifty servo and inverter drive manufacturers currently supporting the protocol along with numerous I/O systems, sensors, operator interfaces and hydraulic/pneumatic valve controls, EtherCAT technology is currently one of the fastest fieldbus system available and in combination with the MC464 is extremely well suited to demanding real time, high axis count machine automation applications.

Trio's MC464 *Motion Coordinator* is based on the 64-bit 400MHz MIPS processor with 64-bit position registers and double floating point maths for exceptional servo precision. With multitasking TrioBASIC programming, the central control unit includes analogue and digital I/O, status display, SD card memory expansion, axis synchronisation and programming ports with a wide choice of half- and full-height expansion modules for drive technology, I/O expansion, factory and fieldbus communication. Users can choose a 4- or 8-axis module for stepper, analogue servo or piezo motor control with several choices of absolute or incremental feedback, and can freely mix modules that support third party drive technologies including SERCOS II, Panasonic RTEX, SLM and now EtherCAT.

The new EtherCAT drive interface module is plug-and-play compatible with the MC464 using Trio's **Motion Perfect 2** programming environment. As a 100 base-T EtherCAT master, the module has a single RJ45 connector which connects to the IN of the first EtherCAT drive. On power-up the MC464 identifies the EtherCAT module, its connected drives and input/output modules with automatic configuration from a comprehensive look-up list. Additional support is included within *Motion Perfect 2* for additional drives and other devices. Four LEDs provide visual status for Module OK (green) and Module Error (red) with two user configurable LEDs (yellow) for Status 1 and 2. The user

configures the position setpoint update rate for the selected EtherCAT drives which is currently between 500 microseconds and 2 milliseconds; the MC464 has been designed for 64 axes at a 2 milliseconds update or 32 axes at a 1 milliseconds update and can run at up to 500 microseconds with high performance drives in lower axis count synchronised moves.

The flexibility of the MC464 *Motion Coordinator* range also includes TrioBASIC, TrioPC for ActiveX and further digital, analogue and relay I/O expansion modules using TrioCAN or CANopen. Factory communications options are fully covered with the Anybus® CompactCom interface module that includes a comprehensive selection of Fieldbus and communications options including, Profibus, Profinet I/O, DeviceNet, CANopen, Modbus-TCP, Modbus-RTU, and many more. The MC464 main controller also includes built-in communication interfaces including EtherNet/IP, CANopen Master, DeviceNet slave, Modbus-TCP and -RTU and TrioCAN I/O.

With such complete flexibility, machine builders, OEMs and system integrators can realise programmed motion with a full complement of high speed registration inputs and I/O-to-axis mapping for tightly synchronised high performance multi-axis motion using linear, circular or helical interpolation, electronic cams and gearboxes. Support is also included for merging multiple moves directly from CAD/CAM software.

As an exclusive designer and manufacturer of motion and machine control systems, and with no drive manufacturing programme, Trio Motion's independence allows its customers the freedom and flexibility to select and mix the very best drive hardware, motor technology and fieldbus systems with price and performance completely matched to their specific application.