



Professional Motion Controller (PMC)

- *Cost Saving Design*
- *All-in-one Solution*
- *Digital and Analog I/O*
- *Program with MAP or G-Code*
- *Rugged Industrial Design*
- *Enclosure Style Options*
- *Supports USB and CAN*



Overview

The PMC4 motion controller uses the most advanced technology in motion control and is intended for controlling machines of 1, 2, 3 or 4 axis with stepper and/or servo control. The onboard HMI, digital I/O (inputs/outputs), USB, ADC and serial ports, supported by ready to use software with advanced motion control makes this controller, an ideal and cost effective solution for machine manufacturers and system integrators.

Advantages

- ⊙ Flexible IO with expansion facilities
- ⊙ Powerful, reliable and cost effective controller optimised for industrial use
- ⊙ PLC, HMI and motion controller included
- ⊙ Less wiring saving manufacturing costs
- ⊙ Smooth, fast and accurate positioning
- ⊙ All in one machine controller increases reliability and simplifies wiring
- ⊙ Fast set-up time
- ⊙ Simple to use graphic interface
- ⊙ Custom options for OEM's

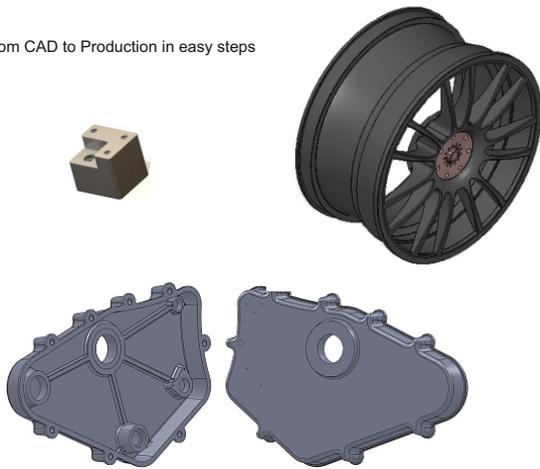
Motion Control Functions

- ⊙ Absolute and Relative Positioning
- ⊙ Point-to-Point Moves
- ⊙ Position Tracking
- ⊙ Manual Setup with Jog Options
- ⊙ Origins and Offsets Programmable
- ⊙ Tool Size Tables
- ⊙ Over xx Commands to Customise Setup and Production

Processing Power

- ⊙ Freescale Version 2 Coldfire Microprocessor for Embedded Designs
- ⊙ High Processing Speed of 160 million instructions per second
- ⊙ 16 Mb Flash Memory
- ⊙ 2 Mb of Battery Backed 16 bit SRAM
- ⊙ 64 Mb of Double Data Rate High Speed RAM
- ⊙ FPGA design for high speed processing of IO, Encoders, Registration Inputs etc.
- ⊙ Low power consumption for battery run applications

From CAD to Production in easy steps



Operating System

- ⊙ Blackthorn OS for speed and stability developed by TRM
- ⊙ Design ensures minimal code size
- ⊙ Updates available via Pen Drive
- ⊙ Used throughout our range of controls
- ⊙ Interrupt driven architecture for stability
- ⊙ Designed for the embedded environment

System Memory

- ⊙ 64Mb DDR
- ⊙ 2Mb SRAM
- ⊙ 16Mb FLASH
- ⊙ USB upto 8Gb
- ⊙ SD Card option

Communications

- ⊙ USB 2 Host
- ⊙ USB On-The-Go (optional)
- ⊙ Controller Area Network (CAN)Port
- ⊙ RS232 Serial
- ⊙ RS485 Multidrop Serial



PLC Support Services

- ⊙ **Alarms and events:** The system supports up to eight 'events', events are interrupts generated from change of input, timeout, position capture/match or keystroke. Events can be used as an alarm, emergency stop function, motion control manager, timer function etc.
- ⊙ **Timer:** Eight precision timers are supported
- ⊙ **Maths and calculations:** Comprehensive mathematics used throughout. From basic addition and subtraction to sine and cosine plus many more.

I/O Services

- ⊙ **Inputs:** 16 Opto Isolated (PNP or NPN)
- ⊙ **Outputs:** 12 1A current limited sourcing outputs. Suitable for relay and contactor control etc.
- ⊙ **Control Outputs:** 4 Motion control outputs +/- 10VDC.
- ⊙ **Stepper Motor:** 4 Channels of Step & Direction
- ⊙ **Analogue Inputs:** 4 High Speed at 0 -10V
- ⊙ **High Speed Digital Inputs:** 2 for fast registration capture
- ⊙ **Encoder Inputs:** 4 channels per Axis plus upto 3 internal Jog/Velocuty

