

PC68 Family

DESCRIPTION

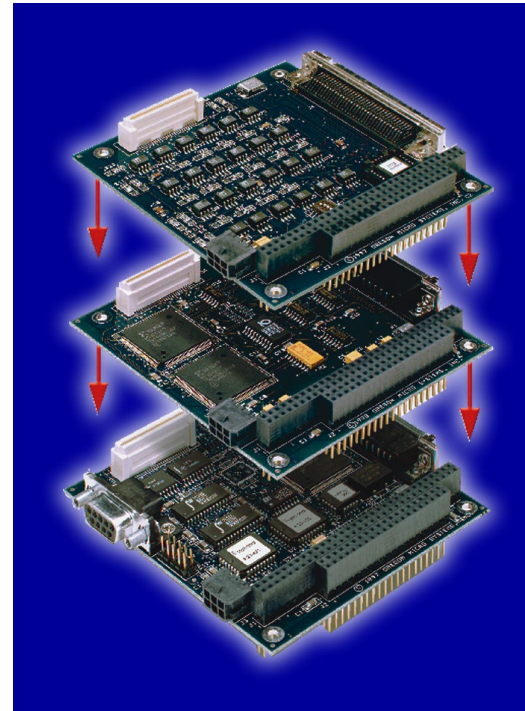
The PC68 is both a PC/104 controller that supports the PC/104 ISA bus standard as well as a stand-alone controller via a high speed RS-232 communication port. The OMS PC/104 product family begins with the PC68, a four axis controller and the number of axes can be expanded to 8 with the expansion module. The PC68 supports up to 24 general purpose TTL I/O bits that can be expanded to include up to 144 optically isolated I/Os with the Px6IO expansion module. The architecture of the PC68 includes an additional board to board bus that is separate from the PC/104 J1 and J2 bus connector where the microcontroller of the PC68 is the master. This provides the ability to add additional features, i.e. more axes, I/O and even custom requirements.

The step pulse is a TTL level 50% duty cycle square wave that supports velocities of 0 through 1,044,000 pulses per second. The encoder feedback functionality supports quadrature encoders up to 4 MHz at a 4 times resolution and is used as feedback for the stepper axes or as independent position feedback. The encoder feedback can provide slip or stall detection. Every axis includes dedicated +/- over travel inputs, a home input, and an auxiliary output. The PC68 is available in several different models at several different prices so that you don't have to pay for a lot of functionality that you don't need.

PROGRAMMING

PC68 motion controllers are easily programmed with double character ASCII commands through an extensive command structure. The commands are combined into character strings to create sophisticated motion profiles and are passed to the PC68 data I/O register. A separate 'FIFO' command queue for each axis is used to store the parsed commands by the PC68 until they are executed allowing the host to send a complex command sequence and attend to other tasks while the PC68 manages the motion process. These command queues store 200 command and parameter words and include a command loop counter which allows multiple executions of any command string.

The commands available in the PC68 family of motion controllers are sent to the controller as ASCII character strings. Some commands expect one or more numerical operands to follow. These commands are identified with a '#' after the command. The '#' indicates a signed integer input parameter or a signed fixed point number of the format ##.# when user units are enabled. With user units defined, distances, velocity and acceleration parameters may be input in inches, revolutions, etc.



FEATURES

- Four axes of Stepper control
- Expandable to 8 axes with the expansion module
- Control architecture options - Stackable
- Stand-alone with high speed RS232 port
- 16 bit DAC analog resolution
- Configurable PID filter with feed forward coefficients
- Encoder feedback available for stepper axes
- Two limits, one home, and one auxiliary output are standard per axis
- Up to 8 "user definable" I/O, expandable to 144 opto-isolated I/O
- Constant velocity linear interpolation (all axes)
- Software for Windows® 95/98 and Windows® NT
- Compatible with the IO68 breakout board
- Electronic gearing
- Circular interpolation
- Linear, Parabolic, Cosine, and Custom Profiles.