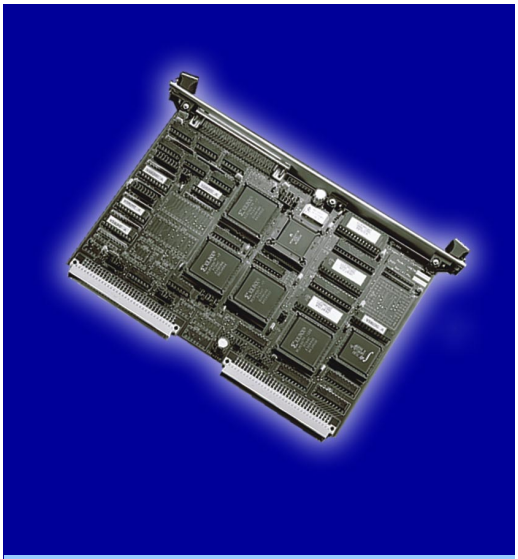
VME58 Family



FEATURES

- Output is step & direction
- Independent and coordinated motion of all axes
- Each axis has a pair of limit inputs plus a home input as well as an auxiliary output for drive or amplifier current control.
- Up to 14 "user definable" TTL I/O lines
- All control signals are on the P2 connector
- Independent and coordinated motion of all axes
- Circular interpolation
- Electronic gearing
- Circular interpolation
- Constant velocity linear interpolation (all axes)
- 100 pint front panel connection for all signals

DESCRIPTION

The VME58 family of motion controllers provide up to 8 axes of motion control on a single card to VME bus compatible computers. Outputs are provided for 12 bit analog or PWM servo output as well as step and direction for stepper applications. A modern PID filter is provided with 8 user adjustable parameters. Limit and home switch inputs are provided for all axes as well as user definable I/O for synchronization and control of other events. Incremental encoder feedback is used for all servo axes and is available on stepper axes on some models. This is used for position feedback and may also be used for slip or stall detection. Electronic gearing is also available for tracking with another motor or manual input device. The bus interface uses dual port RAM technology for communication of commands from the host and feedback of motion control parameters. Commands may be written to this RAM by the host, eliminating the communication bottlenecks of I/O port based communications. Critical motion parameters such as position and velocity are available in the dual port RAM allowing the host to interrogate these parameters in real time while the motion is in progress. This RAM may be mapped to any desired 4K boundary within the computer short address memory space. Interrupt control and other data is available through a block of 9 memory mapped registers. These registers include interrupt vector, interrupt control and status, limit and home switch status, done flag status and slip status for each axis as well as the user definable I/O. Some commands may be passed to the VME58, bypassing the communication channel using the mailbox system. These commands cause an immediate interrupt and may be used for critical commands such as abort. Each axis may perform individual unrelated moves or they can be coordinated as required by the application. Simple ASCII commands may be easily sent to the board from any high level language. Complex move sequences, time delays and control of other external events may be programmed through the VME58 interface. The IO58 companion breakout module for the VME58 provides an efficient means of connecting the VME58 signals to external devices. A 3 meter 100 conductor shielded cable and individual connectors that separate each axis and the I/O signals of the VME58, is also available.

PROGRAMMING

The OMS motion controls are easily programmed with double character ASCII commands through an extensive command structure. These commands are combined into character strings to create sophisticated motion profiles. It includes an 800 command and parameter buffer for each axis and a command loop counter which allows multiple executions of most command strings.