

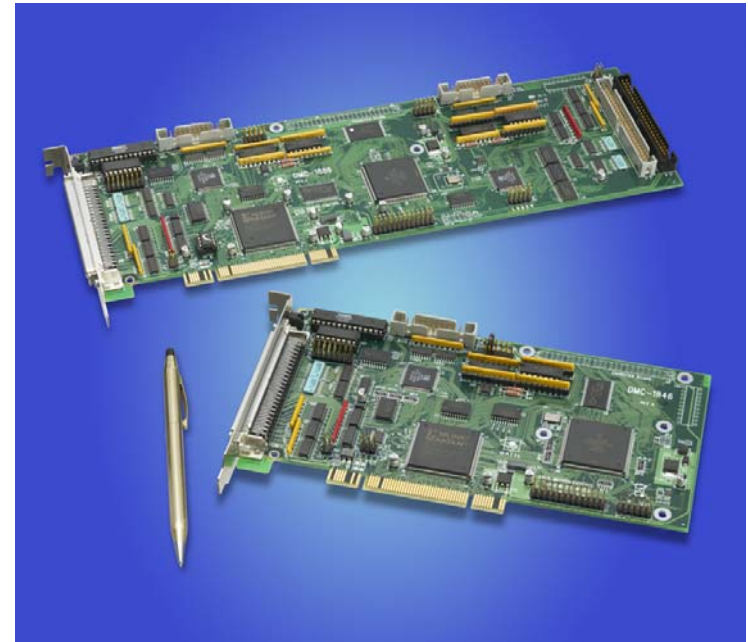


News from Galil

Latest News from Galil

November 2005

- Next Generation PCI Controller – *High Speed*
- 1 through 8 axes
- Optically isolated inputs
- Dual encoder inputs
- Same price as DMC-18x0
- Same 100-pin SCSI as DMC-18x0





DMC-18x6 PCI –It's Fast!

- Uses Risc-based, clock multiplying processor with DSP functions for high-speed performance and processing power
- Accepts encoder inputs up to 22 MHz for servos
- Servo update as low as 31 μ sec/axis
- Command execution speeds as low as 40 μ sec
- 2000 lines (x 80 chr) program memory
- 16,000 array elements
- 510 user defined variables
- Enhanced instruction set



DMC-18x6 vs DMC-18x0 Comparison

	DMC-18x6	DMC-18x0
Max Encoder rate	22 MHz	12 MHz
Max stepper rate	6 MHz	3 MHz
Program memory	2000 lines x 80 chr	1000 lines x 80 chr
Array Size	16000 elements	8000 elements
Number of variables	510	254
Minimum Servo Update	31 microseconds (1-2 axes, fast)	125 microseconds (1-2 axes, fast)
Command Execution Speed	40 microseconds	400 microseconds



DMC-18x6: Changes to PID

- To convert DMC-18x0 PID values to DMC-18x6 PID values:
 - Multiply KP and KD by 4
 - Divide KI by 2
- Effective resolution of KP and KD has been increased by a factor of four
- Resolution of KI is 1/1024 vs 1/128



DMC-18x6: Other Changes

- Homing and Find Index now use hardware latch to define Index position
- Homing and Find Index now have programmable slew speed (HV)
- Motion smoothing command IT has been expanded to include vector moves. VT is no longer needed
- Contour commands are buffered and WC is no longer needed
- MT expanded so that Step Motor Jumpers are not required



DMC-18x6: New Commands

- HV sets slew speed for Homing
- ^L^K, PW Locks program/Sets password
- OA,OT, OV Encoder failure checking
- SD sets limit deceleration
- % math operand that returns integer remainder of a division
- ZA user data record variables
- EY returns number of ECAM cycles that have been executed



DMC-18x6: Modified Commands

- AC,DC,JG,SP,VS,VA,VD Increased ranges
- TM automatic scaling
- AL expanded to allow latch on Index
- OE2 expanded to shut off motor on Limit
- TRn,m expanded to trace on specific threads
- _NO specifies which threads are running
- M-axis adds a second virtual axis which can be used as a master in ECAM



- **Stepper Position Maintenance Mode**

If commanded position and encoder position are more than 2 full motor steps, motion is stopped on OE1. YR issues a correction move.
- **ECAM widen**

EW Allows one or two master intervals to be wider than specified EP interval. Allows for more points in curved sections



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- White Papers, application notes and articles
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Questions



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