Title:	Data Acquisition with the DCX-PCI100 and DCX-MC500
Products:	DCX-PCI100, DCX-MC500
Keywords:	Data Acquisition, A/D, D/A,
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Summary
When installed on a DCX-PCI100 motion control motherboard, a DCX-MC500 Analog I/O module provides four A/D channels (12 bit, 0 - 5V) and four D/A channels (12 bit, 0 - 5V).

More Information
The primary function of the DCX-PCI100 is to control the motion of servo axes. The reading of DCX-MC500 A/D input channels or setting the voltage level of D/A output channels are auxiliary operations of the DCX-PCI100, and is not given a high priority. The Analog I/O functions of the DCX-MC500 are asynchronous operations that occur during available DCX-PCI100 processing time.

Reading A/D inputs
The minimum time for an A/D conversion is 150 usec. Due to possible interruption by higher priority operations the maximum time for an A/D conversion is 1000 usec. The average time for A/D conversions is approximately 600 usec.

Setting D/A outputs
The minimum time for setting a new D/A voltage output is 60 usec. Due to possible interruption by higher priority operations the maximum time for setting a new D/A voltage output is 1000 usec. The average time for setting a new D/A voltage output is 550 usec.