SPECIFICATIONS

CIO-DAS08-PGH
CIO-DAS08-PGM
CIO-DAS08-PGL
Analog Input & Digital I/O

Revision 9, October, 2000

Power consumption

+5V:	900 mA typical, 1125 mA max

Analog Input Section

A/D converter type	AD574
Resolution	12 bits
Number of channels	8 differential (configurable as quasi-differential via installation of SIP resistor)
Input Ranges	
CIO-DAS08/PGH	±10V, ±5V, ±1V, ±0.5V , ±0.1V, ±0.05V, ±0.01V, ±0.005V, 0 to 10V, 0 to 1V, 0 to 0.1V, 0 to 0.01V software selectable
CIO-DAS08/PGL	±10V, ±5V, ±2.5V, ±1.25V, ±0.625V, 0 to 10V, 0 to 5V, 0 to 2.5V, 0 to 1.25V software selectable
CIO-DAS08/PGM	±10V, ±5V, ±0.5V, ±0.05V, ±0.01V, 0 to 10V, 0 to 1V, 0 to 0.1V, 0 to 0.01V software selectable
Polarity	Unipolar/Bipolar, software selectable
A/D pacing	Internal counter or external source (Interrupt Input, jumper selectable, rising edge) or software polled
A/D Trigger sources	External hardware/software (Digital In 1)
Data transfer	Interrupt or software polled
DMA	None
A/D conversion time	25 µs
Throughput	20 kHz, PC dependent
Accuracy ±0.05% of full scale	±0.01% of reading ±1 LSB
Differential Linearity error	±1 LSB
Integral Linearity error	±0.5 LSB
No missing codes guaranteed	12 bits
Gain drift (A/D specs)	±25 ppm/°C
Zero drift (A/D specs)	±10µV/°C
Common Mode Range	±10V
CMRR	72 dB
Input leakage current (@25 Deg C)	100 nA
Input impedance	10 Meg Ohms min
Absolute maximum input voltage	±35

Digital Input / Output

Digital Type (main connector)	
Output:	74LS273
Input:	74LS244
Configuration	4 fixed output bits, 3 fixed input bits
Number of channels	4 out, 3 in
Output High	2.7 volts min @ –0.4mA
Output Low	0.4 volts max @ 8 mA
Input High	2.0 volts min, 7 volts absolute max
Input Low	0.8 volts max, –0.5 volts absolute min
Interrupts	2 - 7, jumper selectable
Interrupt enable	Programmable
Interrupt sources	External (Interrupt In), rising edge

Counter Section

Counter type	82C54
Configuration	3 down-counters, 16 bits each
Counter 0 - independent, user configurable	
Source:	user connector (Counter 0 In)
Gate:	user connector (Gate 0)
Output:	user connector (Counter 0 Out)
Counter 1 - independent, user configurable	
Source:	user connector (Counter 1 In)
Gate:	user connector (Gate 1)
Output:	user connector (Counter 1 Out)
Counter 2 - independent, user configurable	
Source:	1 MHz (from 10MHz Xtal via divide-by-ten) or PC SysClk (via divide by 2 circuit) selectable by jumper
Gate:	user connector (Gate 2)
Output:	user connector (Counter 2 Out)

Clock input frequency	10 Mhz max
High pulse width (clock input)	30 ns min
Low pulse width (clock input)	50 ns min
Gate width high	50 ns min
Gate width low	50 ns min
Input low voltage	0.8V max
Input high voltage	2.0V min
Output low voltage	0.4V max
Output high voltage	3.0V min

Environmental

Operating temperature range	0 to 50°C
Storage temperature range	–20 to 70°C
Humidity	0 to 95% non-condensing

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