

SPECIFICATIONS

PC104-DAS08

Analog Input & Digital I/O



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SPECIFICATIONS

Power Consumption

+5V:	130 mA typical, 185 mA max
+12V:	18 mA typical, 25 mA max
-12V:	12 mA typical, 18 mA max

Analog Input Section

A/D converter type	AD674
Resolution	12 bits
Number of channels	8, single-ended
Input Ranges	$\pm 10V$, $\pm 5V$, 0 to +10V, switch selectable
Polarity	Unipolar/Bipolar, switch selectable
A/D pacing	Internal counter or external source (Interrupt Input, jumper selectable, rising edge) or software polled
A/D Trigger sources	External polled gate trigger (Digital In 1)
Data transfer	Interrupt or software polled
DMA	None
A/D conversion time	15 μs
Throughput	20 kHz, PC dependent
Accuracy	$\pm 0.01\%$ 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/ $^{\circ}C$
Zero drift (A/D specs)	$\pm 10 \mu V/^{\circ}C$
Common Mode Range	$\pm 10V$
CMRR	72 dB
Input leakage current (@25 $^{\circ}C$)	100 nA
Input impedance	10 MegOhms min
Absolute maximum input voltage	$\pm 35V$

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 @ -0.4 mA
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
Output power-up / reset state	
Interrupts	2 thru 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: PC SysClk via divide by 2 circuit
	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 90% non-condensing

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