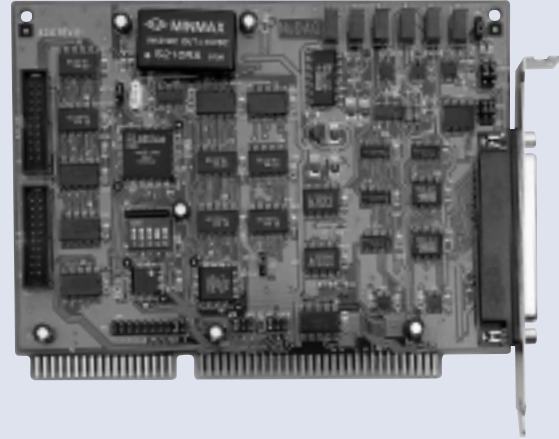


Features

- 16-bit high resolution
- 8 differential or 16 single-ended analog inputs
- Programmable gains of 1,2,4,8
- Up to 100 KHz sample rate through DMA operation
- Two channel 12-bit analog output
- 16 TTL compatible digital inputs and outputs
- A/D trigger modes: software, timer pacer, external trigger
- Internal programmable timer pacer on-board
- Rugged DB-37 connector



Specifications

Analog Input (A/D)

- Converter: AD7805 or equivalent
- Resolution: 16-bit
- Number of channels: 16 single-ended or 8 differential
- Input range: (programmable)
Bipolar: $\pm 10V$, $\pm 5V$, $\pm 2.5V$, $\pm 1.25V$
- Conversion time: 8 μ sec
- AD Data throughput:
 - 100 K Hz max. for one channel
- Over-voltage protection: Continuous $\pm 35V$ maximum
- System accuracy: 0.003% of FSR ± 1 LSB
- Input impedance: >10 M Ω
- Common mode rejection: 80 dB
(Gain = 1, differential input)
- Coding: sign + magnitude (binary)
- Trigger mode: Software, Pacer and External trigger
- Data transfer: Polling, Interrupt, and DMA

Analog Output (D/A)

- Converter: DAC7541 or equivalent, monolithic multiplying
- Resolution: 12-bit
- Number of channels: 2 double-buffered analog outputs
- Analog output range: (unipolar)
 - Internal reference: 0~5V or 0~10V
 - External reference: +10V max
- Setting time: 30 μ sec

- Linearity: $\pm 1/2$ bits LSB
- Output drive capability: $\pm 5mA$ max.

Digital Input & Output (DIO)

- Number of channels: 16 DI channels and 16 DO channels
- I/O characteristics: TTL compatible

Programmable Counter

- Device: 82C54
- A/D pacer: 32-bit timer (two 16-bit counters cascaded together) with a 2 MHz time base
- Counter: One 16-bit counter with a 2 MHz time base

General Specifications

- Interrupt IRQ: 3,5,6,7,9,10,11,12,15
- DMA channel: CH1 and CH3
- Connector: DB-37 female connector
- Operating temperature: 0° ~ 55°C
- Storage temperature: -20° ~ 80°C
- Humidity: 5~95%, non-condensing
- Power requirement:
 - +5V @ 420 mA typical
 - +12V @ 240 mA typical
- Dimension: 163 mm x 123 mm

Termination Boards

- ACLD-8125
- ACLD-9137
- ACLD-9182A
- ACLD-9188
- DIN-20P
- ACLD-9138
- DIN-37D
- ACLD-9185
- ACLD-9178

Ordering Information

ACL-8216

16 bit High Resolution Multi-function DAS Card

Pin Assignments for the DB-37 Connector

A10(H0) (1)	○	(20) A18(L0)
A11(H1) (2)	○	(21) A19(L1)
A12(H2) (3)	○	(22) A110(L2)
A13(H3) (4)	○	(23) A111(L3)
A14(H4) (5)	○	(24) A112(L4)
A15(H5) (6)	○	(25) A113(L5)
A16(H6) (7)	○	(26) A114(L6)
A17(H7) (8)	○	(27) A115(L7)
A.GND (9)	○	(28) A.GND
A.GND (10)	○	(29) A.GND
V.ref (11)	○	(30) DA1
ExtRef1 (12)	○	(31) ExtRef2
+12V out (13)	○	(32) DA2
A.GND (14)	○	(33) GATE0
D.GND (15)	○	(34) GATE
COU0 (16)	○	(35) N/C
ExtTrg (17)	○	(36) N/C
N/C (18)	○	(37) ExtCLK
+5V out (19)	○	