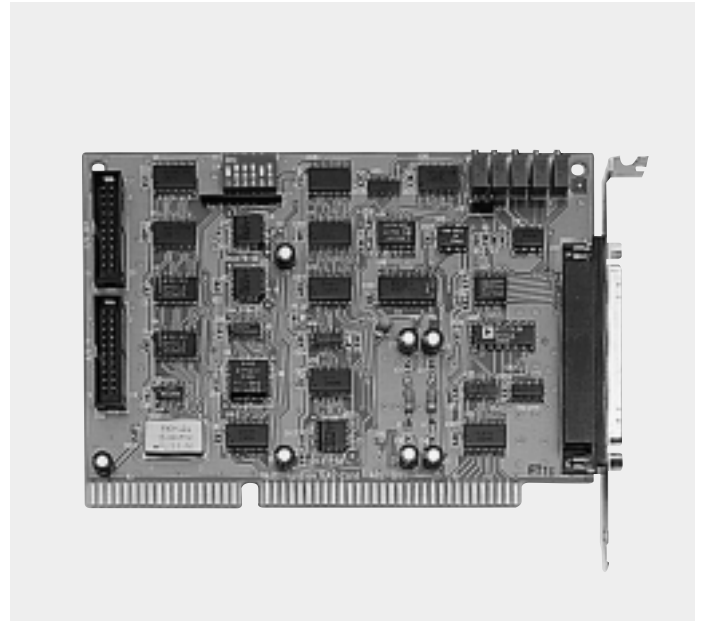


ACL-8111

Low Cost Multi-function Data Acquisition Card

Features

- 8 single-ended 12-bit analog input channels
- Software programmable input range: $\pm 5V$, $\pm 2.5V$, $\pm 1.25V$, $\pm 0.625V$, and $\pm 0.3125V$
- Up to 50 kHz sampling rates with on-chip sample & hold
- One 12 bit monolithic multiplying analog output channel
- 16 TTL compatible digital outputs
- 16 TTL compatible digital inputs
- 3 Programmable A/D trigger modes
- One board 8254 timer chip
- Programmable IRQ level for A/D data transfer
- Compact size with rugged 37-pin D-type connector



Specifications

Analog Input (A/D)

- DC and resolution: 12 bit ADS574 or equivalent
- Number of channels: 8 single-ended channels
- Maximum sampling rate: 50 kHz
- Input signal range: $\pm 5V$, $\pm 2.5V$, $\pm 1.25V$, $\pm 0.625V$, $\pm 0.3125V$ software programmable
- Over-voltage protection: $\pm 35V$ maximum
- Input impedance: $>10\text{ M}\Omega$
- Trigger mode: Software, on-board programmable timer or external trigger
- Data transfer: Program control, interrupt control
- IRQ level: Programmable IRQ 2, 3, 4, 5, 6, 7
- External trigger: TTL compatible digital trigger

Analog Output (D/A)

- DAC resolution: 12-bit, 7541A industry standard
- Conversion type: monolithic multiplying
- Number of channel: 1
- Voltage output range : $0\sim 5V$ or $0\sim 10V$
- Reference voltage: $-5V$ or $-10V$
- Setting time: $30\text{ }\mu\text{sec}$
- Output driving capability: $\pm 5\text{mA}$ 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 timer: 32 bit with 2MHz time base

General Specifications

- I/O base address: 16 consecutive address location
- I/O connectors: one DB-37 female connector and two 20-pin flat cable connectors
- Operating temperature: $0^{\circ}\sim 55^{\circ}\text{C}$
- Storage temperature: $-20^{\circ}\sim 80^{\circ}\text{C}$
- Humidity: 5~95%, non-condensing
- Power requirement
 - $+5V$ @ 440mA typical, 500mA max.
 - $+12V$ @ 60mA typical, 75mA max.
- Dimension: 158 mm x 108 mm

Termination Boards

- ACLD-9137 • ACLD-9188
- DIN-37D

Ordering Information

ACL-8111

Multi-function Data Acquisition Card

ACL-8111/37

ACL-8111+ACLD-9137

Pin Assignments for the DB-37 Connector

AI0 (1)	○	○	(20) A.GND
AI1 (2)	○	○	(21) A.GND
AI2 (3)	○	○	(22) A.GND
AI3 (4)	○	○	(23) A.GND
AI4 (5)	○	○	(24) A.GND
AI5 (6)	○	○	(25) A.GND
AI6 (7)	○	○	(26) A.GND
AI7 (8)	○	○	(27) A.GND
- (9)	○	○	(28) -
- (10)	○	○	(29) -
- (11)	○	○	(30) DA1
- (12)	○	○	(31) -
- (13)	○	○	(32) -
- (14)	○	○	(33) -
D.GND (15)	○	○	(34) -
- (16)	○	○	(35) -
- (17)	○	○	(36) -
- (18)	○	○	(37) -
+5V out (19)	○	○	