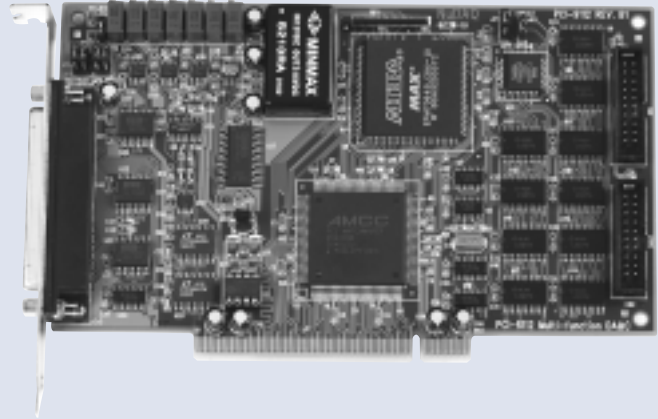


### Features

- 32-bit PCI Bus with Bus-mastering DMA
- 12-bit analog input resolution
- 16 single-ended or 8 differential analog input
- On-board A/D FIFO memory
- Auto-scanning channel selection
- Up to 110 KHz A/D sampling rates
- Programmable gain of x0.5, x1, x2, x4, x8
- Bipolar or unipolar input signals
- Three A/D trigger modes: software trigger, programmable pacer trigger, and external pulse trigger
- 16-bit digital input and 16-bit digital output
- Two 12-bit monolithic multiplying analog output channels
- 3 independent programmable 16-bit down counters
- Compact, half-size PCB
- 37-pin D-type connector



### Specifications

#### Analog Input (A/D)

- Converter: B.B. ADS774 or equivalent successive approximation type
- Resolution: 12-bit
- Input channels: 16 SE or 8 DI
- Input range: (programmable)
  - Bipolar:  $\pm 10V$ ,  $\pm 5V$ ,  $\pm 2.5V$ ,  $\pm 1.25V$ ,  $\pm 0.625V$
  - Unipolar:  $0\sim 10V$ ,  $0\sim 5V$ ,  $0\sim 2.5V$ ,  $0\sim 1.25V$
- Conversion time:  $8\mu$  sec
- Sampling rate: 110K samples / sec maximum
- Overvoltage protection: Continuous  $\pm 35V$  maximum
- Accuracy:

GAIN = 0.5, 1	0.01% of FSR $\pm 1$ LSB
GAIN = 2, 4	0.02% of FSR $\pm 1$ LSB
GAIN = 8	0.04% of FSR $\pm 1$ LSB

- Input impedance: 10 M $\Omega$
- Trigger mode: Software, pacer, and external trigger
- Data transfer: Polling, Interrupt, Bus mastering DMA

#### Analog Output (D/A)

- Number of channels: 2
- Resolution: 12-bit
- Output range:
  - Internal reference: (unipolar)  $0\sim 5V$  or  $0\sim 10V$
  - External reference: (unipolar) max.  $+10V$  or  $-10V$

- Converter: DAC7541 or equivalent, monolithic multiplying
- Settling time: 30  $\mu$ sec
- Linearity:  $\pm 1/2$  bit LSB
- Output driving capacity:  $\pm 5$  mA max.

#### Digital I/O (DIO)

- Number of channels: 16DI/16DO
- Signal type: TTL compatible

#### Programmable Counter

- Device: 8254
- A/D pacer: 32-bit timer (two 16-bit counters cascaded together) with a 2 MHz time base
- Counter: One 16-bit counter

#### General Specifications

- Connector: 37-pin D-type connector
- Operating temperature:  $0^{\circ} \sim 60^{\circ}C$
- Storage temperature:  $-20^{\circ} \sim 80^{\circ}C$
- Humidity: 5~95%, non-condensing
- Power requirement:
  - $+5V$  @ 460 mA typical
  - $+12V$  @ 110 mA typical
- Dimension: 173mm x 102 mm

#### Termination Boards

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

### Ordering Information

#### PCI-9112

Advanced PCI Bus-mastering DAS Card

Note: The above products are shipped with software development kit for DOS/Win-95/98/NT/2000, PCIS-LVIEW, PCIS-VEE and DAQ Creator.

#### Pin Assignments for the DB-37 Connector of PCI-9112

AI0 (1)	○		(20) AI8
AI1 (2)	○	○	(21) AI9
AI2 (3)	○	○	(22) AI10
AI3 (4)	○	○	(23) AI11
AI4 (5)	○	○	(24) AI12
AI5 (6)	○	○	(25) AI13
AI6 (7)	○	○	(26) AI14
AI7 (8)	○	○	(27) AI15
A.GND (9)	○	○	(28) A.GND
A.GND (10)	○	○	(29) A.GND
Vref (11)	○	○	(30) DA1
ExtRef2 (12)	○	○	(31) ExtRef1
+12V (13)	○	○	(32) DA2
A.GND (14)	○	○	(33) GATE0
D.GND (15)	○	○	(34) GATE1
Count0 (16)	○	○	(35) Count1
ExtTrg (17)	○	○	(36) N.C.
N.C. (18)	○	○	(37) ExtCLK
+5V (19)	○	○	