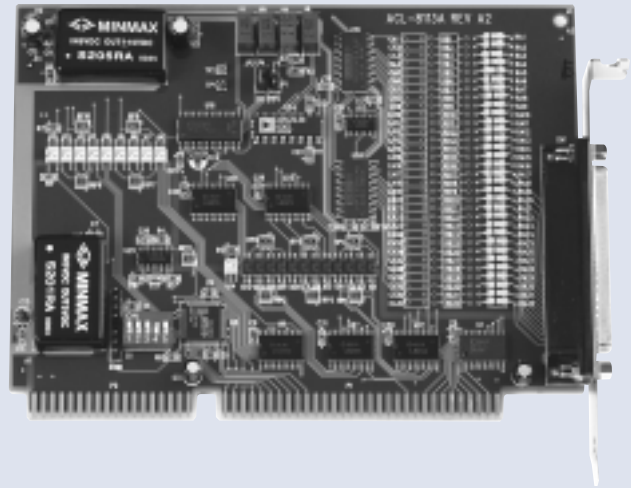


# ACL-8113A

## 32-CH Single-ended Isolated A/D Card

### Features

- 32 single-ended 12-bit analog input channels
- High isolation voltage 2500 V rms
- 12-bit successive approximation A/D converter (AD774)
- Programmable gain :1, 2, 4, 8, 16
- Bipolar or Uni-polar Analog input ranges
- Software programmable gain control
- Integral DC-to-DC converter for stable input operation
- Compact size-only half-size PCB
- Register structure compatible with PCL-813



### Specifications

#### Analog Input (A/D)

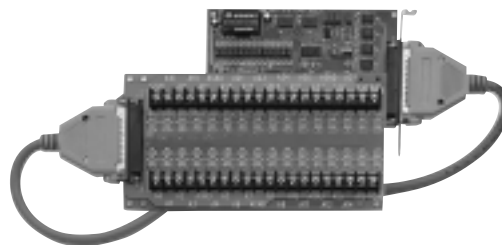
- Number of input channels: 32 isolated channels
- Resolution: 12-bit
- Input range:
  - 10V Range**
    - Bipolar:  $\pm 5V$ ,  $\pm 2.5V$ ,  $\pm 1.25V$ ,  $\pm 0.625V$ ,  $\pm 0.3125V$
    - Unipolar:  $0\sim 10V$ ,  $0\sim 5V$ ,  $0\sim 2.5V$ ,  $0\sim 1.25V$ ,  $0\sim 0.625V$
  - 20V Range**
    - Bipolar:  $\pm 10V$ ,  $\pm 5V$ ,  $\pm 2.5V$ ,  $\pm 1.25V$ ,  $\pm 0.625V$
    - Unipolar:  $0\sim 10V$ ,  $0\sim 5V$ ,  $0\sim 2.5V$ ,  $0\sim 1.25V$
- Over voltage protection:  $\pm 35V$  maximum
- Conversion type: Successive approximation
- Converter: B.B. AD774 or equivalent
- Conversion speed: 50 KHz max.
- Accuracy: 0.015% of reading  $\pm 1$  bit
- Nonlinearity:  $\pm 1$  bit LSB
- Trigger mode: Software trigger
- Data transfer: Program control
- Input impedance:  $>10 M\Omega$
- Temperature coefficient:
  - 5 ppm typical
  - 15 ppm maximum

#### General Specifications

- Connector: DB-37 female connector
- Operating temperature:  $0^{\circ} \sim 55^{\circ}C$
- Storage temperature:  $-20^{\circ} \sim 80^{\circ}C$
- Humidity: 5~95%, non-condensing
- Power requirement:
  - +5V @ 960mA maximum
- Dimension: 163 mm x 107 mm

#### Termination Boards

- ACLD-9881
- ACLD-9137
- DIN-37D



ACL-8113A+ACLD9881

### Ordering Information

#### ACL-8113A

32-CH Isolated 12-bit A/D Card

#### ACL-8113A/81

ACL-8113A + ACLD-9881 (include 1M cable  
ACL-10137-1)

#### Pin Assignments for the DB-37 Connector

AI0 (1)	○	(20) AI1
AI2 (2)	○	(21) AI3
AI4 (3)	○	(22) AI5
AI6 (4)	○	(23) AI7
AI8 (5)	○	(24) AI9
AI10 (6)	○	(25) AI11
AI12 (7)	○	(26) AI13
AI14 (8)	○	(27) AI15
A.GND (9)	○	(28) A.GND
A.GND (10)	○	(29) A.GND
AI16 (11)	○	(30) AI17
AI18 (12)	○	(31) AI19
AI20 (13)	○	(32) AI21
AI22 (14)	○	(33) AI23
AI24 (15)	○	(34) AI25
AI26 (16)	○	(35) AI27
AI28 (17)	○	(36) AI29
AI30 (18)	○	(37) AI31
A.GND (19)	○	