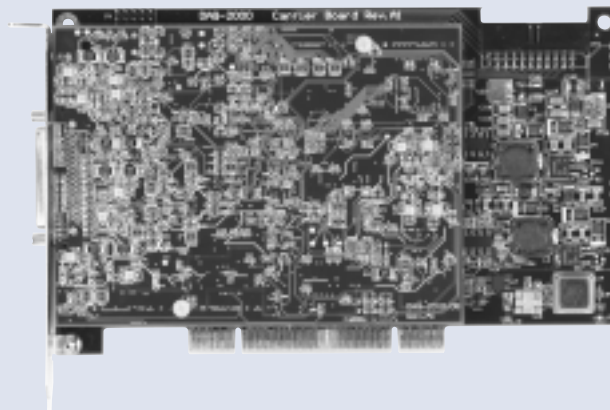


### Features

- 32-bit PCI Bus, plug and play
- 4-channel simultaneous analog inputs
- 14-bit ADC with sampling rate up to 2MHz
- Bipolar/Unipolar analog input
- 8K A/D sample FIFO
- Analog and Digital trigger
- Data transfer: Software Polling, FIFO half-full Interrupt, & Bus-mastering DMA with Scatter/Gather
- 2 channel D/A output with waveform generation
- Bipolar/Unipolar analog output
- 1K output data FIFO per channel
- D/A: I/O update and Bus-mastering DMA with Scatter/Gather
- System Synchronization Interface
- Fully auto-calibration
- Fully software configuration
- Easy Upgrade to CompactPCI form factor



### Introduction

DAQ-2010 is a multi-function data acquisition card with four-channel simultaneous analog inputs, two-channel analog outputs, digital I/O and timer/counter functions. The four high speed A/D converters provide simultaneous sampling to allow sample four channels at the same time. If more channels required, multiple cards can be synchronized by the system synchronization interface provided by DAQ-2000 series. The two analog output function can operate together with analog input function. This makes DAQ-2010 the ideal tool for the stimulus/response test.

### Specifications

#### Analog Input (A/D)

- Converter: LTC1414
- Sample rate: 2MHz max
- Resolution: 14-bit
- Number of channels: 4-channel simultaneous with differential input
- Analog input range: (programmable)
  - Bipolar:  $\pm 10V$ ,  $\pm 5V$ ,  $\pm 2.5$ ,  $\pm 1.25V$
  - Unipolar:  $0\sim 10V$ ,  $0\sim 5.0V$ ,  $0\sim 2.5V$ ,  $0\sim 1.25V$
- Over-voltage protection: Continuous  $\pm 25V$  maximum
- FIFO Size: 8K samples
- Time base sources: 40MHz internal clock, external clock source
- Trigger sources: software trigger, external digital/analog trigger

- Trigger modes: pre-trigger, post-trigger, middle-trigger and delay-trigger
- Data transfer mode: polling, FIFO half full interrupt, and bus-mastering DMA transfer with Scatter/Gather

#### Analog Output (D/A)

- Converter: LTC7545A
- Update rate: 1MHz max
- Resolution: 12-bit
- Number of channels: 2 simultaneous channels
- Analog output range:
  - Unipolar:  $0\sim 10V$
  - Bipolar:  $\pm 10V$
- Trigger mode: Post and Delay trigger
- FIFO Size: 1K samples per channel
- Data transfer mode: I/O instruction update and bus-mastering DMA transfer with Scatter/Gather

#### Digital Input/Output

- Number of channels: 24-bit 8255 Programmable DIO
- Signal type: TTL compatible

#### General Purpose Timer / Counter

- Two 16-bit up/down timer/counter

#### System Synchronization Interface

- Timebase

- ADCONV(AD)
- UPDATE(DA)
- TRIG(AD)
- WFTRIG(DA)

#### Calibration

- Fully auto-calibration
- On board precision reference:  $+5V$
- T/C: 2 ppm/ $^{\circ}C$
- L.T. Stability: 6ppm/1000Hr

#### General Specifications

- Connector: AMP-787254-1 or equivalent 68-pin connector X1
- Operating temperature:  $0^{\circ}C \sim 65^{\circ}C$
- Storage temperature:  $-20^{\circ}C \sim 80^{\circ}C$
- Humidity: 5 ~ 95%, non-condensing
- Dimension: 174mmx107mm

### Termination Boards

- DIN-68S

### Ordering Information

#### DAQ-2010

4-CH 2 MS/s simultaneous A/D multi-function card

**Call for availability**