PCI-9112
16-CH 12-bit Advanced Multi-function DAS Card

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: ±10V, ±5V, ±2.5V, ±1.25V, ±0.625V
  - Unipolar: 0~10V, 0~5V, 0~2.5V, 0~1.25V
- Conversion time: 8µ sec
- Samplinrate: 110K samples / sec maximum
- Overvoltage protection: Continuous ±35V maximum

Accuracy

<table>
<thead>
<tr>
<th>GAIN</th>
<th>Resolution</th>
<th>Linearity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.01% of FSR ±1 LSB</td>
<td>±1/2 bit LSB</td>
</tr>
<tr>
<td>2.4</td>
<td>0.02% of FSR ±1 LSB</td>
<td>±1 LSB</td>
</tr>
<tr>
<td>8</td>
<td>0.04% of FSR ±1 LSB</td>
<td>±5 LSB</td>
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- Input impedance: 10 MO
- 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) 0~5V or 0~10V
  - External reference: (unipolar) max. +10V or -10V

- Converter: DAC7541 or equivalent, monolithic multiplying
- Settling time: 30 µsec
- Signaling: 12-bit output
- Output driving capacity: ±5 mA max.

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: -20° ~ 80°C
- Humidity: 5~95%, non-condensing
- Power requirement
  - +5 V @ 460 mA typical
  - +12V @ 110 mA typical
- Dimension: 173mm x 102 mm

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

Ordering Information
PCI-9112
Advanced PCI Bus-mastering DAS Card

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