**PCI-1712/L**

1 MS/s, 12-bit, 16-ch PCI Multifunction DAQ Card

### Features
- 16 single-ended or 8 differential or a combination of analog inputs
- 12-bit A/D converter, with up to 1 MHz sampling rate
- Programmable gain
- Automatic channel/gain scanning
- Onboard FIFO memory (AI: 1,024 samples AO: 32,768 samples)
- Two 12-bit analog output channels with continuous waveform output function (PCI-1712 only)
- 16-ch digital input or output (programmable)
- Three 16-bit programmable multifunction counter/timers on 10 MHz
- Auto-calibration (A/AO)
- PCI-Bus mastering data transfer
- Pre-, post-, about- and delay-trigger data acquisition modes for analog input channels
- Flexible triggering and clocking capabilities

### Specifications

**Analog Input**
- **Channels**: 16 single-ended/ 8 differential (software programmable)
- **Resolution**: 12 bits
- **Max. Sampling Rate**: Multi-channel, single gain: 1 MS/s  
  Multi-channel, multi gain: 600 kS/s  
  Multi-channel, multi gain, unipolar/bipolar: 400 kS/s
- **FIFO Size**: 1,024 samples

Note: The sampling rate for each channel will be affected by used channel number. For example, if 4 channels are used, the sampling rate is 600k/4 = 125 kS/s per channel. (multi gain, without unipolar/bipolar mixed)

- **Overvoltage Protection**: 30 Vp-p
- **Input Impedance**: 100 MΩ/10 pF (Off), 100 MΩ/100 pF (On)
- **Sampling Modes**: Software, onboard programmable pacer and external
- **Trigger Modes**: Pre-trigger, post-trigger, delay-trigger and about-trigger
- **Input Range (V, software programmable) & Absolute Accuracy**

<table>
<thead>
<tr>
<th>Range</th>
<th>Unipolar</th>
<th>Bipolar</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>±10</td>
<td>±5</td>
</tr>
<tr>
<td>0 ~ 10</td>
<td>±2.5</td>
<td>±1.25</td>
</tr>
<tr>
<td>0 ~ 5</td>
<td>±0.25</td>
<td>±0.25</td>
</tr>
<tr>
<td>0 ~ 2.5</td>
<td>±0.25</td>
<td></td>
</tr>
<tr>
<td>0 ~ 1.25</td>
<td>±0.4</td>
<td></td>
</tr>
</tbody>
</table>

* ±1 LSB is added as the derivative for absolute accuracy

**Analog Output (PCI-1712 only)**
- **Channels**: 2
- **Resolution**: 12 bits
- **Output Rate**: 1 MS/s max.
- **FIFO Size**: 32,768 samples
- **Output Range**: (Software programmable)

<table>
<thead>
<tr>
<th>Range</th>
<th>Bipolar</th>
<th>Unipolar</th>
</tr>
</thead>
<tbody>
<tr>
<td>±5 V</td>
<td>±10 V</td>
<td></td>
</tr>
<tr>
<td>0 ~ 5 V</td>
<td>0 ~ 10 V</td>
<td></td>
</tr>
</tbody>
</table>

**Digital I/O**
- **Channels**: 16
- **Compatibility**: 5 V/TTL
- **Input Voltage**: Logic 0: 0.8 V max.  
  Logic 1: 2.0 V min.
- **Output Voltage**: Logic 0: 0.8 V max.  
  Logic 1: 2.0 V min
- **Output Capability**: Sink: 8.0 mA @ 0.8 V  
  Source: 0.4 mA @ 2.0 V

**Pacer/Counter**
- **Channels**: 3
- **Resolution**: 16 bits
- **Compatibility**: 5 V/TTL
- **Max. Input Frequency**: 10 MHz
- **Reference Clock**: Internal: 10 MHz, 1 MHz, 100 kHz, 10 kHz  
  External Frequency: 10 MHz max.

**General**
- **Bus Type**: PCI V 2.2
- **I/O Connector**: 1 x 68-pin SCSI female connector
- **Dimensions (L x H)**: 175 x 100 mm (6.9” x 3.9”)
- **Power Consumption**: Typical: 5 V @ 850 mA, 12 V @ 600 mA  
  Max.: 5 V @ 1.0 A, 12 V @ 700 mA
- **Operating Temperature**: 0 ~ 60°C (32 ~ 140°F)
- **Storage Temperature**: -20 ~ 85°C (-4 ~ 185°F)
- **Storage Humidity**: 5 ~ 95% RH non-condensing

**Ordering Information**
- **PCI-1712**: 1 MS/s, 12-bit High-speed Multifunction PCI Card
- **PCI-1712L**: 1 MS/s, 12-bit High-speed Multi. PCI Card w/o AO

**Accessories**
- **PCLD-8712**: DIN-rail Wiring Board for PCI-1712/L
- **PCL-10168-1E**: 68-pin SCSI Shielded Cable, 1 m
- **PCL-10168-2E**: 68-pin SCSI Shielded Cable, 2 m
- **ADAM-3968**: 68-pin DIN-rail SCSI Wiring Board

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All product specifications are subject to change without notice

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