

# PXI/DAQ/DAQe-2208

## 96-CH 12-Bit 3 MS/s Ultra High-Density Analog Input Cards



PXI-2208



DAQ-2208



DAQe-2208

### Ordering Information / Quick Selection Guide

| Model Name        | Analog Input    |            |               |                            | Analog Output   |            |             | DIO             | Timer/Counter   |
|-------------------|-----------------|------------|---------------|----------------------------|-----------------|------------|-------------|-----------------|-----------------|
|                   | No. of channels | Resolution | Sampling rate | Input range                | No. of channels | Resolution | Update rate | No. of channels | No. of channels |
| PXI/DAQ/DAQe-2208 | 48 DI/96 SE     | 12 Bit     | 3 MS/s        | $\pm 0.05$ V to $\pm 10$ V | -               | -          | -           | 24-Bit 8255 PIO | -               |

### Specifications

| Model Name                    | PXI/DAQ/DAQe-2208                                                                                                                                                        |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Analog Input</b>           |                                                                                                                                                                          |
| Resolution                    | 12 Bit, no missing codes                                                                                                                                                 |
| Number of channels            | 96 single-ended or 48 differential                                                                                                                                       |
| Channel gain queue size       | 1024                                                                                                                                                                     |
| Maximum sampling rate         | 3 MS/s                                                                                                                                                                   |
| Programmable gain             | 1, 2, 4, 5, 8, 10, 20, 40, 50, 200                                                                                                                                       |
| Bipolar input ranges          | $\pm 10$ V, $\pm 5$ V, $\pm 2.5$ V, $\pm 2$ V, $\pm 1.25$ V, $\pm 1$ V, $\pm 0.5$ V, $\pm 0.25$ V, $\pm 0.2$ V, $\pm 0.05$ V                                             |
| Unipolar input ranges         | 0-10 V, 0-5 V, 0-4 V, 0-2.5 V, 0-1 V, 0-0.5 V, 0-0.4 V, 0-0.1 V                                                                                                          |
| Offset error                  | $\pm 2$ mV                                                                                                                                                               |
| Gain error                    | $\pm 0.06\%$ of FSR                                                                                                                                                      |
| Input Coupling                | DC                                                                                                                                                                       |
| Overvoltage protection        | Power on: Continuous $\pm 30$ V, Power off: Continuous $\pm 15$ V                                                                                                        |
| Input Impedance               | 1 G $\Omega$ /100 pF                                                                                                                                                     |
| Trigger sources               | Software, external digital/analog trigger, SSI bus                                                                                                                       |
| Trigger modes                 | Pre-trigger, post-trigger, middle-trigger, delay-trigger, and repeated trigger                                                                                           |
| FIFO buffer size              | 1 k samples                                                                                                                                                              |
| Data Transfers                | Polling, scatter-gather DMA                                                                                                                                              |
| <b>Digital I/O</b>            |                                                                                                                                                                          |
| Number of channels            | 24-CH 8255 programmable input/output                                                                                                                                     |
| Compatibility                 | 5 V TTL                                                                                                                                                                  |
| Data transfers                | Programmed I/O                                                                                                                                                           |
| <b>General Specifications</b> |                                                                                                                                                                          |
| Auto Calibration              | Yes ( $\pm 5$ V, $\pm 2$ ppm/ $^{\circ}$ C)                                                                                                                              |
| Dimensions                    | 160 mm x 100 mm (not including connectors) (PXI-2208)<br>175 mm x 107 mm (not including connectors) (DAQ-2208)<br>168 mm x 107 mm (not including connectors) (DAQe-2208) |
| Connector                     | 68-pin VHDCI female x 2                                                                                                                                                  |
| Operating temperature         | 0 $^{\circ}$ C to 55 $^{\circ}$ C (32 $^{\circ}$ F to 131 $^{\circ}$ F)                                                                                                  |
| Storage temperature           | -20 $^{\circ}$ C to 70 $^{\circ}$ C (-4 $^{\circ}$ F to 158 $^{\circ}$ F)                                                                                                |
| Humidity                      | 5 to 95%, non-condensing                                                                                                                                                 |
| Power requirements            | +5 V 0.95 A typical (PXI/DAQ-2208)<br>+3.3 V 0.81 A, +12 V 0.568 A typical (DAQe-2208)                                                                                   |

### Features

- Supports a 32-Bit 3.3 V or 5 V PCI bus (DAQ-2208)
- x1 lane PCI Express<sup>®</sup> Interface (DAQe-2208)
- PXI Specification Rev. 2.2 compliant (PXI-2208)
- 96-CH single-ended or 48-CH differential analog inputs
- Onboard 1 k-sample A/D FIFO
- Bipolar or unipolar analog input ranges
- Programmable gains of x1, x2, x4, x5, x8, x10, x20, x40, x50, x200
- 1024-configuration channel gain queue
- Scatter-gather DMA for analog inputs
- 24-CH TTL digital input/output
- Analog and digital triggering
- Fully auto calibration
- Multiple cards synchronization through SSI (System Synchronization Interface) bus or PXI trigger bus
- Supported Operating System
  - Windows 7/8 x64/x86, Linux
- Driver and SDK
  - LabVIEW, MATLAB, C/C++ , Visual Basic, Visual Studio.NET
- Software Utility
  - AD-Logger

### Terminal Boards & Cables

- DIN-68S-01
- ACL-10568-I
- ACL-SSI-2/3/4

\* For more information on mating terminal board and cables, please refer to P3-48/49.