✳DATAQ®
INSTRUMENTS

Low-Cost, Portable, USB Data Acquisition System

16 Single-ended, 8 Differential Analog Inputs

Maximum Sample Rate of 900 Samples/Second

Includes WINDAQ Software

Front (top) and back (bottom) of a DI-700 Series Instrument.

Our DI-700 defines new price/performance standards for PC-based data acquisition. Designed to communicate with your PC through its USB port, the DI-700 offers 16 single-ended or 8 differential analog input channels that can be programmed individually for optimal use. Each of the DI-700's channels is capable of measuring ±10 volts full scale across four programmable gain selections, making it possible to measure a wide range of signals simultaneously. The PGH model supports gains of 1, 2, 4, and 8 while the PGL model supports gains of 1, 10, 100, and 1000. Sample at speeds up to 900 samples per second with high measurement resolution. The DI-700 also offers eight programmable digital input lines and eight programmable digital output lines. The USB interface provides the ultimate plug-and-play connection. It provides power for the DI-700 and allows you to connect/disconnect the DI-700 at will without rebooting the computer.

Features

Data Acquisition To Go
Complete portability in a small (4 × 5 × 1.52 inches), lightweight, self-contained package with built-in signal connectors. Use the DI-700 with desktop, transportable, notebook, or laptop computers.

Wide Signal Measurement Range
Suitable for use with all types of transducers, the 16-channel single-ended, 8-channel differential DI-700 features a per channel measurement range of ±10 V over four gain ranges. This allows you to simultaneously measure a wide range of signals with ease.

Flexible Programmability
Channel-by-channel software selection of gain, and single-ended/differential operation.

High Throughput Rate
Supports sample throughput rates as great as 900 samples per second, depending upon host computer speed.

Easy to Connect & Use
Installs in seconds. Simply connect to your computer's USB port using the supplied cable. Then connect your signals to the DAS-16 compatible 37-pin "D" connector. Or use the optional DI-705 (sold separately) which provides a convenient screw terminal interface for signal connections.

Includes WINDAQ Software
Be up and running minutes out of the box with WINDAQ software. WINDAQ/Lite Recording and Playback software is included free with the purchase of every DI-700 instrument. WINDAQ/Lite Recording Software operates at a maximum throughput of 900Hz with DI-700 Series products. The maximum sustained rate that may be achieved is dependent upon the speed of the host computer and Operating System. Use WINDAQ/Lite Playback software (WINDAQ Waveform Browser) to review, measure, compare, and analyze the waveform file during or after a recording session. WINDAQ software products support up to 14 bits of measurement resolution.

Specifications

Analog Inputs

Number of channels:	16 single-ended; 8 differential
Measurement range:	±10V Full Scale
Input Impedance:	1MΩ
CMRR Input to common:	60db min, 1kΩ unbalance @ 60 Hz
Sample Rate:	900 samples/second max*
ADC Resolution:	14-bit (1 part in 16,000)

Gain (software selectable per channel)

PGL:	1, 10, 100, 1000
PGH:	1, 2, 4, 8
System inaccuracy:	±0.25% of FSR

Minimum Computer Requirements

Any Intel or compatible computer with a USB interface and running Windows 98, ME, 2000, or XP. Note that neither Windows 95 nor NT support USB, even though the host PC may provide USB hardware support.

Digital I/O

Capacity:	8 inputs, 8 outputs
Compatibility:	TTL-compatible
High level:	3.5 volts min
Low level:	0.8 volts max

Power Requirements

Derived from USB port–no external power required.

Physical

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Dimensions:	4"W × 5"L × 1.52"H
Operating Temperature range:	0 to 50˚C
Storage temperature range:	-25 to 70˚C
Humidity:	0-90% non-condensing

*488 samples/second under Windows XP

Record analog channel data using WINDAQ's continuous recording capability. WINDAQ automatically time- and date-stamps, then streams acquired data and your commented event markers to disk—acquire as much data as you need. At the same time, WINDAQ reveals on your monitor a real time graphical display of any or all channels, so you can easily chart your progress, identify critical events, and plan your next action. No other product gives you WINDAQ'S power, speed, and flexibility.
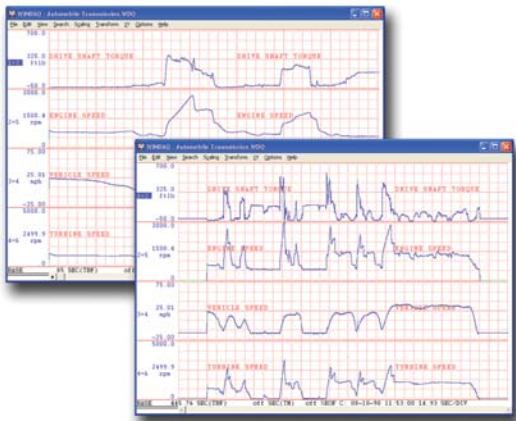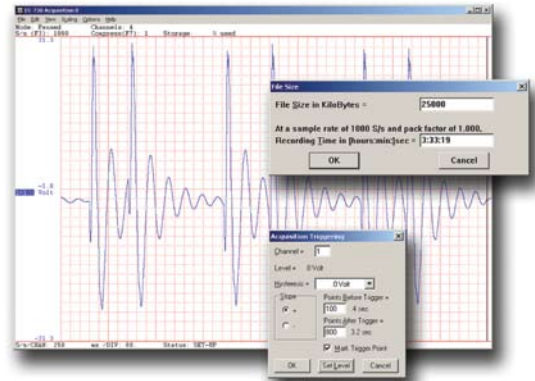
Use the WINDAQ Waveform Browser to review, compare, qualify, and export recorded waveform data in ways you've never seen on a PC. Compress an entire session's recording to one screen width, then expand around an area of interest for a closer look. Use cursors to precisely measure amplitudes and timing. Move to any event marker in the file with the click of a mouse button. Then access WINDAQ's wealth of analysis tools to immediately gain further insight. And you can do it all immediately, without the burden of programming.

DI-700 Block Diagram

Ordering Guide
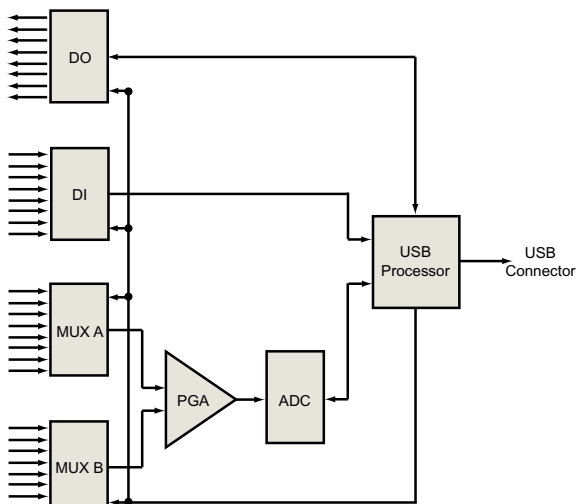
Description	Order No.
DI-700-PGH OBSOLETE. Model DI-710 Series has replaced the DI-700 Series.	DI-700-PGH
DI-700-PGL OBSOLETE. Model DI-710 Series has replaced the DI-700 Series.	DI-700-PGL

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