DI-148U Starter Kit

Low Cost, Compact Data Acquisition Kit

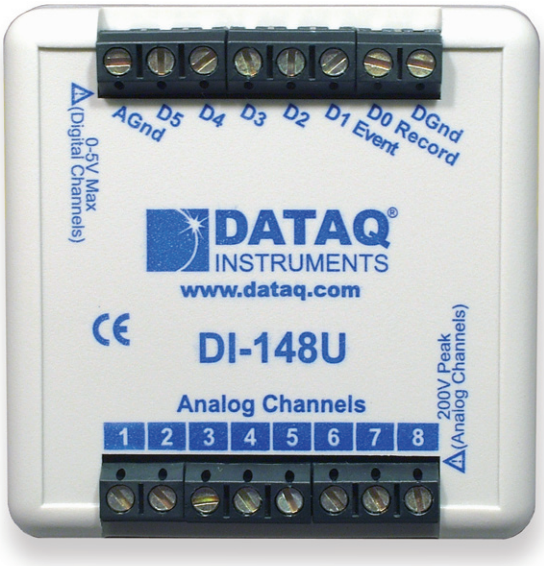
Convenient USB Interface

8 ±10V Analog Single-Ended Inputs

Six Bidirectional TTL Ports for General Purpose Control

10 Bit Resolution

Up to 14,400 Hz Sample Rate



The DI-148U breaks new ground in price and performance, offering advanced features usually reserved for more expensive instruments. They include, but are not limited to, a channel scan list, high sample rate throughput, and an advanced computer interface. These features combine to produce a robust instrument that can be applied to nearly any data acquisition situation where pre amplified signals need to be acquired to a PC.

This extremely inexpensive instrument offers eight single-ended analog input channels (each with a fixed ±10 volt full scale range), analog-to-digital conversion resolution of 10 bits (allowing a minimum voltage sensitivity of ±19.5 mV), six bidirectional TTL ports that may be used for general purpose control, and a maximum sample throughput rate of up to 14,400 Hz. No other instrument offers so much for so little.

Features

Easy to Connect and Use

Connect the DI-148U to any local laptop or desktop PC. Power is derived from the PC through the USB interface so no external power is required. Two, built-in, 8 position screw terminal connectors allow easy and secure access to all signal I/O connections without the need for extra options.

Wide Sample Throughput Range

Throughput ranges from sub-Hertz to over 14,400 Hertz allow the DI-148U to connect to a wide range of both static and dynamic signals.

Compact

Small size—66D × 66W × 28H mm (2.6D × 2.6W × 1.1H inches)—allows the DI-148 to fit comfortably in crowded instrumentation cabinets, desktops, and other tight locations.

Self Powered Advantage

All DI-148 instruments derive their power directly from the host PC eliminating the need for an external power adaptor and connections—perfect for use in automotive and other portable environments where power is unavailable.

Built-In, Bidirectional Port

A built-in bidirectional port allows programmable discrete inputs and outputs for control.

Free Data Acquisition Software

Our WINDAQ/Lite data acquisition software offers real time display and disk streaming for the Windows environment. Their real time display can operate in a smooth scroll or triggered sweep mode of operation, and can be scaled into any unit of measure. Event markers with comments allow you to annotate your data acquisition session with descriptive information as you're recording to disk.

Raise your productivity to new heights with WINDAQ's unique multitasking feature. Record waveform data to disk in the background while running any combination of programs in the foreground — even WINDAQ Playback software to review and analyze the waveform data as it's being stored!

WINDAQ/Lite recording and playback software is provided free with every DI-148U purchase. WINDAQ/Lite recording software is limited to 240 Hz sample rate when recording to disk. The extra cost WINDAQ High Speed option allows you to record at rates up to the speed of the instrument.

Specifications

Analog Inputs

Number of Channels:	8
Channel Configuration:	Single-Ended
Measurement range:	±10V
Accuracy:	0.25% of FSR
Resolution:	±19.5mV
Input Impedance:	200KΩ
Input bias current:	50µA for a 10V input, single channel
Max. normal mode voltage:	20 Volts peak to peak
Channel-to-channel crosstalk rejection:	-60db
Gain temperature coefficient:	100ppm/°C
Offset temperature coefficient:	.5µV/°C
Digital filtering:	Over-sampling, average

A/D Characteristics

Type:	Successive approximation
Resolution:	10-bit
Monotonicity:	±2LSB
Conversion Time:	70µs

Scanning Characteristics

Max. throughput sample rate:	14,400
Min. throughput sample rate:	0.0137334 Hz
Timing accuracy:	100 ppm of sample rate
Max. scan list size:	10 entries
Sample buffer size:	2kb

Digital I/O

Channels:	6 bi-directional ports
Output voltage levels:	Min. "1" 3V @ 2.5mA sourcing Max. "0" 0.4V @ 2.5mA sinking
Output current:	Max. source, -2.5 mA Max. sink, 2.5mA
Input voltage levels:	Min. required "1" 2V Max allowed "0" 0.8V

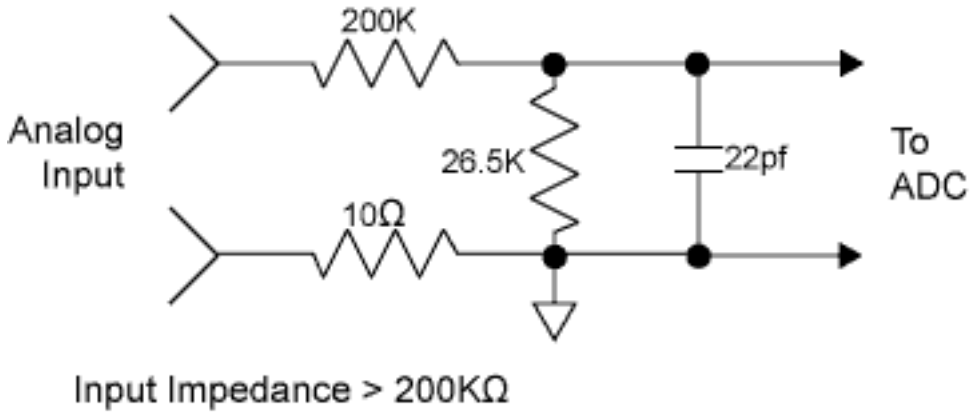
Calibration

Calibration cycle:	Verify yearly in the field
Calibration method:	Digital calibration with scale and offset constant.

General

Input connectors:	Two eight position terminal blocks
Operating Environment:	0°C to 70°C
Enclosure:	Molded ABS plastic.
Dimensions:	2.6L × 2.6W × 1.1D inches 66W × 66W × 28D mm.
Weight:	3 oz. (85 gr.)
Power Requirements:	80mA max. @ 5 VDC. No external power required. Power derived from communications cable.

DI-148 Analog Inputs (Typical)



DATAQ® INSTRUMENTS

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Ordering Guide

Description	Order Number
DI-148U Starter Kit 8-channel data acquisition module with USB Interface.	DI-148U

Data Acquisition Product Links

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Data Acquisition | Data Logger | Chart Recorder