

Supports All DI-Series Data Acquisition Hardware

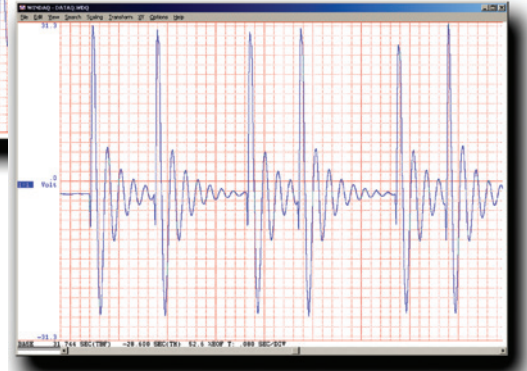
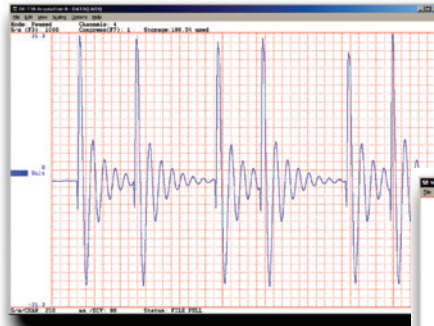
Disk Streaming and Real Time Display At the Hardware Rate

Check Hardware Page For Supported Sampling Rates

Built-in Export-to-Excel Function

Cursor-based Waveform Analytical Tools

Ready-to-run, No programming User Interface



WINDAQ Acquisition Software (above) and WINDAQ Waveform Browser (right) Included with every hardware purchase.

WINDAQ software is included with all DI-Series data acquisition hardware products, and consists of two applications: Recording and Playback software. Both applications supply a feature-rich environment along with a no-programming, point-and-click user interface.

WINDAQ Recording Software offers a real-time recording environment consisting of a zero-delay, real-time display with simultaneous data recording to disk. Up to 32 channels can be displayed at once, and each can be scaled into meaningful engineering units. You can 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 data as it's being stored! Acquisition speeds and some features vary with data acquisition hardware, so refer to the hardware page for details.

WINDAQ Playback Software offers an easy way to review and analyze waveform data acquired by WINDAQ Recording software. Playback's disk streaming design allows data files of any length to be plotted on your computer's display with lightning speed. Waveform panning and compression controls allow you to quickly review and interpret recorded data. Seven standard cursor-based measurements, frequency domain (FFT/DFT), X-Y, and statistical analysis functions help simplify waveform analysis and interpretation. An special export facility allows instantaneous porting of WinDacq data into an Excel spreadsheet.

Features

Exclusive Heads-Up Display

From 1 to 32 channels. Smooth scrolling or triggered sweep with level, slope, and source selections. Zero plot delay for true real time performance. Works to the full sample rate of connected DI-series. Control plot speed independently of sample rate.

Multitasking Operation

WINDAQ fully leverages Windows' multitasking capabilities to provide fully automatic foreground/background operation—even while recording data to disk!

Built-In Data File Translator

Exports and imports data files in a variety of data acquisition, spreadsheet, and analysis software formats. Also translates files stored in a variety of foreign formats, including DADiSP, TDM, and ASCII.

Includes Frequency Analysis, Digital Filtering, X-Y Plotting, and Statistical Analysis

Calculates up to an 8,191 point DFT or 16,384-point FFT with 4 pre-programmed windows and on-screen power spectrum graphics. Allows you to graphically edit power spectrum for high-pass, low-pass, band-pass, and notch filters. Allows you to examine the relationship of one channel to another (X-Y) allowing X-Y excursions, instantaneous rate-of-change, 2-point and linear regression rate of change, and area bounded by curve. Reports more than 10 statistical variables over any waveform length with export capabilities.

Easy Excel Export

WINDAQ Playback software has a built-in tool that easily and quickly exports selected data to an Excel spreadsheet. Data appears instantly in your spreadsheet in calibrated engineering units and without the use of intermediate data files.

Time- and Date-Stamp

Every data point acquired by WINDAQ Recording software is time- and date-stamped so you can easily correlate process events with recorded data.

Intelligent Oversampling Feature

WINDAQ Recording software allows you to sample at high rates, and display and record at lower rates as a calculated average, minimum, maximum, frequency, or rms value per channel.

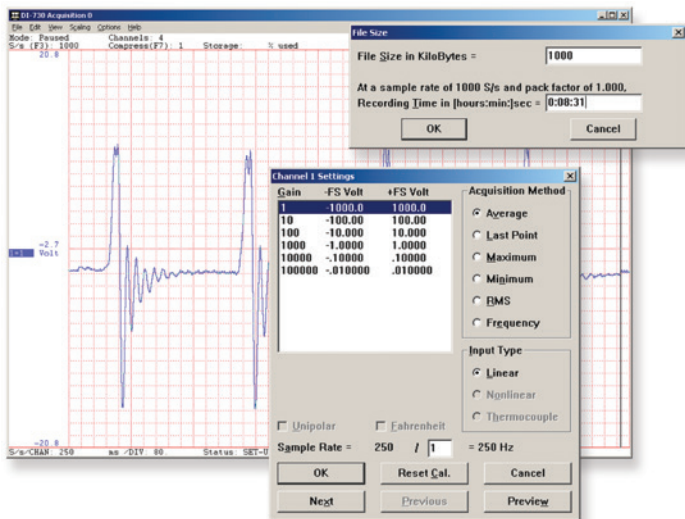
Supports All DI-Series Data Acquisition Hardware

WINDAQ software is included with all DATAQ Instruments model DI-Series data acquisition hardware. WinDacq Recording software can operate at the full hardware sampling rate, and some features are data acquisition hardware-dependent. Please refer to DI-Series hardware product pages for details.

WINDAQ Recording Software

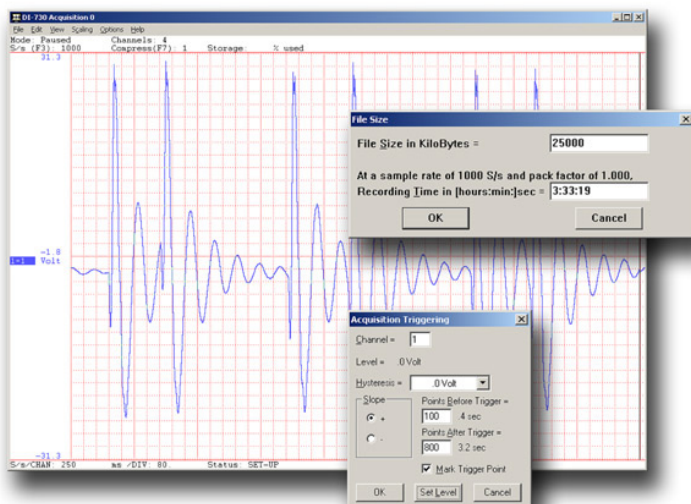
Setup

Double-click and enter the channels you want to acquire into the WINDAQ scan list. Click to select gain, signal averaging, true RMS, frequency, and peak or valley detection per channel. Click to define a single to 32-channel display — either triggered sweep (oscilloscope-like) or scrolling (chart recorder-like). Click again to define a sample rate that spans the entire supported range of DI-Series data acquisition hardware.



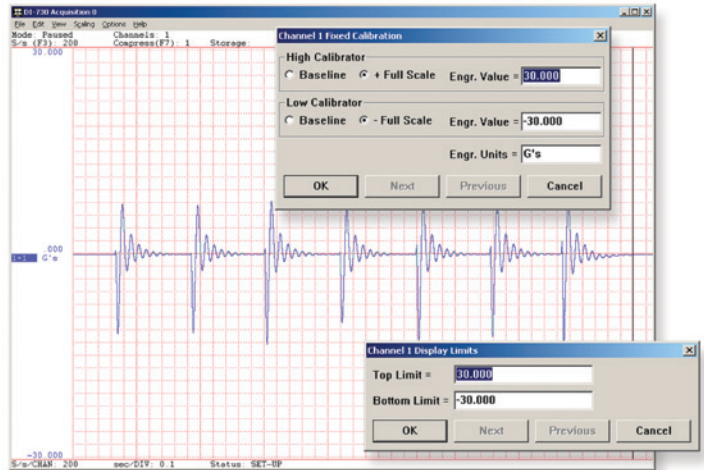
Record

Choose a continuous waveform recording mode or the triggered mode with selectable trigger level, slope, and pre- and post-trigger times. WINDAQ automatically time- and date-stamps, then streams acquired data to disk — record as much data as you need. At the same time, WINDAQ supplies a real-time graphical display of any or all channels so you always know where you are and where you're going.



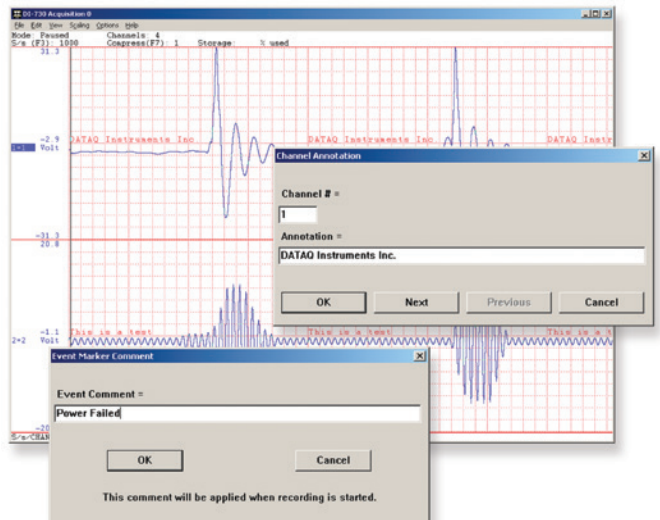
Calibrate

Define calibration per channel to display waveform values in meaningful units such as psi, °F or °C, amps, rpm, watts, horsepower — any unit of measure you need.



Annotate

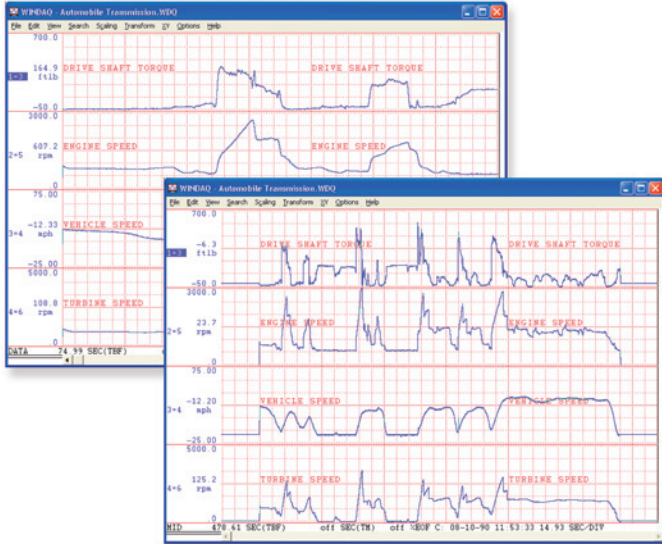
Of course, you can label any channel with text that describes it — "Motor 1," "Engine speed," "Vertical position," etc. But WINDAQ also allows you to supply commented event markers while you record — "Beginning test phase 1," "Small vibrations noticed," "Starting cool-down cycle," etc. Your comments and our acquired data combine to form a complete diary of your data acquisition session.



WINDAQ Playback Software

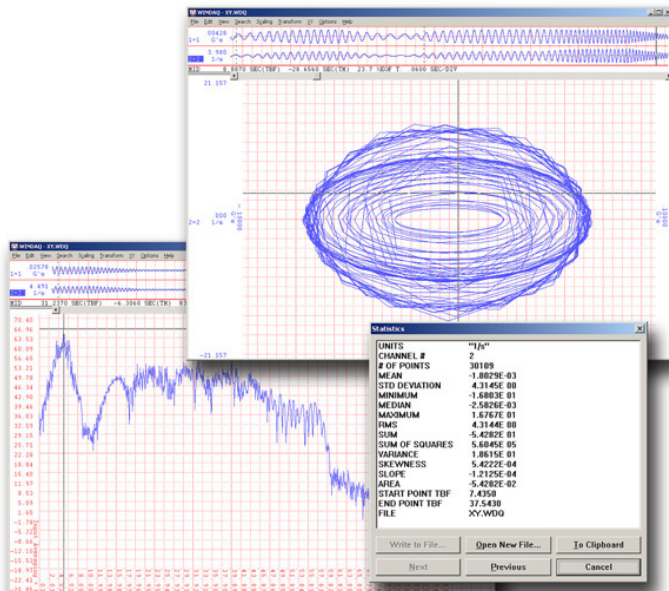
Playback

Recording is only half the solution. WINDAQ's Waveform Browser playback software allows you to graphically manipulate waveforms in ways you've never seen on a PC. Compress an entire recording to one screen-width for a bird's eye view, then expand around an area of interest for a closer look. Use the cursor to measure amplitudes and timing with precision. Move to any event marker with the click of a mouse button.



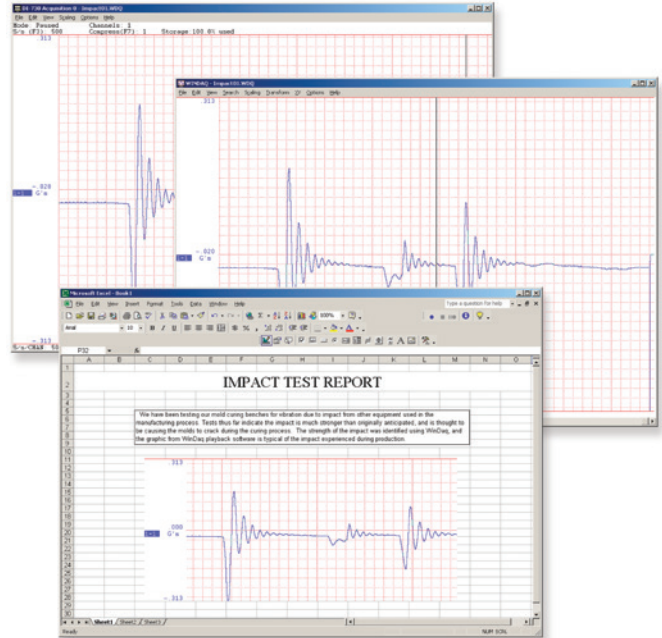
Analyze

Waveform interpretation is easy with our built-in analysis functions. Apply frequency and filtering analysis with the WINDAQ Waveform Browser FFT and DFT functions. Analyze any range of waveform data with the statistics function. Use X-Y plotting to examine the relationship of one channel to another. Extended analysis functions allow waveform peak detection, integration, differentiation, arithmetic operations, and more.



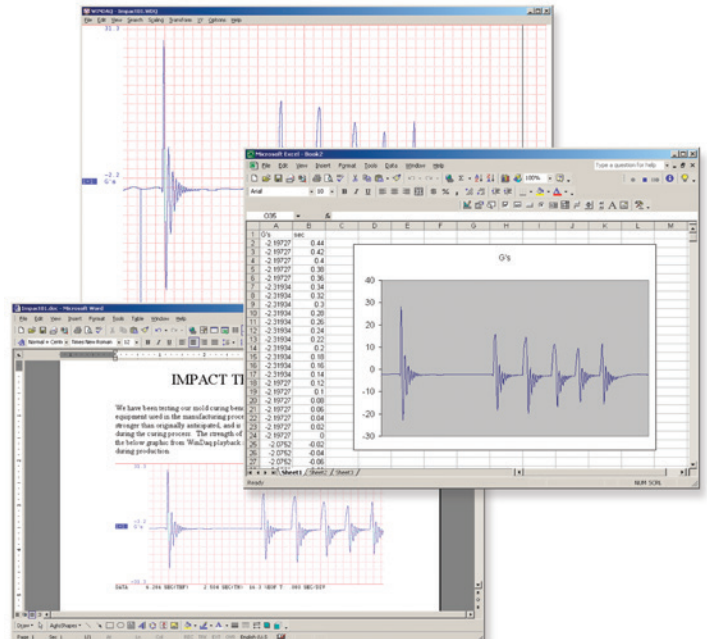
Multitask

Double your productivity and let WINDAQ record while you review last week's results from your spreadsheet, or compose a memo with your word processor. You can even play back data already stored to disk while you're still recording.



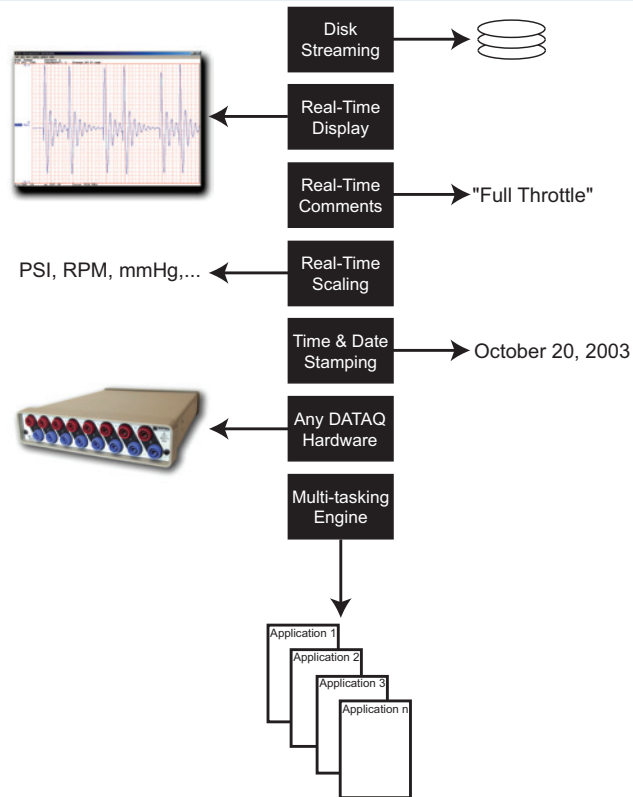
Export

The WINDAQ Waveform Browser can export any range of data to your spreadsheet, or any other analysis or presentation package you use. You can even copy a graphical image displayed by the WINDAQ Waveform Browser and paste it directly into a word processing document. Finally, export any range of waveform graphics to your printer for a hard copy record.

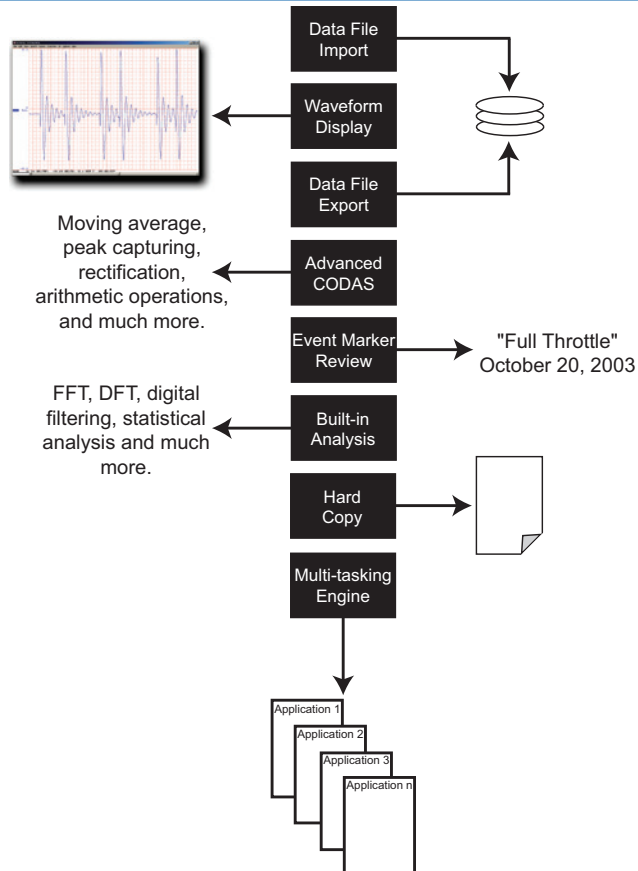


Block Diagrams

WINDAQ Acquisition Software



WINDAQ Playback Software



Specifications

Hardware and Software Requirements	Visit http://www.dataq.com/products/windaq/windows-compatibility/	Waveform Display (Playback Software)	Number of displayed channels: 1 to 29
Help Facilities	Built-in context-sensitive CHM help facility with multimedia enhancements.		Number of supported channels: 240
Disk and Display (Recording Software)			Display formats: Overlapping and non-overlapping
Maximum continuous throughput to disk:	DI-Series data acquisition hardware dependent. Please refer to hardware page for supported rates and features.		Compression: Allows compressed view of displayed waveforms with compression factors of 1 (no compression) to whatever factor is required to compress the waveform to one screen-width.
Maximum continuous real-time display throughput:	DI-Series data acquisition hardware dependent. Please refer to hardware page for supported rates and features.		Display Modes: Y vs. t; frequency vs. amplitude.
Waveform Display Modes:	Continuous smooth-scrolling; freeze; triggered and non-triggered sweep. Dot-joined at all sample rates.		Event Marker Display: Displays event marker number, time and date of activation, and supplied comment in special display window (applies only to waveforms recorded with WINDAQ).
Display Trigger Conditions:	Selectable \pm slope, level, and source.	Waveform Measurement (Playback Software)	
Waveform Compression:	Allows display rate to vary independently of sample rate. Compression factors of 1 (no compression) to 9,000.	Single-point cursor-oriented measurements (Y vs. t):	Amplitude measurements per channel in calibrated units; elapsed time; time and date at cursor (applies only to waveforms recorded with WINDAQ).
Number of displayed channels:	1 to 32	Dual-point cursor-oriented measurements (Y vs. t):	Time measurements on the same or across different channels; D%; Y-value difference; two-point slope (d/dt); number of samples; Hz; cycles per minute.
Number of acquired channels:	1 to 240	Cursor-Oriented measurements (freq vs. amplitude):	Frequency vs. db; Frequency vs. magnitude (in engineering units).
Display formats:	Overlapping (2 channel max) and non-overlapping.	Waveform Analysis (Playback Software)	
Maximum Data File Size:	4GB	Statistical Calculations:	Min; max; standard deviation; mean; median; sum; sum-of-squares; skewness; rms; least squares differential; area bounded by curve.
Waveform Display Scaling (Acquisition Software)		Statistical calculation range:	Unlimited.
Screen scaling:	Waveform expansion, contraction, and offset per channel.	Fourier transform calculation ranges:	32 to 16,384 points (FFT) 2 to 8,191 points (DFT)
Engineering Units Conversion:	Scale and offset applied to each channel as $y=mx+b$.	Selectable FFT windows:	\sin^2 ; Hamming; Bartlett; Blackman.
Software selection of:	Amplifier gain and input configuration (for hardware products supporting programmable gain).	Inverse Fourier Transform Range:	2 to 16,384 points. Time domain waveforms are inserted into display windows as calculated channels.
Grid Scaling:	Allows each displayed channel to be scaled between user-defined limits.	X-Y plotting calculations:	Area bounded by curve; instantaneous rate of change; 2-point rate of change; regression rate of change; max X and Y excursions; time measurements on the same or across channels; amplitude measurements per channel in calibrated units; elapsed time; time and date at cursor.
Hard Copy (Acquisition Software)	Supports print screen hard copy in the background regardless of disk streaming activity.	File Management (Playback Software)	
Event Marker and Time and Date Stamp (Acquisition Software)		Maximum data file size:	Unlimited.
Event Marker Operating Modes:	Asynchronous manual or remote activation with or without comments.	Supported data file export translators:	WINDAQ (CODAS) format to any spreadsheet (CSV), DADiSP, general purpose binary, and ASCII.
Maximum number of commented event markers per file:	8,184	Supported data file import translators:	Any spreadsheet (CSV), DADiSP, CODAS, ASCII, and binary integer/real to WINDAQ (CODAS) format.
Time and Data Stamping:	Automatic for acquired data and event markers.	Data file translator range:	Unlimited.
Programmability (Acquisition Software)		Data file format:	16-bit binary with data file header and trailer.
Hardware-dependent software selection of:	Amplifier gain, unipolar or bipolar, single-ended, differential, or thermocouple per channel.	Waveform Hard Copy (Playback Software)	
Data Storage Format (Acquisition Software)	16-bit, 2's complement binary data with header and trailer information.	Type:	Print screens and continuous form.
Toolbox (Acquisition Software)	Provides a toolbox of icons used to make setup fast and virtually effortless and to otherwise customize a recording session.	Continuous form hard copy:	Generates an unlimited length of continuous hard copy of any combination of channels.
Waveform Search Feature (Playback Software)	Allows you to immediately go to a specific part of the data file based on range or date and time. Specify a range of data for the search and immediately jump to the next or previous data point occurring inside or outside the range. Specify a time and/or date and immediately jump to that position in the file.	Supported printers:	Any supported by Windows.
Analog Waveform Playback (Playback Software)	Allows you to output previously recorded data in analog form to a speaker, LED, chart recorder, etc. for all hardware products supporting a printer port interface.	Supported printer resolution:	Printer-dependent.



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Submit a Support Ticket at: www.dataq.com/ticket/

Data Acquisition Product Links

(click on text to jump to page)

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