

The DAQ432 is a complete 32-channel multiplexed signal conditioning system with a 16-bit resolution ADC and 10BaseT Ethernet connectivity to a PC or laptop for setup, data display and processing.

The ultra-compact fully enclosed chassis weighs just 1.09kg (2.4lbs), making it suitable for in-vehicle applications.

FREE VersaDAQ
Demo Software

APPLICATIONS

In-vehicle testing
Automotive testing
Aircraft engine testing
Motorcycle/ATV testing
Boat/Marine engine testing
Temperature measurement
Pressure measurement
4-20 mA control loop monitoring
General analog monitoring

DAQ432

32-Channel Signal Conditioning System with 16-Bit ADC



The DAQ432 provides complete data acquisition in an ultra-compact chassis

FEATURES

- 32 Differential input analog channels with signal conditioning
- 2 Additional frequency measurement channels
- 10BaseT Ethernet connectivity to your PC or laptop for setup, data display and processing
- Wireless Ethernet available
- 16-bit analog-to-digital converter resolution
- Programmable gain from 1 to 128, on an individual channel basis, supports a wide variety of signals
- Programmable number of active channels
- Aggregate sampling rate of up to 4k samples/second
- Simple user interface allows for quick setup of data collection and storage
- Local data storage via CompactFlash™ module
- Auto-configuration on power-up for stand-alone applications
- External trigger input is provided

GENERAL DESCRIPTION

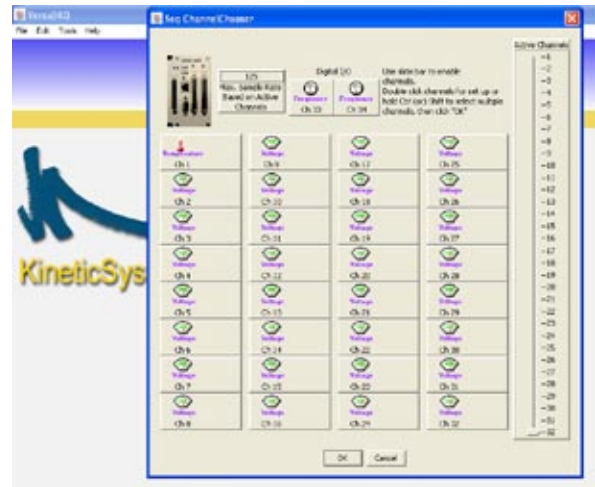
The DAQ432 is a complete 32-channel multiplexed signal conditioning system with a 16-bit resolution ADC and 10BaseT Ethernet connectivity to a PC or laptop for setup, data display and processing. The ultra-compact fully enclosed chassis weighs just 1.09kg (2.4lbs), making it suitable for in-vehicle applications. The DAQ432 chassis can be powered from DC voltage sources ranging from 10-18 volts. Power consumption is 8 watts. Local data storage is available via a CompactFlash™ module. Auto configuration on power-up provides stand-alone capability and along with the simple user interface makes data collection and storage a quick and easy process.

Signal conditioning consists of 32 multiplexed differential input analog channels with 100 Hz low-pass filters and eight software programmable gain choices from 1 to 128, in a binary progression. Gain is programmable on an individual channel basis, allowing one DAQ432 to measure a wide variety of signal input types (such as thermocouples, high-level inputs, etc.).

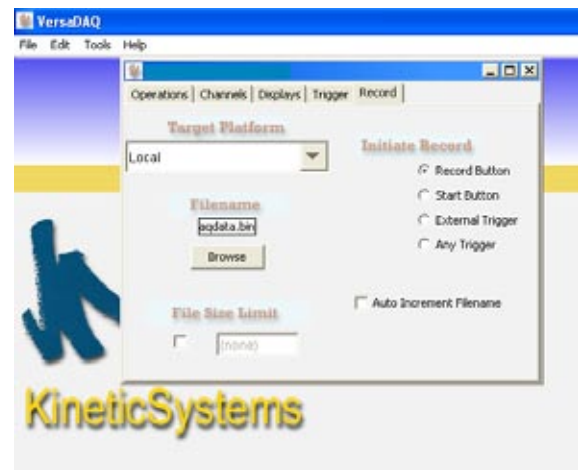
Two channels of frequency measurement are provided. One of these channels can be configured as an external trigger input.

Signal conditioning channels are connected via a 68-position high density SCSI connector or through an available DAQ750 Termination Assembly. Frequency measurement channels are connected via a 15-contact "D" connector.

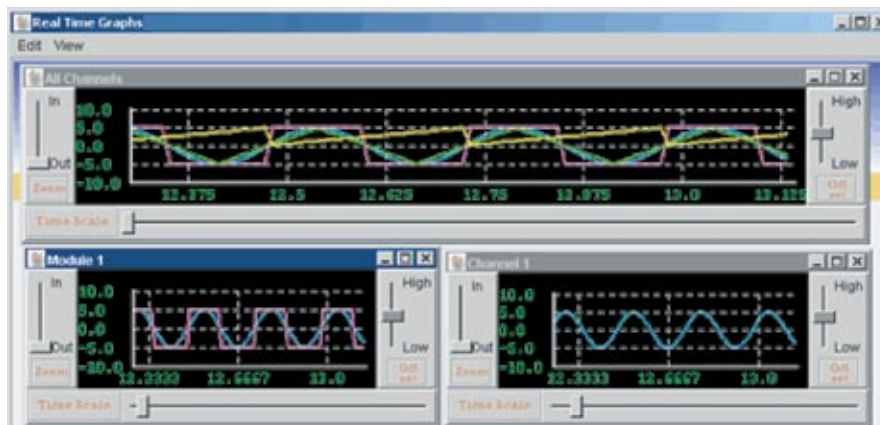
VersaDAQ software manages and controls DAQ432 operations including setup, data acquisition, and data recording. VersaDAQ runs on a PC/laptop and connects to a DAQ432 chassis via the 10BaseT Ethernet connection. VersaDAQ's simple but powerful user interface configures channels, sample rate, record mode, calibration, and all other DAQ432 functionality with a few mouse clicks and pull-down menus.



Configuring DAQ432 Series Channels



Configuring Data Record Parameters



Monitoring Live Data Real-time Graphs

Items	Specifications																																				
Number of channels	32 channels (31 differential analog input channels, with channel 1 configured as an isothermal reference for thermo-couple measurements) 2 frequency measurement channels																																				
Analog Inputs Input range Common mode: Differential: Input protection Input impedance	±10.5 V standard ±10 ±25 V continuous 22 MΩ																																				
Frequency measurement Inputs Frequency range: External Trigger:	2 single-ended TTL-level inputs that can be used as counters. Digital input 0 can also be used as an external trigger to start a scan 0.8 Hz to 50 kHz TTL-level low true pulse (1 second minimum pulse width)																																				
Gain range (software programmable on an individual channel basis)	1, 2, 4, 8, 16, 32, 64, 128																																				
Filters	Fixed single-pole RC, 100Hz cutoff (consult factory for other filter options)																																				
Maximum Sampling Rate	4 kHz																																				
Sampling Rate Range	0.0625 Hz to 4 kHz																																				
Resolution	16-bit, no missing codes																																				
Accuracy	<table border="1"> <thead> <tr> <th data-bbox="456 913 511 934">Gain</th> <th data-bbox="565 913 651 934">Full-Scale</th> <th data-bbox="824 940 932 961">Range (FSR)</th> <th data-bbox="1036 940 1187 961">Accuracy (%FSR)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>±10.000 V</td> <td>0.020%</td> </tr> <tr> <td>2</td> <td></td> <td>±5.000 V</td> <td>0.020%</td> </tr> <tr> <td>4</td> <td></td> <td>±2.500 V</td> <td>0.030%</td> </tr> <tr> <td>8</td> <td></td> <td>±1.250 V</td> <td>0.030%</td> </tr> <tr> <td>16</td> <td></td> <td>±625.000 mV</td> <td>0.040%</td> </tr> <tr> <td>32</td> <td></td> <td>±312.500 mV</td> <td>0.040%</td> </tr> <tr> <td>64</td> <td></td> <td>±156.250 mV</td> <td>0.050%</td> </tr> <tr> <td>128</td> <td></td> <td>±78.125 mV</td> <td>0.065%</td> </tr> </tbody> </table>	Gain	Full-Scale	Range (FSR)	Accuracy (%FSR)	1		±10.000 V	0.020%	2		±5.000 V	0.020%	4		±2.500 V	0.030%	8		±1.250 V	0.030%	16		±625.000 mV	0.040%	32		±312.500 mV	0.040%	64		±156.250 mV	0.050%	128		±78.125 mV	0.065%
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Noise (@ gain of 128)	9 μV rms																																				
Crosstalk	0.009% of OFF channel signal																																				
I/O Connector Type	1- 68P SCSI High Density and 1 15-contact D subminiature																																				
DC Power Requirements	10-18VDC (12VDC nominal), 8 watts																																				
Chassis Dimensions	57.5mm (2.26") high, 112mm (4.41") wide, 220mm (8.66") deep																																				
Weight	1.09kg (2.4lbs)																																				

RELATED PRODUCTS

Model DAQ750-432

Isothermal Termination Assembly for the DAQ432

Model 5868-Bxyz

68-Position High Density SCSI to unterminated Cable

Model DAQ500-TRIG

Push Button Cable Assembly for External Trigger



DAQ750 shown with cover removed



Specifications contained within this data sheet are subject to change without notice.

ORDERING INFORMATION

DAQ432-AA11 32-Channel Signal Conditioning Chassis
with 16-Bit ADC

Please contact the factory for detailed pricing information.

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KineticSystems Company, LLC

900 N. State St.
Lockport, IL 60441-2200

Toll-Free (US and Canada):

phone 1-800-DATA NOW
1-800-328-2669

Direct:

phone +1-815-838-0005
fax +1-815-838-4424

Email:

mkt-info@kscorp.com

To find your local sales representative
or distributor or to learn more about
KineticSystems' products visit:

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