Data Acquisition Solutions 2009

Strain | Temperature | Pressure | Voltage | Current | Frequency | Position | Digital

iOtech®

Out-of-the-Box Measurement Solutions

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Out-of-the-Box Measurement Solutions

The Smart Choice

Engineers, scientists, technicians, and students around the world choose IOtech's *Out-of-the-Box* solutions for their data acquisition requirements. Since 1984, we've been providing PC-based data acquisition products that are designed to be versatile and expandable, economical to own, and easy to use. From low-channel count, portable modules, to large distributed systems, IOtech has cost effective solutions to fit a variety of needs.

Out-of-the-Box Solutions

IOtech offers a large selection of *Out-of-the-Box* data acquisition solutions designed to measure a variety of signal types, including:
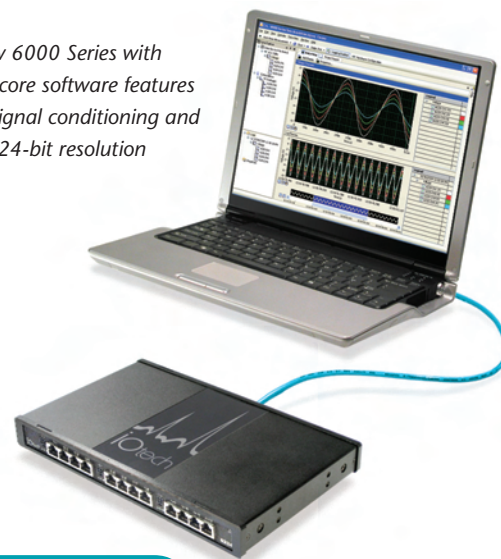
- Strain
- Temperature
- Pressure
- Voltage
- Vibration

- Current
- Frequency
- Position
- Digital

Our Ethernet, USB, and PCI-based systems, as well as our stand-alone loggers meet a wide range of applications and signal requirements.

All IOtech data acquisition solutions include *Out-of-the-Box* measurement software, as well as support for programming languages and applications including LabVIEW® and DASYLab®.
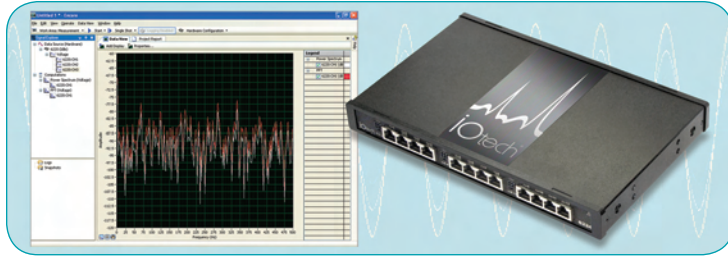
The new 6000 Series with included Encore software features integrated signal conditioning and up to 24-bit resolution

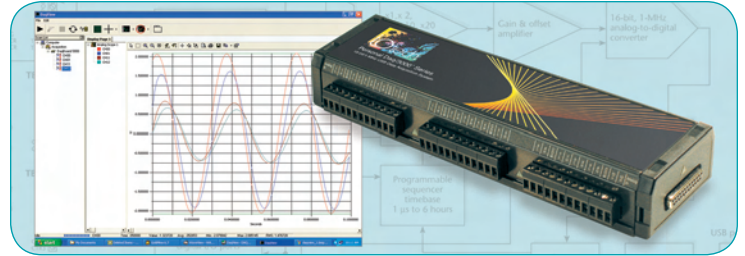**For more information visit iotech.com/sales**

Data Acquisition
Out-of-the-Box Measurement Solutions

6000 Series   `Learn More`

- Voltage and strain measurements
- 12 channels, up to 24-bit resolution
- Up to 100-kHz per channel sampling
- Ethernet interface
- Expandable using multiple 6000 Series modules
- *Out-of-the-Box* Encore software

Portable USB   `Learn More`

- Measure thermocouples or voltage
- 8 to 64 channels
- Up to 22-bit resolution
- Digital I/O and Analog Output
- OEM board only versions available
- *Out-of-the-Box* software and drivers

Stand-Alone Data Loggers   `Learn More`

- Internal memory, independent of PC
- 8 to 256 channels
- Measure strain, pressure, accelerometer, volts, tachometer, temperature, vehicle bus interface, and more
- *Out-of-the-Box* software and drivers
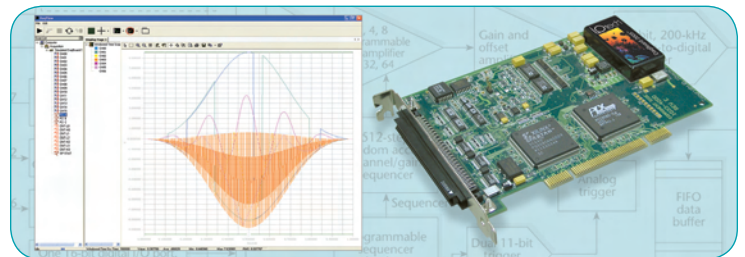
Plug-In PCI Boards   `Learn More`

- 8 to 256 channels
- 200-kHz or 1-MHz A/D
- Signal conditioning for a variety of measurement types
- Digital I/O and Analog Output
- *Out-of-the-Box* software and drivers
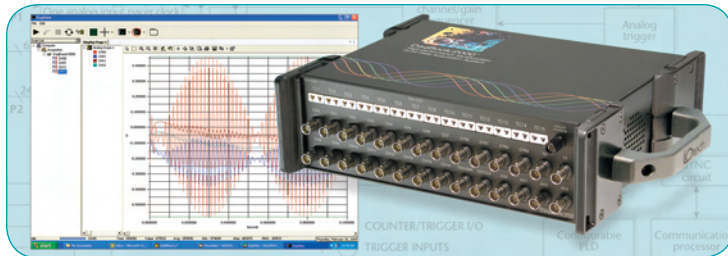
Strain Gage and Mixed Signal   `Learn More`

- Measure various sensor types
- 8 to 256 channels
- 200-kHz or 1-MHz A/D
- Ethernet interface
- Digital I/O and Analog Output
- *Out-of-the-Box* software and drivers
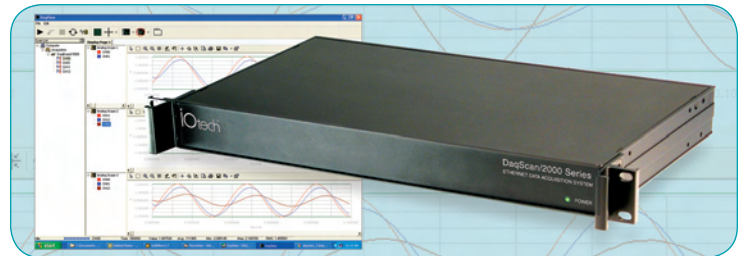
Rack and Laboratory   `Learn More`

- 19" rack mountable and benchtop DAQ
- 8 to 256 channels
- Ethernet interface
- Measure various sensor types
- Digital I/O and Analog Output
- *Out-of-the-Box* software and drivers

Data Acquisition
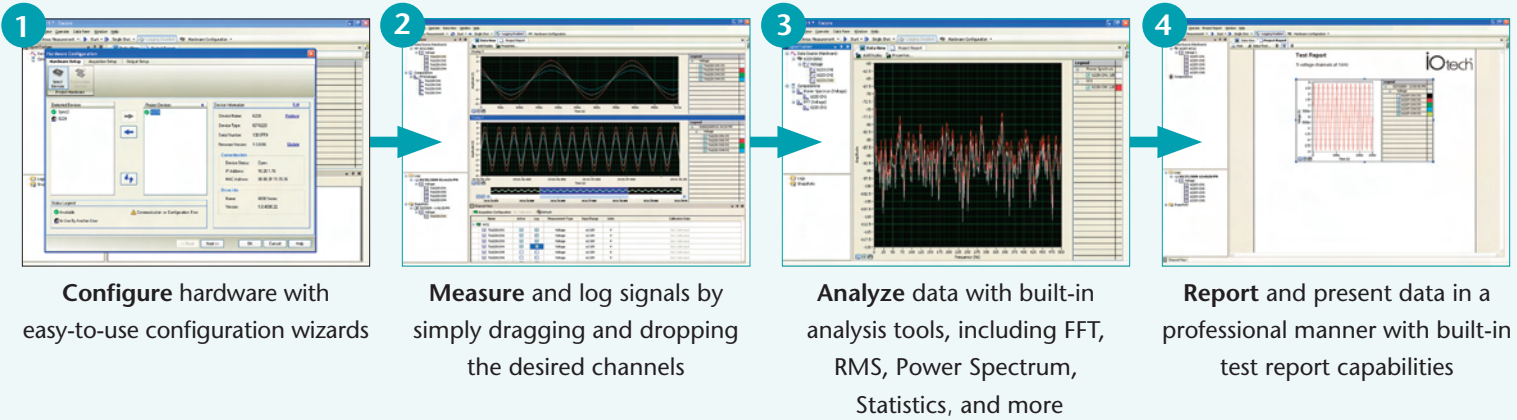## *Out-of-the-Box Measurement Solutions*

Out-of-the-Box Software – 4 Easy Steps

Out-of-the-Box software is just one of the ways IOtech helps users save time and money. Because our applications offer immediate set-up and fast time to measurement, users spend minimal time configuring their system.

IOtech's *Out-of-the-Box* software allows you to go from opening your system to taking measurements within minutes. Drivers are also provided for other applications, including Visual Studio® and Visual Studio® .NET, DASYLab®, LabVIEW®, and MATLAB®.

1

2

3

4

Configure hardware with easy-to-use configuration wizards

Measure and log signals by simply dragging and dropping the desired channels

Analyze data with built-in analysis tools, including FFT, RMS, Power Spectrum, Statistics, and more

Report and present data in a professional manner with built-in test report capabilities

For more information visit iotech.com/software

Support & Training

Your Success is Our Success. IOtech offers a worldwide network of sales and support offices. Training can be provided at your facility or ours, and each session is customized to address the specific goals and requirements of your applicaton. Applications engineers will provide a comprehensive foundation for using your IOtech system. In addition to optional on-site training, IOtech provides free technical support for the life of your product.

Countless engineers and technicians depend on IOtech *Out-of-the-Box* data acquisition solutions. Whether it's our on-site training and education, or through our range of support options, we're dedicated to supporting our customers and making sure they get the most out of their IOtech solution.

For more information visit iotech.com/training

Application Resources

Our online Resource Center provides tech tips, videos, and application notes describing real world applications solved with IOtech products. Actual customer applications include: compressor and turbine vibration testing, bridge crane testing, steam turbine rotor testing, hydroelectric generator maintenance, and many more.
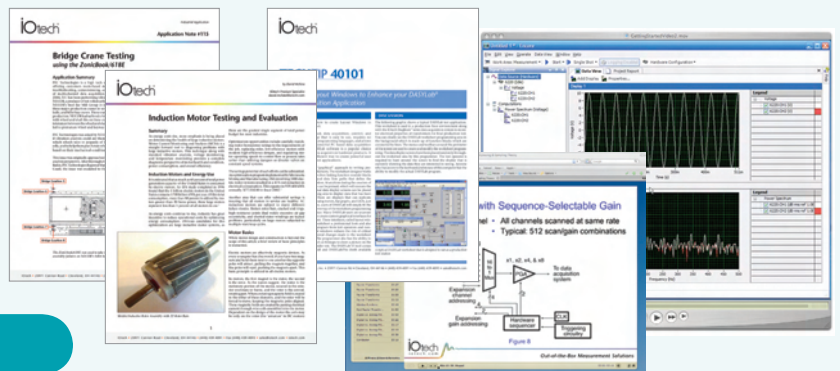
For more information visit iotech.com/resources

6000 Series
Voltage and Strain Measurement Modules

Common Solution Highlights

- Ethernet-based data acquisition modules
- 12 analog inputs
- Eight digital I/O
- Compact, modular design
- Expandable using multiple 6000 Series modules
- Supported Operating Systems: Windows 2000® SP4, Windows XP® SP2 (32-bit), Windows Vista® (x86 or x64)

Model 6220

- 12 voltage inputs
- 16-bit, 100-kHz sample rate per channel
- ±10V input range
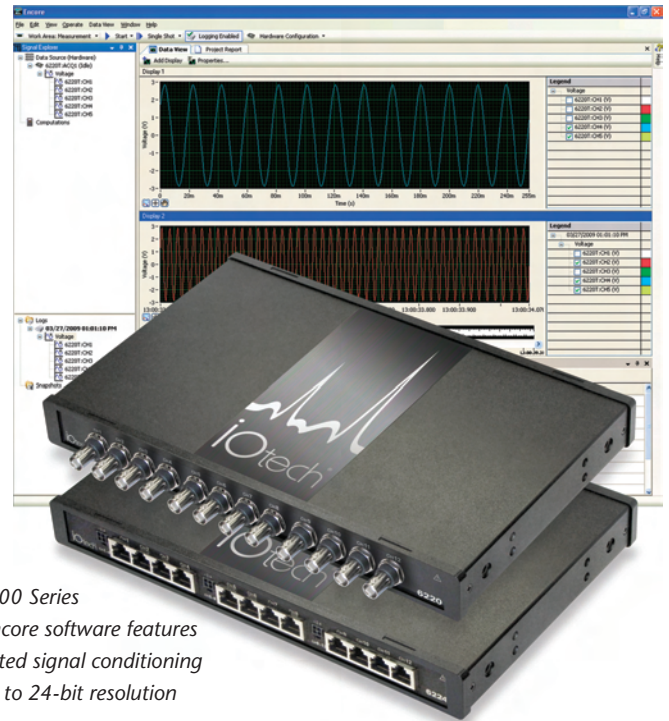- Simultaneous sampling
- BNC connectors

Model 6224

- 12 strain gage inputs
- 24-bit/Delta-sigma A/D per channel
- 50-kHz per channel sample rate
- User programmable excitation
- 100% software programmable

The 6000 Series with Encore software features integrated signal conditioning and up to 24-bit resolution

Overview

The 6000 Series with Encore software combines accurate, Ethernet-based DAQ modules with powerful, easy-to-use software. 6000 Series modules feature integrated signal conditioning and a modular design with built-in channel expansion capability.

Because the 6000 Series uses an Ethernet connection, modules can be connected directly to a PC or used in remote configurations utilizing multiple modules. Modules are offered for voltage or direct strain inputs. Included with each 6000 Series module is Encore interactive measurement software. Encore combines an intuitive user interface with robust functionality. It allows users to quickly configure hardware, develop and customize data displays, analyze data with built-in analysis tools, and provides the ability to develop comprehensive test reports.

For complete information visit iotech.com/6000series

■ **Encore.** Instead of having a program to log data, another to analyze, and a third to develop report data, *Out-of-the-Box* Encore includes the functionality of all three into one package, thus shortening the learning curve, and saving time and cost.

VIEW ▶ DEMO
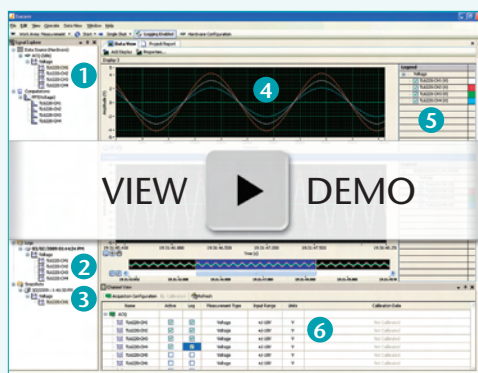
Main Features

1 **Signal Explorer** displays the data sources, computations, snapshots and logs available for your project. It also allows you to select and drag signals into the Data View.

2 **Log Window** displays a list of a project's logged data [including snapshots] sorted by the time at which you recorded the log or took the snapshot.

3 **Snapshots** allow you to save a record of the current values of any signal in your project. You can use snapshots as a reference signal to compare data within projects.

4 **Data View** tab allows you to view your data by dragging signals directly from the Signal Explorer or the Log Window. The Data View tab can display signals in several formats, including graphs, charts, and various numeric representations.

5 **Legend (Graph Legend)** lists every signal displayed in the graph and also shows its corresponding plot color.

6 **Channel View** is a table-style section which gives you an overview of all your channels and their settings. You can enable (or disable) channels, select the measurement type, enable (or disable) logging, perform mx+b calculation, and more.

WaveBook/516E
Portable High-Speed Waveform Acquisition

Solution Highlights

- 16-bit/1-MHz A/D

- 1 µs/channel scanning of any combination of channels

- Multiple analog and digital trigger modes

- Sixteen digital inputs can be scanned synchronously with analog signals

- Expandable up to 72 high-speed channels

- Multiple modules can be used on the same network

- WBK signal conditioning and channel expansion options available for measuring voltage, accelerometers, thermocouples, strain, encoders, and more

- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®
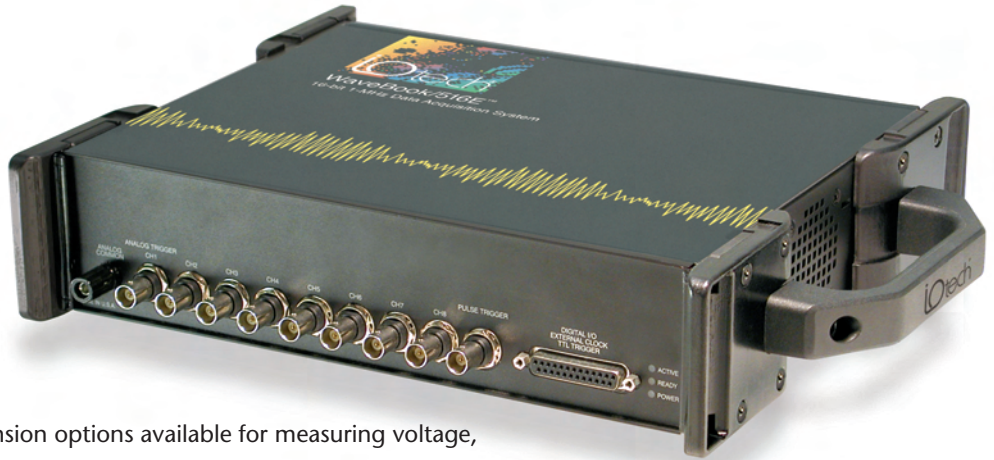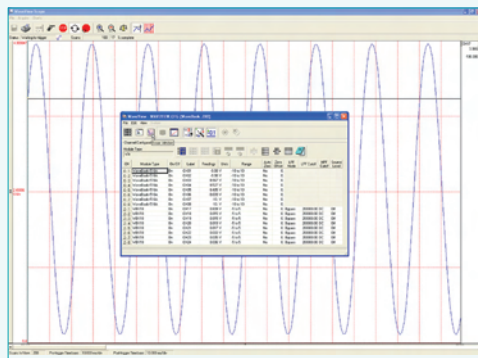
Overview

The WaveBook/516E is a high-speed (up to 1 MS/s) data acquisition product that offers multi-channel waveform acquisition and analysis for portable or laboratory applications. It transfers acquired data to the computer through a high-speed Ethernet connection, allowing a continuous stream of data to be collected by the computer.
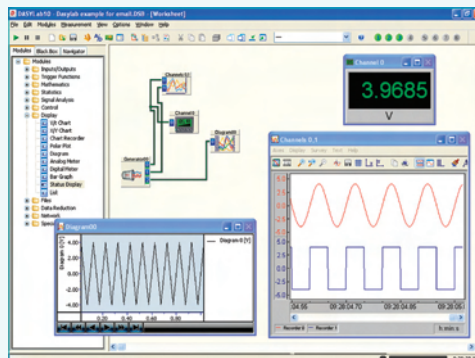
WaveBook system with 8 strain inputs and 8 accelerometer inputs

For complete information visit iotech.com/wavebook

■ **WaveView.** IOtech's graphical data acquisition and display software is included with all WaveBook systems. WaveView's spreadsheet-style interface allows you to easily set up your application and begin taking data within minutes of connecting your hardware, with no programming.

■ **DASYLab.** If your application requirements go beyond the scope of WaveView, optional DASYLab® software offers a great degree of flexibility and customization. You can learn DASYLab in a matter of days without the weeks of training required for some other software.

■ **Driver Support.** Included is a complete set of drivers and detailed example programs for popular programming languages and software packages. Driver support is included for DASYLab®, LabVIEW®, and MATLAB®*, Visual C++®, Visual C#®, Visual Basic®, and Visual Basic® .NET.

■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within WaveView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

*   No WBK support
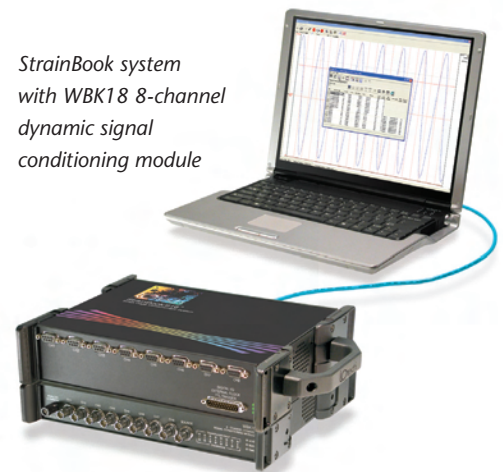
StrainBook/616
Strain Gage Measurement System

Solution Highlights

- 8-channels built-in, expandable up to 64 channels per StrainBook

- Multiple StrainBooks can be synchronized for applications >64 channels

- High-speed Ethernet interface

- 1-MHz scanning A/D converter, with simultaneous sample and hold on each channel, guaranteeing channel-to-channel match to within 100 nsec

- WBK signal conditioning and channel expansion options available for measuring voltage, accelerometers, thermocouples, strain, encoders, and more

- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

StrainBook system with WBK18 8-channel dynamic signal conditioning module
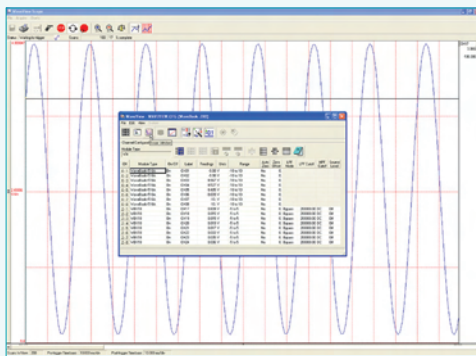
Overview

StrainBook/616 is a compact and portable strain gage measurement system that connects to your PC's Ethernet port. Eight channels of strain measurement are built into the StrainBook, and up to 64 channels can be measured with one StrainBook using 8-channel WBK16 options. For applications with more than 64 channels, multiple StrainBook systems can be combined and synchronized for a virtually limitless number of strain measurement channels.
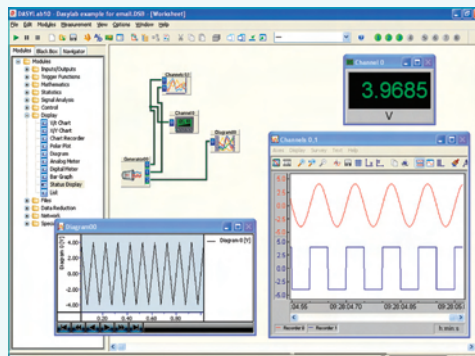
For complete information visit iotech.com/strainbook

■ **WaveView.** IOtech's graphical data acquisition and display software is included with all StrainBook systems. WaveView's spreadsheet-style interface allows you to easily set up your application and begin taking data within minutes of connecting your hardware, with no programming.

■ **DASYLab.** If your application requirements go beyond the scope of WaveView, optional DASYLab® software offers a great degree of flexibility and customization. You can learn DASYLab in a matter of days without the weeks of training required for some other software.

■ **Driver Support.** Included is a complete set of drivers and detailed example programs for popular programming languages and software packages. Driver support is included for DASYLab®, LabVIEW®, and MATLAB®*, Visual C++®, Visual C#®, Visual Basic®, and Visual Basic® .NET.

■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within WaveView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

* No WBK support

WBK Signal Conditioning Options
for WaveBook and StrainBook

WBK10A – 8-Channel Analog Expansion Module

Visit iotech.com/wbk

- Adds eight differential voltage input channels
- Accepts one WBK11A, WBK12A, or WBK13A low-pass filter and SS&H option

WBK11A – 8-Channel Simultaneous Sample and Hold Card

- Provides eight input channels with simultaneous sample and hold
- Samples all channels within 100 ns of one another
- Expands the WaveBook's gain sensitivity

WBK12A & WBK13A – 8-Channel Programmable Low-Pass Filter Cards

- WBK12A provides eight input channels with simultaneous sampling
- WBK13A samples all system channels within 100 ns of one another
- Programmable-cutoff frequencies from 400 Hz to 100 kHz

WBK15 – Multifunction Isolated Signal Conditioning Module

- Accepts any combination of up to eight 5B isolated input signal conditioning modules
- Features built-in cold junction sensing for thermocouple calibration

WBK16 – 8-Channel Strain Gage Module

- 100% programmable; no pots to adjust
- Full, half, and quarter bridge support
- Programmable excitation source
- Optional simultaneous sample and hold

WBK17 – 8-Channel 32-Bit Counter/Encoder/High-Voltage Module

- 5 counter modes: totalize, period, pulsewidth, timing, and encoder
- Multi-axis quadrature encoder inputs
- Power output for quadrature encoders (+5V @ 1000 mA and +15V @ 500 mA total)

WBK18 – 8-Channel Dynamic Signal Conditioning Module with TEDS

- Built-in IEPE biasing (4 mA), software selectable per channel
- AC or DC coupling, software selectable per channel
- Simultaneous sampling on all channels

WBK30 – Memory Option

- Allows full-speed sampling with resource-limited PCs
- Transparent operation

WBK40 – 14-Channel Thermocouple Input Module

- Adds from 14 to 224 thermocouple inputs
- Provides linearized and cold-junction compensated readings for all thermocouple types
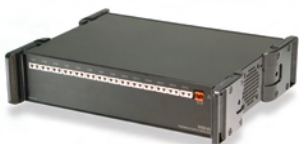
WBK41 – Multifunction I/O Module

- Provides TC inputs, digital I/O and frequency/timer I/O
- TC channels handle either thermocouples or ±100 mV inputs

WBK61 & WBK62 – High-Voltage Adapters with Probes

- Provide up to 1000V (WBK61) or 100V (WBK62) inputs for the WaveBook and WBK10A
- Ideal for 3-phase voltage measurements; includes leads and probes

LogBook Series
Stand-Alone, Intelligent Data Acquisition

Solution Highlights

- 16-bit, 100-kHz analog and digital sampling
- Compact yet expandable architecture can accommodate over 400 channels of analog, digital, and frequency I/O
- Stand-alone nonvolatile storage of over 500 million samples via removable memory card
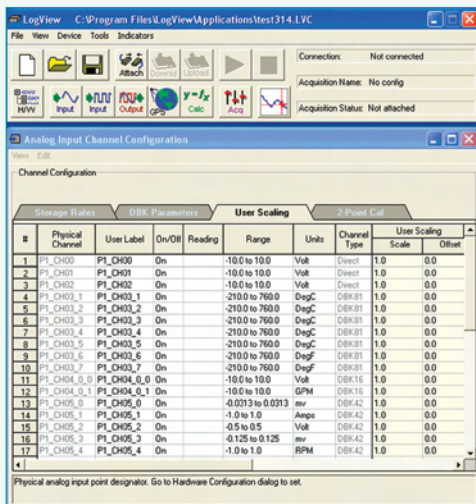- Card swapping and uploading during acquisition allows continuous data acquisition
- Built-in analog inputs support 14 programmable ranges up to 20V
- GPS support (LogBook/360 only) logs location information
- Optional control terminal provides channel inspection, and acquisition queries
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

The LogBook/360 data acquisition system includes an expansion bay for up to three signal conditioning cards

Overview

The LogBook/300 and LogBook/360 are portable data acquisition systems that can be used for remote, portable, and unattended operation. They are also operational with a PC attached. An optional Remote Operation Terminal allows control of LogBook operation without a computer. The LogBook combines on-board intelligence and a large capacity PC-Card removable memory with the industry's easiest and most powerful data logging software. Its 16-bit, 100-kHz A/D and triggering capabilities make it ideal for collecting high- and low-speed phenomena. For continuous data collection, PC-Cards can be swapped while the acquisition is taking place.

An assembled system consisting of a LogBook/360 plus a DBK84 thermocouple option, plus a DBK85 voltage option

**For complete information visit iotech.com/logbook**

LogView's analog input spreadsheet makes viewing and adjusting many channels easy

LogView. IOtech's *Out-of-the-Box* software uses a series of spreadsheets to allow simple setup and display of all channel parameters. No auxiliary dialog boxes, configurable block diagrams, or programming methodologies are employed.

All of the parameters for the analog I/O, digital I/O, counter/timers, and calculated channels can be viewed and adjusted through LogView's unique spreadsheet interface. The spreadsheets make it possible to see and adjust the parameters of many channels concurrently, unlike typical data logging software that requires channels to be set up one at a time through auxiliary dialog boxes.

PostView. IOtech's time-domain post-acquisition data viewing package is integrated and ready to use from within LogView when you install it. PostView provides easy to use basic time-domain data viewing.
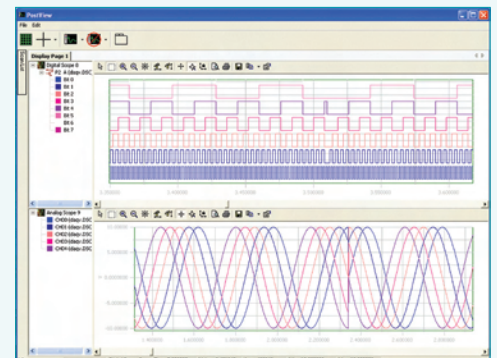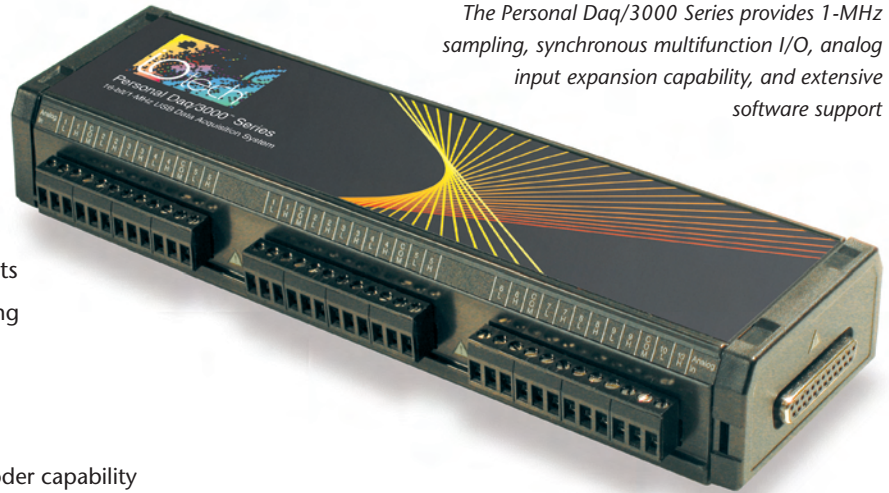
Personal Daq/3000 Series
USB 1-MHz, 16-Bit Multifunction Modules

Solution Highlights

- 1-MHz, 16-bit multifunction USB modules
- Synchronous analog input, analog output, digital I/O, and counter/timer I/O
- 8 differential or 16 single-ended analog inputs (software selectable per channel)
- Thermocouple inputs on any of the 8 differential inputs
- User-expandable up to 64SE/32DE analog inputs including thermocouple measurements
- Up to four 16-bit, 1-MHz analog outputs
- 24 high-speed digital I/O lines
- Four 32-bit counter input channels with quadrature encoder capability
- Low-latency control output capability (as low as 2 µs latency)
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

The Personal Daq/3000 Series provides 1-MHz sampling, synchronous multifunction I/O, analog input expansion capability, and extensive software support
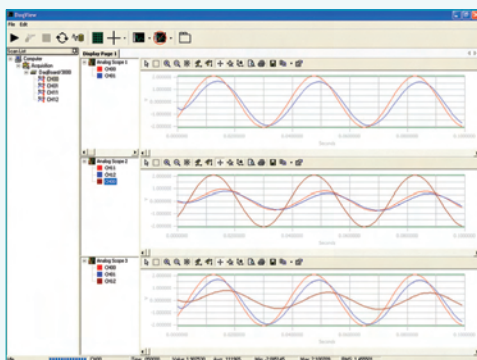
Overview

The USB Personal Daq/3000 Series offers high-speed, multifunction data acquisition in a low-cost, portable package. The modules offers synchronous and concurrent voltage input, temperature input, waveform output, counter input, quadrature encoder input, timer output, and digital I/O. For OEM or embedded applications, the same functionality is offered in a board-level product — see DaqBoard/3000USB. Everything needed to begin acquiring, viewing, and storing data is included with the Personal Daq/3000, including comprehensive software support. Unique to the Personal Daq/3000 Series is a low-latency, highly deterministic control output mode that operates independent of the PC.
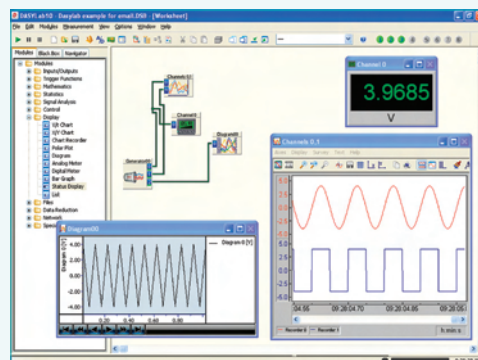
Personal Daq/3000 attached to a PDQ30 expansion module via a CA-96A cable

For complete information visit iotech.com/pdaq3000

■ **DaqView.** IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.

■ **DASYLab.** If your application requirements go beyond the scope of DaqView, optional DASYLab® software offers a great degree of flexibility and customization. You can learn DASYLab in a matter of days without the weeks of training required for some other software.

■ **Driver Support.** Included is a complete set of drivers and detailed example programs for popular programming languages and software packages. Driver support is included for Visual Basic®, C/C++, DASYLab®, LabVIEW®, and MATLAB®. DaqCOM provides Windows®-based ActiveX/COM-based programming tools for Microsoft® Visual Studio® and Visual Studio® .NET.

■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within DaqView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

Personal Daq/50 Series
USB High-Resolution Data Acquisition Modules

Solution Highlights

- High-resolution, 22-bit A/D converter, reading rates from 1 to 80 Hz
- Ultra low-power design requires no external power or batteries
- Built-in cold-junction compensation for thermocouple measurements
- Frequency/pulse, or duty-cycle measurements up to 1 MHz*
- Convenient removable screw-terminal signal connections
- 500V optical isolation from PC for safe and noise-free measurements
- Programmable inputs from ±31 mV to ±20V full scale
- Digital I/O lines with open collector output for direct drive applications*
- Expandable up to 80 channels of analog and digital I/O*
- Up to 100 Personal Daq modules can be attached to one PC using USB hubs, for a total capacity of 8,000 channels
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

*The compact Personal Daq is ideal for portable data acquisition applications*

Overview

Designed for high accuracy and resolution, the 22-bit Personal Daq/50 data acquisition systems directly measure multiple channels of voltage, thermocouples, pulse, frequency, and digital I/O*. A single cable to the PC provides high-speed communication and power to the Personal Daq. No additional batteries or power supplies are required in most applications**. The Personal Daq modules are a family of low-cost, USB-based products from IOtech.

* The Personal Daq/54 does not have frequency, digital I/O, or expansion capability
** In rare instances an external power source is required when PC-supplied power is inadequate

For complete information visit iotech.com/pdaq50

■ **Personal DaqView.** IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.
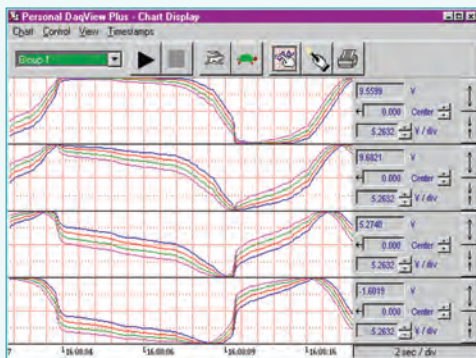
■ **DASYLab.** If your application requirements go beyond the scope of Personal DaqView, optional DASYLab® software offers a great degree of flexibility and customization. You can learn DASYLab in a matter of days without the weeks of training required for some other software.
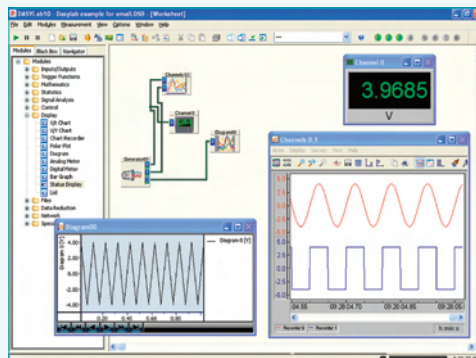
■ **Driver Support.** Included with the Personal Daq/50 Series is support for Visual Basic® and C/C++ for Windows®. In addition, drivers are available for icon-based software packages, such as DASYLab® and LabVIEW®.

■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use within seconds of acquiring data. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

PDQ Series
Expansion Modules for Personal Daq Series

PDQ30
Analog Input Expansion Module for Personal Daq/3000 Series and DaqBoard/3000 Series
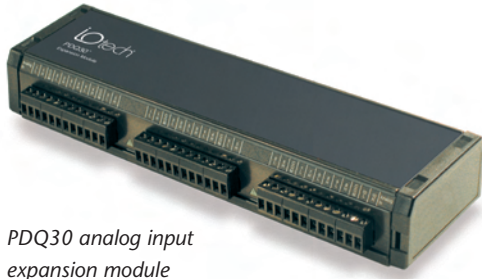
PDQ30 analog input expansion module

The PDQ30 increases total channel capacity of a DaqBoard/3000 Series or Personal Daq/3000 Series to a total of 32 differential or 64 single-ended analog inputs. The PDQ30 attaches to a DaqBoard via an optional CA-266-x cable, and to the Personal Daq/3000 either by plugging directly into the Personal Daq with included clips, or via

an optional CA-96A cable if it is necessary to have some distance between each device.

Voltage measurements via the PDQ30 have the same ranges as the host PCI DaqBoard or USB Personal Daq. When used with either host, the PDQ30 also adds thermocouple measurement capability, where the A/D operates in a programmable, over-sample/ digital filtering mode to provide low-noise and stable temperature measurements.

DaqBoard/3000 attached to a PDQ30 expansion module via a CA-266-3 cable

Personal Daq/3000 Series Selection Chart					
Product or System	Analog Inputs	Input Ranges	Digital I/O	Analog Outputs	Counters/Timers
Personal Daq/3005	16SE/8DE	7	24	0	4/2
Personal Daq/3000	16SE/8DE	7	24	2	4/2
Personal Daq/3001	16SE/8DE	7	24	4	4/2
Personal Daq/3005 + PDQ30	64SE/32DE	7	24	0	4/2
Personal Daq/3000 + PDQ30	64SE/32DE	7	24	2	4/2
Personal Daq/3001 + PDQ30	64SE/32DE	7	24	4	4/2

PDQs
Expansion Options for Personal Daq/50 Series

A Personal Daq and a PDQ module simply plug together for additional channel capacity

Personal Daq/50 Series and Expansion System Channel Capacities			
Product or System	Volts/TC Inputs*	Digital I/O	Freq/Pulse Inputs
Personal Daq/54	5 DE, 10 SE	—	—
Personal Daq/55	5 DE, 10 SE	8	2
Personal Daq/56	10 DE, 20 SE	16	4
PDQ1 Expansion Module	10 DE, 20 SE	16	—
PDQ2 Expansion Module	20 DE, 40 SE	—	—
Personal Daq/55 + PDQ1	15 DE, 30 SE	24	2
Personal Daq/55 + PDQ2	25 DE, 50 SE	8	2
Personal Daq/56 + PDQ1	20 DE, 40 SE	32	4
Personal Daq/56 + PDQ2	30 DE, 60 SE	16	4

* TC inputs are differential only

Both the Personal Daq/55 and the Personal Daq/56 can be easily expanded with one of two available snap-on expansion modules. PDQ1 adds 20 SE/DE analog inputs and 16 digital I/O. PDQ2 provides 40 SE/20 DE analog inputs.

Furthermore, USB hubs can be used to create multi-unit systems containing up to 100 Personal Daq modules attached to a single PC. Using this strategy, a multi-unit Personal Daq system can provide up to 8,192 analog and digital I/O lines.

PDQ12 - USB Extender Cable

Each PDQ12 adds 16 ft. to the length of your USB cable. Since the extender cable cannot provide adequate power, a TR-2U will be required for the Personal Daq/50 Series.

PDQ10 - DIN-Rail Mount

The PDQ10 allows one Personal Daq or PDQ module to be DIN-rail mounted. The Personal Daq or PDQ module simply snaps into the PDQ10.

DaqBook/2000 Series
Ethernet-Based Portable Data Acquisition

Solution Highlights

- Analog input, analog output, frequency input, timer output, and digital I/O — all in one compact and portable enclosure
- Built-in Ethernet connection provides continuous streaming to PC
- 16-bit, 200-kHz A/D converter
- Expand analog and digital channel count with DBK options
- Powerable from 10 to 30 VDC, or with included AC adapter
- Synchronous analog, digital, and frequency measurements
- Four channels of 16-bit, 100-kHz analog output (/2001 and /2020)
- DaqBook/2020 offers convenient front panel connectors for thermocouple, voltage, and frequency measurements
- DBK signal conditioning and channel expansion options available for measuring voltage, accelerometers, temperature, strain, encoders, digital I/O, and more
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®
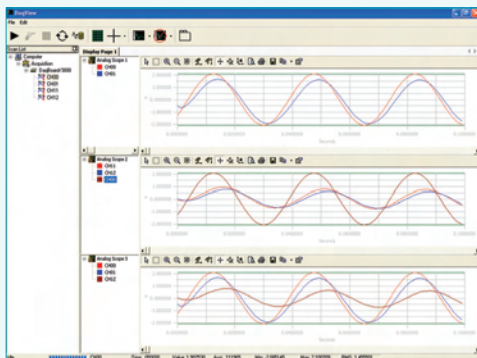
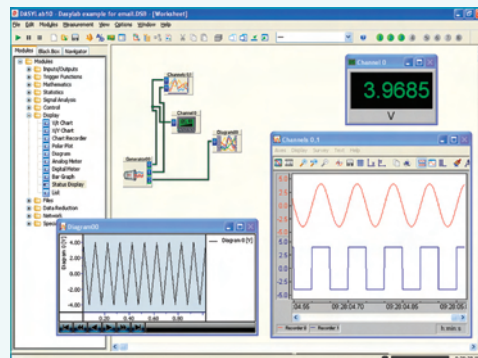DaqBook/2020

DaqBook/2001

Overview

The Ethernet-based DaqBook/2000 Series of portable data acquisition devices can synchronously measure analog inputs, frequency inputs, and digital inputs. The 16-bit/200-kHz DaqBooks can be further expanded and enhanced with over 40 DBK signal conditioning options. Models are available with up to four high-speed analog outputs.

DaqBook/2020 system plus 32 additional channels of analog input (two DBK85's)

For complete information visit iotech.com/daqbook

■ **DaqView.** IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.

■ **DASYLab.** If your application requirements go beyond the scope of DaqView, optional DASYLab® software offers a great degree of flexibility and customization. You can learn DASYLab in a matter of days without the weeks of training required for some other software.

■ **Driver Support.** Included is a complete set of drivers and detailed example programs for popular programming languages and software packages. Driver support includes DASYLab®, LabVIEW®, MATLAB®, Visual C/C++®, Visual C#®, Visual Basic®, and Visual Basic® .NET. DaqCOM provides ActiveX/COM-based programming tools for Microsoft® Visual Studio® and Visual Studio® .NET.

■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within DaqView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

DBK Signal Conditioning Options
for LogBook and Daq Series

For complete information visit iotech.com/dbk

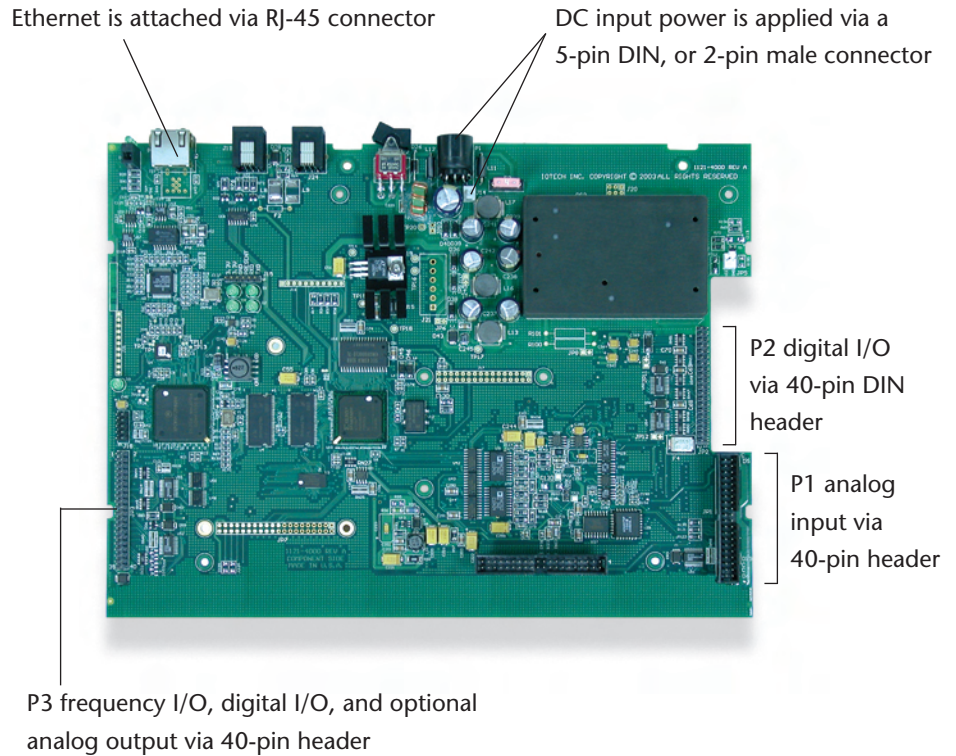| DBK Compatibility Selection Guide		Card	Module	DaqBook/2000 Series	DaqBoard/2000 Series	DaqLab/2000 Series	DaqScan/2000 Series	LogBook/300 Series
Product	Description							
Connectivity and Packaging Options								
DBK1	16-connector BNC interface	—	✓	✓	✓*	✓	✓	✓
DBK10	3-slot expansion-card enclosure	—	✓	✓	✓	✓	✓	✓
DBK11A	Screw-terminal	✓	—	✓	✓*	✓	✓	✓
DBK41	10-slot analog expansion	—	✓	✓	✓*	✓	✓	✓
DBK60	3-slot expansion with termination panels	—	✓	✓	✓*	✓	✓	✓
DBK200	Adapter board for analog inputs	✓	—	✓**	✓	—	—	—
DBK202	Scew-terminal adapter; three analog and digital I/O expansion ports	✓	—	✓	✓	—	✓	✓
DBK203A	Same as DBK202 with rugged metal enclosure	—	✓	✓	✓	—	✓	✓
DBK206	Screw-terminal adapter	✓	—	✓	✓	—	✓	✓
DBK209	Same as DBK201 but rack and DIN-rail mountable	✓	—	✓**	✓	—	—	—
DBK213	Screw-terminal and expansion card module	—	✓	✓	✓	✓	✓	✓
DBK214	16-connector BNC interface	—	✓	✓	✓	✓	✓	✓
Voltage Input Options								
DBK8	8-channel high-voltage	✓	—	✓	✓*	✓	✓	✓
DBK15	Universal current/voltage input	✓	—	✓	✓*	✓	✓	✓
DBK17	4-channel simultaneous sample and hold	✓	—	✓	✓*	✓	✓	✓
DBK18	4-channel low-pass filter and amplifier	✓	—	✓	✓*	✓	✓	✓
DBK42	16-slot multi-purpose isolated signal conditioning	—	✓	✓	✓*	✓	✓	✓
DBK44	2-channel multi-purpose isolated signal conditioning	✓	—	✓	✓*	✓	✓	✓
DBK45	4-channel simultaneous sample and hold with low-pass filter	✓	—	✓	✓*	✓	✓	✓
DBK48	16-slot multifunction isolated signal conditioning	—	✓	✓	✓	✓	✓	—
DBK50	8-channel isolated high-voltage input	—	✓	✓	✓*	✓	✓	✓
DBK51	8-channel isolated low-voltage input	—	✓	✓	✓*	✓	✓	✓
DBK65	8-channel transducer interface	—	✓	✓	✓*	✓	✓	—
DBK80	16-channel differential voltage input with excitation	✓	—	✓	✓*	✓	✓	✓
DBK85	16-channel differential voltage input	—	✓	✓	✓*	✓	✓	—
DBK207	5B-isolated analog input signal conditioning board with two expansion ports	✓	—	✓	✓	✓	✓	✓
Voltage/Current Output Options								
DBK2	4-channel D/A voltage output	✓	—	✓	✓*	✓	✓	—
DBK5	4-channel current output	✓	—	✓	✓*	✓	✓	—
Temperature Input Options								
DBK9	8-channel RTD measurement	✓	—	✓	✓*	✓	✓	✓
DBK81	7-channel TC/mV board with screw-terminal connections	✓	—	✓	✓*	✓	✓	✓
DBK82	14-channel TC/mV board with screw-terminal connections	✓	—	✓	✓*	✓	✓	✓
DBK83	14-channel TC/mV board with external screw-terminal pod	✓	—	✓	✓*	✓	✓	✓
DBK84	14-channel TC/mV board with mini TC connector jacks	—	✓	✓	✓*	✓	✓	✓
DBK90	56-channel thermocouple input	—	✓	✓	—	✓	✓	—
DBK207/CJC	Same as DBK207 with on-board cold-junction compensation	✓	—	✓	✓	✓	✓	✓
Frequency Input Options								
DBK7	4-channel frequency input	✓	—	✓	✓*	✓	✓	✓
DBK55	8-channel frequency input	—	✓	✓	✓*	✓	✓	—
IEPE Sensor Input Options								
DBK4	2-channel dynamic signal input	✓	—	✓	✓*	✓	✓	✓
Strain Gage/Bridge Input Options								
DBK16	2-channel strain gage exxpansion	✓	—	✓	✓*	✓	✓	✓
DBK43A	8-channel strain gage	—	✓	✓	✓*	✓	✓	—
DBK43B	8-channel strain gage with screw-terminal connection	—	✓	✓	✓*	✓	✓	✓
Multifunction I/O Options								
DBK42	16-slot multi-purpose isolated signal conditioning	—	✓	✓	✓*	✓	✓	✓
DBK44	2-channel multi-purpose isolated signal conditioning	✓	—	✓	✓*	✓	✓	✓
DBK65	8-channel transducer interface	—	✓	✓	✓*	✓	✓	—
DBK207	5B-isolated analog input signal conditioning board with two expansion ports	✓	—	✓	✓	✓	✓	✓
DBK207/CJC	Same as DBK207 with on-board cold-junction compensation	✓	—	✓	✓	✓	✓	✓
Digital I/O Options								
DBK20	48-channel digital I/O with screw-terminal connectors	✓	—	✓	✓*	✓	✓**	✓
DBK21	48-channel digital I/O with male DB27 connectors	✓	—	✓	✓*	✓	✓**	✓
DBK23	24-channel optically isolated digital-input	—	✓	✓	✓*	✓	✓**	✓
DBK24	24-channel optically isolated digital-output	—	✓	✓	✓*	✓	✓**	✓
DBK25	8-channel relay-output	✓	—	✓	✓*	✓	✓**	✓
DBK208	16-channel isolated digital I/O signal conditioning	✓	—	✓	✓	✓	✓**	✓
DBK210	32-channel isolated high-density digital I/O	✓	—	✓	✓	✓	✓**	✓
Power Options								
DBK30A	Rechargeable battery/excitation	—	✓	✓	—	—	—	✓
DBK32A	Auxiliary power supply with AC adapter	✓	—	✓	—	—	—	✓
DBK34A	Uninterruptable power supply (UPS) - DC-powered	—	✓	✓	—	—	—	✓
Vehicle Network Measurement Option								
DBK70	Vehicle network interface	—	✓	✓	✓*	✓	✓	✓

* Requires additional hardware in order to make the physical connection
** Not compatible with all models within the series

DaqOEM Series
Board-Level Ethernet-Based Data Acquisition

Solution Highlights

- Analog input, analog output, frequency input, timer output, and digital I/O

- High-speed Ethernet interface

- 16-bit, 200-kHz A/D converter

- Synchronous analog, digital, and frequency measurements

- Trigger modes include analog, digital, frequency, and software

- Virtually infinite pre-trigger buffer

- 4 channels of 16-bit, 100-kHz analog output (/2001 model only)

- DaqOEM boards attach to over 40 DBK signal conditioning options to assemble an affordable system

- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

Ethernet is attached via RJ-45 connector

DC input power is applied via a 5-pin DIN, or 2-pin male connector

P2 digital I/O via 40-pin DIN header

P1 analog input via 40-pin header

P3 frequency I/O, digital I/O, and optional analog output via 40-pin header

Overview

The DaqOEM Series are single-board solutions for Ethernet-based embedded and OEM applications requiring analog, digital, and frequency I/O. All of the features of our popular DaqBook/2000 Series are available in the DaqOEM board-level solution. The DaqOEM is powered by a user-supplied +10 to +30 VDC input at 15W, via a standard 5-pin DIN connecto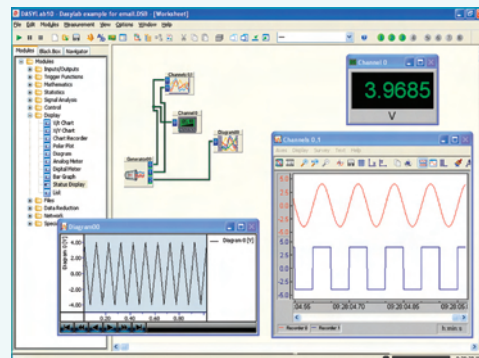r. An optional AC/DC converter (TR-40U) provides power from a 110 to 250 VAC source. All signal I/O is accessed via three 40-pin dual in-line connectors on the board. Optional cables are available for converting the 40 position header to a male DB37 connector (CA-248).

For complete information visit iotech.com/daqoem

DaqView. IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.

DASYLab. If your application requirements go beyond the scope of DaqView, optional DASYLab® software offers a great degree of flexibility and customization. You can learn DASYLab in a matter of days without the weeks of training required for some other software.

Driver Support. Included is a complete set of drivers and detailed example programs for popular programming languages and software packages. Driver support includes DASYLab®, LabVIEW®, MATLAB®, Visual C/C++®, Visual C#®, Visual Basic®, and Visual Basic® .NET. DaqCOM provides ActiveX/COM-based programming tools for Microsoft® Visual Studio® and Visual Studio® .NET.

PostView. Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within DaqView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

DaqLab/2000 Series
Ethernet-Based Laboratory Data Acquisition Instruments

Solution Highlights

- Ideal for bench-top data acquisition applications
- 16-bit, 200-kHz A/D converter
- Built-in capability measures voltage, frequency, and digital I/O
- Easily expand to measure temperature, strain, vibration, and much more via internal expansion slots
- High-speed Ethernet interface insures continuous real-time data transfers
- Up to four 16-bit, 100-kHz analog outputs
- DBK signal conditioning and channel expansion options available for measuring voltage, accelerometers, temperature, strain, encoders, digital I/O, and more
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

Overview

The DaqLab/2000 Series provides bench-top data acquisition capability for a wide variety of laboratory applications. Compared to traditional digital multimeters, the DaqLab is 1,000 times faster and is capable of measuring a wider variety of signals.

Built into the DaqLab is a 16-bit/200-kHz A/D converter. Signal I/O is on the front panel via removable screw-terminal connectors, and additional I/O is via rear panel DB37 connector. Front-panel I/O includes 8 voltage inputs, 4 frequency inputs, 2 timer outputs, and 6 digital I/O. The DaqLab/2001 also has 4 analog outputs on the front-panel screw terminals.
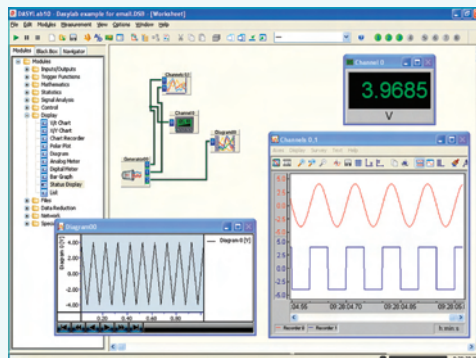
The DaqLab can expand its built-in analog and digital I/O with over 40 DBK signal conditioning and expansion options. There are two slots built in to the DaqLab chassis to accommodate two of these DBK cards. Signals attach to these DBK cards via on-board screw terminals or BNC connectors, which are accessed from the front of the DaqLab.

For complete information visit iotech.com/daqlab

■ **DaqView.** IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.

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DaqScan/2000 Series
Ethernet-Based Data Acquisition System Components

Solution Highlights

- Adds analog I/O, digital I/O, and frequency I/O to Ethernet-based test systems

- All I/O can be synchronous, enabling precise timing between various I/O functions

- 8 differential, or 16 single-ended inputs, expandable up to 256 voltage or 896 TC channels using signal conditioning and expansion options

- Up to 40 built-in TTL-level digital I/O, expandable up to 256 channels of isolated I/O using low-cost isolation modules

- Convenient 1U high 19" rack mount package minimizes rack space in test systems

- DBK signal conditioning and channel expansion options available for measuring voltage, accelerometers, temperature, strain, encoders, digital I/O, and more

- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

The DaqScan/2000 Series provides compact data acquisition capability for Ethernet-based test systems

Overview

The DaqScan/2000 Series of Ethernet-based system components provide analog, digital, and frequency I/O capability for Ethernet-based test systems. The DaqScan Series builds on IOtech's IEEE 488-based predecessors. Two models in the DaqScan Series are available, and include the full-featured DaqScan/2001 which provides 16 analog inputs, 4 analog outputs, 40 digital I/O, 4 frequency inputs, and 2 timer outputs. Multiple DaqScan models can be combined in the same system and synchronized using a simple SYNC connection between units.

For complete information visit iotech.com/daqscan

■ **DaqView.** IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.

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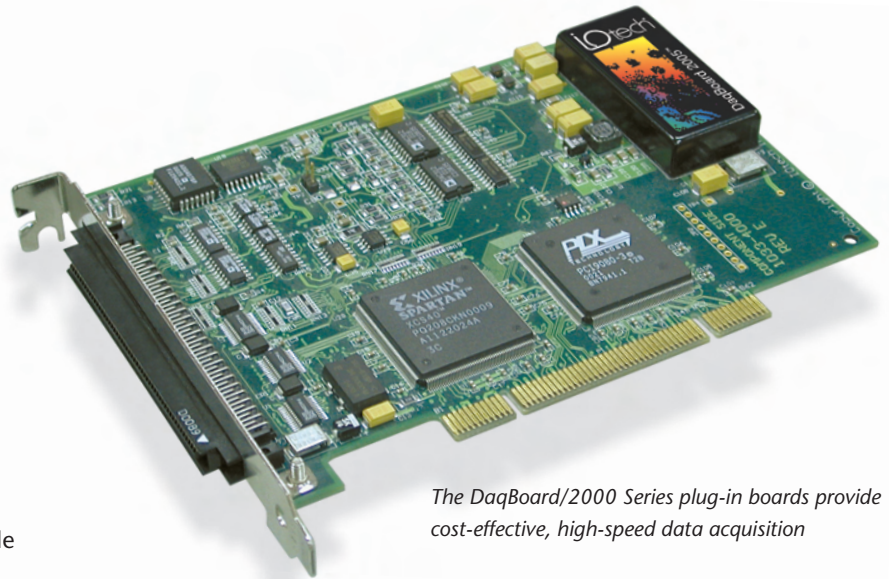
■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within DaqView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

DaqBoard/1000/2000/3000 Series
PCI Data Acquisition Boards

DaqBoard/1000 Series Highlights

- 16-bit, 200-kHz A/D converter – two models available
- 8 differential or 16 single-ended analog inputs
- Up to two 16-bit, 100-kHz analog outputs
- 24 digital I/O lines, can be scanned synchronously or asynchronously with analog and frequency inputs
- Four counter/pulse input channels can be scanned synchronously or asynchronously with analog and digital inputs
- Two timer/pulse output channels

DaqBoard/2000 Series Highlights

- 16-bit, 200-kHz A/D converter – three models available
- 8 differential or 16 single-ended analog inputs
- Expandable up to 256 analog input channels
- Up to four 16-bit, 100-kHz analog outputs
- 40 digital I/O lines, can be scanned synchronously or asynchronously with analog inputs
- Four counter/pulse input channels can be scanned synchronously or asynchronously with analog inputs
- Two timer/pulse output channels
- DBK signal conditioning and channel expansion options available for measuring voltage, accelerometers, temperature, strain, encoders, digital I/O, and more

The DaqBoard/2000 Series plug-in boards provide cost-effective, high-speed data acquisition
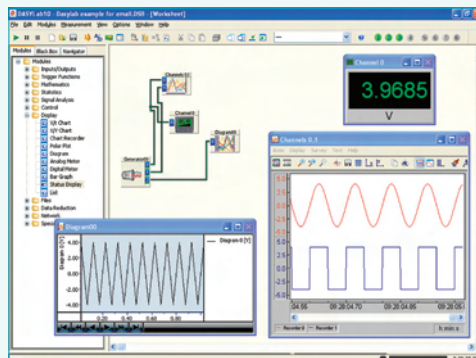
DaqBoard/3000 Series Highlights

- 1-MHz, 16-bit multifunction PCI boards – four models available
- 8 differential or 16 single-ended analog inputs
- User-expandable up to 64SE/32DE analog inputs including thermocouple measurements
- Up to four 16-bit, 1-MHz analog outputs
- 24 high speed digital I/O lines
- Ultra low-latency control output capability (as low as 2 µs latency)
- Four 32-bit counter input channels with quadrature encoder capability

For complete information visit iotech.com/daqboards

■ **DaqView.** IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.

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Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®.

■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within DaqView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

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DaqBoard/3000USB Series
16-Bit, 1-MHz USB Data Acquisition Boards

Solution Highlights

- Designed for OEM and embedded applications

- Custom versions available for OEMs (contact factory)

- 16-bit, 1-MHz A/D converter

- Up to 32 differential or 64 single-ended analog inputs, four of which can accept thermocouples

- Up to four 16-bit, 1-MHz analog outputs

- 24 high-speed digital I/O lines

- Four 32-bit counters with quadrature encoding support

- Low-latency setpoint control output mode

- Small, compact design (6" x 5.93")

- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®
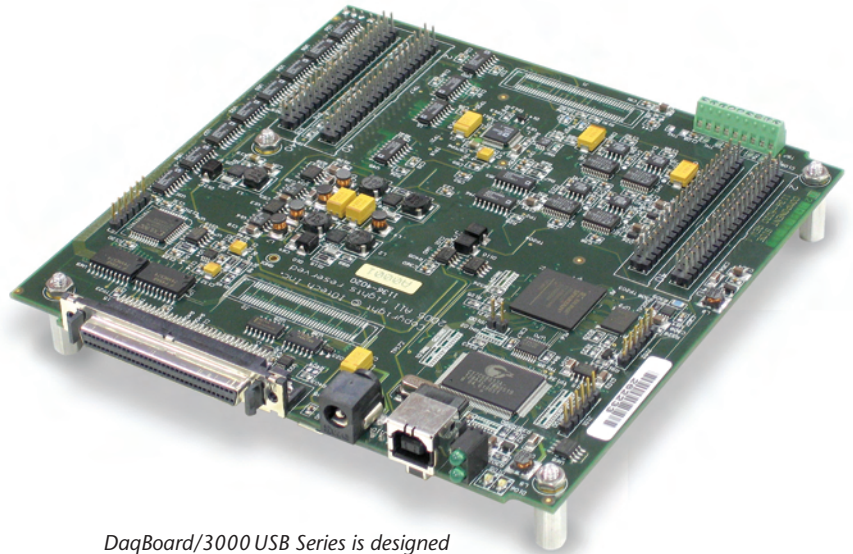
DaqBoard/3000 USB Series is designed for OEM and embedded applications

Overview

The DaqBoard/3000USB Series offers high-speed, multifunction data acquisition in a low-cost, board-only design. Unique to the DaqBoard/3000USB Series is a low-latency, highly deterministic setpoint control output mode that operates independent of the PC. In this mode digital, analog, and timer outputs can respond to analog, digital, and counter inputs as fast as 2 µs; at least 1,000 times faster than other products that rely on the PC for decision making. The DaqBoard/3000USB Series has a 16-bit, 1-MHz A/D converter coupled with 16 single-ended, 8

differential analog inputs (/3001USB and /3005USB models), 64 single-ended, or 32 differential analog inputs (/3031USB and /3035USB models).
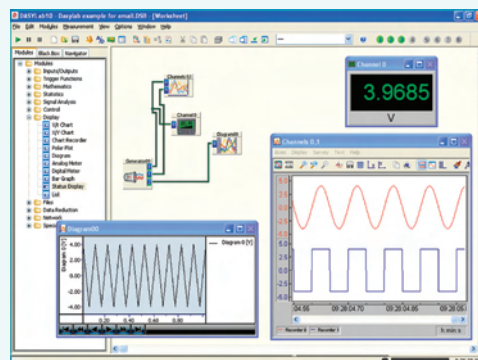
Four of the analog inputs can be configured as four differential thermocouple inputs (all models). Each channel can be software-configured for a different voltage range, as well as for single-ended or differential bipolar input, or thermocouple input (up to four channels).

For complete information visit iotech.com/daqboard3000usb

■ **DaqView.** IOtech's included *Out-of-the-Box* application enables set-up, data logging, and real-time data viewing without any programming skills. DaqView also features direct-to-Excel® enhancements, as well as increased charts/scope capabilities and time-domain anlaysis.

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DaqTemp/14A
PCI Thermocouple Multifunction DAQ System

Solution Highlights

- Measure thermocouples, volts, frequency, pulses, digital inputs, and generate analog outputs, digital outputs, and timer outputs

- Includes a PCI plug-and-play card, screw-terminal/signal conditioning pod, cable and extensive software support

- 14 thermocouple input channels

- Supports TC types J, K, S, T, B, E, N, R

- TC resolution of 0.1°C, accuracy better than 1°C

- 200 kS/s measurement rate

- 7 differential voltage input channels, with 13 programmable ranges from ±156 mV to ±10V input

- 24 digital I/O lines

- 4 frequency/pulse counting input channels

- 4-channel 16-bit/100-kHz, waveform-capable analog outputs

- 2 timer output channels

- 100% digital calibration

- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), Windows XP®

DaqTemp includes a full suite of software including DaqView Out-of-the-Box software

Overview

The DaqTemp data acquisition system provides a total hardware/software/signal conditioning solution for high-accuracy temperature, voltage, frequency, and pulse counting measurements, plus digital I/O and analog output. DaqTemp hardware is comprised of a plug-and-play PCI board, 3 ft. cable, and screw terminal/signal conditioning pod.
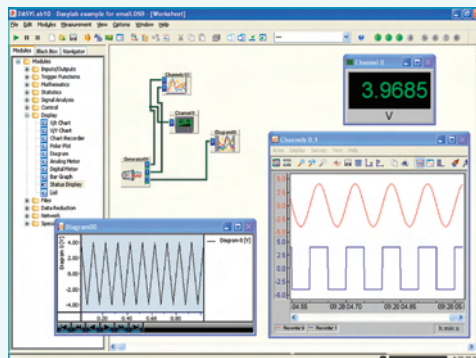
For complete information visit iotech.com/daqtemp

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■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within DaqView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.

ChartScan/1400
Voltage and Temperature Recorder

Solution Highlights

- Paperless chart recorder

- Measure isolated temperature, DC volts, AC volts, and waveforms in one compact instrument

- Convenient signal connectivity; recessed safety jack, or subminiature plug connections

- Expandable up to 64 channels

- Single-channel burst mode for digitizing waveforms at rates up to 20 kHz

- 32 alarm outputs & 8 digital inputs

- Two programmable scan rates for pre- an post-trigger sampling, and accelerated sampling on-event detection

- 128 Kreadings of memory

- RS-232/422 standard interface; RS-232 to USB interface available

- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

ChartScan/1400 provides up to 64 isolated temperature or voltage inputs

Overview

The ChartScan/1400 is a compact voltage and temperature recorder that can be used as a paperless chart recorder or as a data logging and control instrument. The convenient safety jack, subminiature plug, and screw-terminal connectors make signal connection easier than other data recorders or loggers. The system offers high-speed, high-channel counts, voltage isolation, and user-selectable signal conditioning.

The ChartScan/1400 is a next-generation recorder that combines the ease-of-use common in paper-based strip-chart recorders with the advanced features of PC-based data acquisition systems. The ChartScan offers distinct advantages over typical chart recorders. For example, it is not prone to mechanical failure like conventional paper-based recorders with chart drives, paper feeds, moving pens, and knobs.

For complete information visit iotech.com/chartscan

■ **ChartView.** IOtech's *Out-of-the-Box* included application provides a graphical spreadsheet-style user interface that lets you easily configure your hardware, acquisition, and display parameters. ChartView features a *no programming* approach that enables data collection and display within minutes.
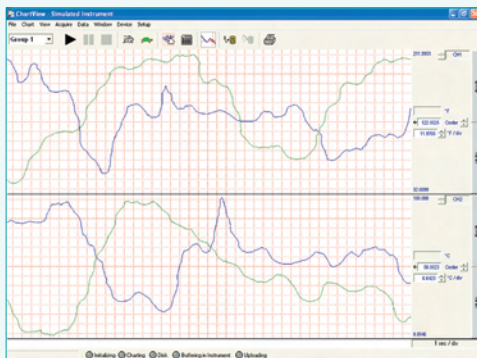
■ **PostView.** Also included is a time and frequency domain post-acquisition data viewing package which is integrated and ready to use from within ChartView when you install it. Up to 8 windows can be displayed on one screen, with up to 16 channels overlaid.
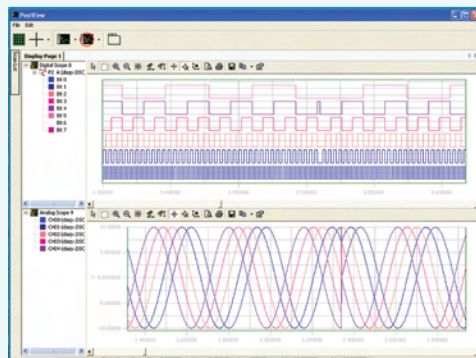
The ChartScan/1400 portable recorder is ideal for making isolated temperature and voltage measurements (notebook PC not included)

MultiScan/1200 & TempScan/1100
Temperature & Voltage Scanning Instruments

Common Solution Highlights

- IEEE 488 and RS-232/422 standard interfaces
- RS-232 to USB interface available
- 32 TTL digital alarm outputs and 8 TTL-compatible digital inputs
- Custom thermocouple types for user-defined linearization tables
- ChartView *Out-of-the-Box* scrolling strip-chart application for effortless, real-time display
- PostView included with *Out-of-the-Box* application software
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

MultiScan/1200

- Measures isolated temperature, DC volts, AC volts, and waveforms
- Single-channel burst mode for digitizing waveforms at rates up to 20 kHz
- Two scanning modules available for measuring 24 channels of thermocouples/volts or high voltage, respectively
- Expandable up to 744 channels

TempScan/1100

- Measures thermocouples, volts, and RTDs at up to 960 channels/s
- Expandable up to 992 channels

The MultiScan/1200 and TempScan/1100 offer high-speed temperature and voltage measurement in compact, 19 in. rack-mountable enclosures

Overview

The MultiScan/1200 is ideal for temperature and voltage measurements that require more channel-to-channel isolation than the TempScan/1100 can offer. The unit provides up to 500V of channel-to-channel isolation for voltage and 200V of channel-to-channel isolation for thermocouples. The MultiScan/1200 uses relays to provide isolation and to scan thermocouples and volts at up to 147 channels/s. The unit can also digitize waveforms on a single channel at up to 20 kHz.

The TempScan/1100 is well suited for temperature and lower-voltage measurement because its solid state scanning provides temperature readings at speeds up to 960 channels/s, an important feature in applications that require monitoring of tens or hundreds of channels. Because of it's unique architecture, the TempScan offers unrivaled low cost per channel.

For complete information visit iotech.com/multiscan

**For complete information visit iotech.com/tempscan**

■ **ChartView.** IOtech's *Out-of-the-Box* included application provides a graphical spreadsheet-style user interface that lets you easily configure your hardware, acquisition, and display parameters. ChartView features a *no programming* approach that enables data collection and display within minutes.
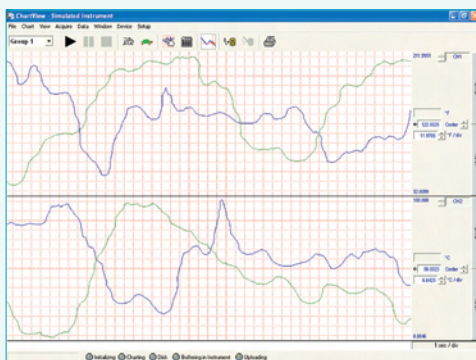
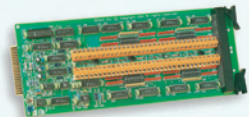■ The MultiScan/1200 is supported by two solid-state scanning modules.
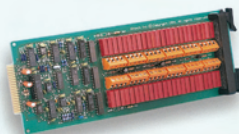
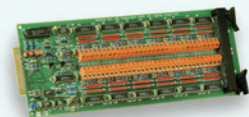*MTC/24 thermocouple/voltage scanning module with 24 channels*
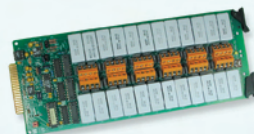
MHV/24X high-voltage scanning module, 24 channels with per-channel programmability for ±250V, ±25V, and ±2.5V
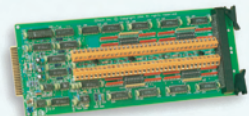
■ The TempScan/1100 is supported by three solid-state scanning modules.

TempTC/32B thermocouple scanning module with 32 channels

TempRTD/16B RTD scanning module with 16 channels

TempV/32B voltage scanning module, 32 channels with per-channel programmability for ±10V, ±5V, ±1V, and ±100 mV

DASYLab®
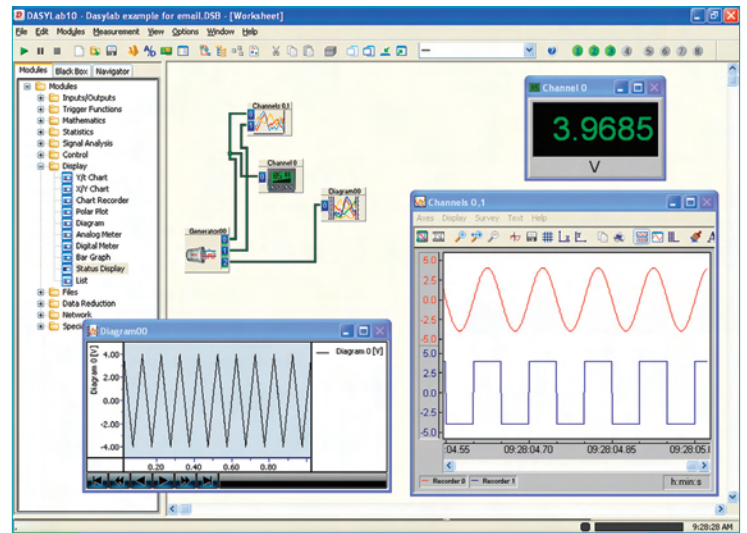## Data Acquisition, Graphics, Control, & Analysis Software

Solution Highlights

- Create complex applications in minimal time without programming
- Lets you build worksheets using graphical icons
- Implements real-time operations
- Provides standard real-time displays (charts, meters, graphs)
- Layout Windows allow you to create simple custom displays for operational end users
- Provides complete library of computational functions
- Includes generator icons to simulate inputs
- "Black Box" icon lets you create macro functions
- Provides serial, OPC, ODBC, and network interface icons
- Supports data acquisition hardware from IOtech and other vendors
- Includes a tutorial, example worksheets, and on-line help

DASYLab's graphical display module provides outstanding interactive versatility and an over all better user experience

Overview

DASYLab offers real-time analysis, control, and the ability to create custom graphical user interfaces (GUIs). What's more, in contrast to other graphical programming environments, which can require weeks of training to master, DASYLab has a very short user-learning curve. Many applications can be configured in a few minutes, rather than days or weeks.

DASYLab supports all of IOtech's data acquisition hardware, as well as a host of hardware from over 20 vendors. There is a wide variety of I/O capabilities to choose from, such as analog, digital, counter/timer, IEEE 488, RS-232, and DDE, plus any I/O device that is supported by an OPC (OLE for Process Control) driver.

To set up an application, simply drop the desired icons on your worksheet. Connecting all your icons together requires very little effort – simply click and drag them together or drag the output box of one functional icon to the input box of another functional icon.

> **For complete information visit iotech.com/dasylab**

## Powerful, Real-Time Data Analysis and Control

DASYLab includes a wide range of real-time data analysis and control functions for easy development of custom applications. DASYLab's analysis function groups include:

- Mathematics
- Statistics
- Signal analysis
- Data reduction
- Control

Within these groups, there are specific modules for performing FFTs, Digital Filtering, Polynomial and Linear Regression, Logical Operations, and much more. These modules all have simple set up with point and click configuration, allowing complex calculations to be set up in seconds.
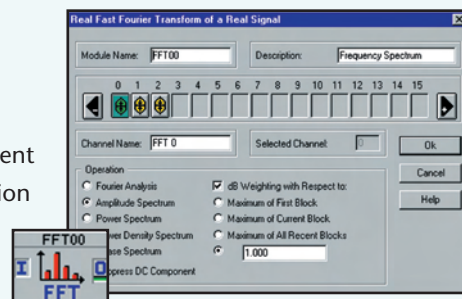
Fast Fourier Transform Module
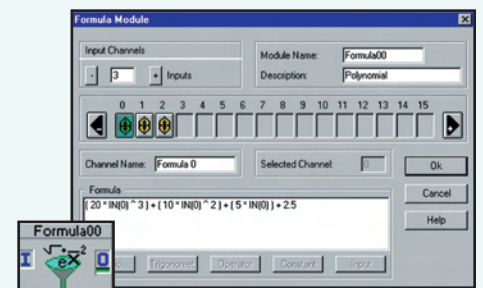
Formula Module
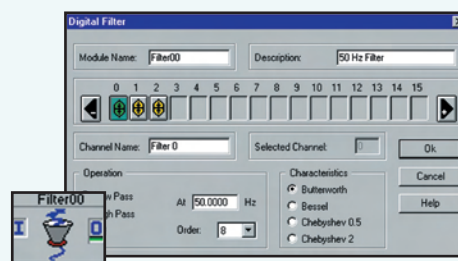
Digital Filter Module

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Vibration
Measurement & Analysis Solutions

IOtech also offers vibration measurement and analysis solutions. From low-channel count, portable modules, to large distributed systems, IOtech has cost effective solutions to fit a variety of needs.

IOtech offers software packages designed specifically for a variety of applications including:

- Vibration Analysis
- Rotating Machine Analysis
- Acoustics
- Machine Condition Monitoring
- Predictive Maintenance
- Balancing
- NVH
- NDT (non-destructive test)
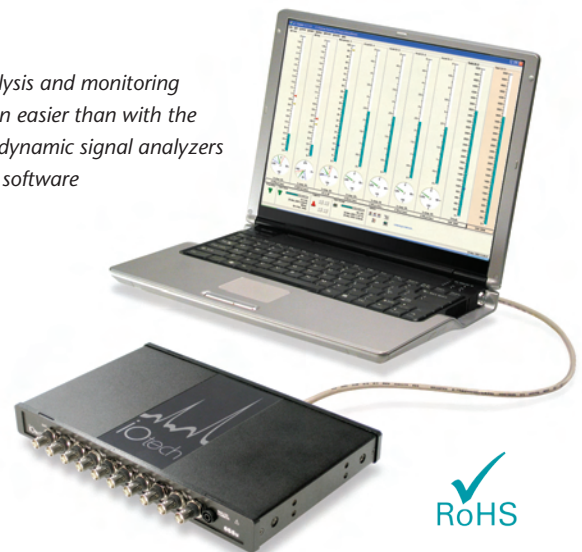- Resonance analysis

IOtech solutions combine PC-based hardware with easy-to-use application specific software. Multiple eZ-Series software packages are offered for the 600 Series and ZonicBook/618E, each tailored to a particular application. 600 Series systems feature a USB or Ethernet interface, 24-bit ADC's per channel, and built-in signal conditioning for accelerometers, tachometers, proximity sensors, temperature,and more.

Your time is valuable, and that's why all IOtech systems feature *Out-of-the-Box* eZ-Series software which allows you to start taking measurements in minutes.

For complete information visit iotech.com/vibration

Vibration analysis and monitoring has never been easier than with the 600 Series of dynamic signal analyzers and eZ-Series software

RoHS

IOtech ®
Out-of-the-Box Measurement Solutions