



DaqBook/260[®]

16-bit, 100-kHz Portable & Laboratory PC-Based Data Acquisition System



Features

- Link to notebook or desktop PCs via the standard or enhanced parallel port (EPP), or optional interface cards and PC-Card (PCMCIA), PCI, ISA, or Ethernet
- Operable from included AC adapter, optional nickel-cadmium power module, 12V car battery, or any +10 to +20 VDC source
- Analog input:
 - 16-bit, 100-kHz A/D converter
 - 100 Kreadings/s sampling & real-time storage-to-disk
 - 8 differential or 16 single-ended inputs, expandable to 256 channels
 - channel/gain sequencing at 10 μ s intervals, including up to 256 expansion channels
 - x1, 2, 4, or 8 programmable gain (other gains available with option cards)
 - 512-location scan memory for user-defined channel/gain sequencing of up to 256 channels
 - triggerable from analog, digital, or software, including pre-trigger
- Two 12-bit analog outputs
- Digital I/O:
 - 24 general-purpose digital I/O lines, expandable to 192
 - 16 high-speed digital-input lines, scannable at up to 100 kHz
- Five programmable 16-bit counter/timers

Signal Conditioning Options

- Three internal DBK expansion slots
- Expansion cards and modules for high-voltage/current, strain gages, thermocouples, isolation, relays, accelerometers, filtering, and simultaneous sample & hold (see p. 143)



The DaqBook/260 data acquisition system offers easy expansion and your choice of connectivity (shown here with optional DBK605, DBK606, and DBK604 termination panels)

Software (see p. 110)

- **DaqView**, spreadsheet-style software for *Out-of-the-Box*[™] setup, acquisition, & real-time display
- **eZ-PostView**[™], for post-acquisition viewing
- **Included drivers for Visual Basic**[®], **Delphi**[™] & **C++ for Windows**[®]; **DASYLab**[®] & **LabVIEW**^{®*}

DaqBook/260[®] portable data acquisition system for notebook and desktop PCs offers 16-bit, 100-kHz data acquisition. Operable from AC or DC power sources, DaqBook/260 is ideal for a variety of portable, field, and benchtop applications.

The DaqBook/260s' A/D and programmable channel/gain sequencer make it particularly useful for applications with high channel-count and speed requirements.

The DaqBooks are supplied with DaqView, a Windows-based data logging application that allows you to set up your acquisition applications and save acquired data directly to disk. The DaqBook is also shipped with eZ-PostView[™] (see p. 228), a post-acquisition application that permits you to display acquired data previously saved to a file.

Several graphical analysis and control software packages support the DaqBooks. These include DASYLab[®] (see p. 223) and LabVIEW[®].

Visit www.iotech.com/DaqBook260 for complete technical information on the DaqBook/260.

* Full DBK support only available in the 32-bit driver



DaqBook/260[®]

Specifications & Ordering Information

Specifications

General

Power Consumption: 620 mA @ 12 VDC
Operating Temperature: 0° to 50°C
Storage Temperature: 0° to 70°C
Humidity: 0 to 95% RH, non-condensing
Dimensions: 280 mm W x 356 mm D x 89 mm H
 (11" x 14" x 3.5")
Weight: 3.08 kg empty (7 lbs.); cards 0.25 to 0.75 kg
 each (8 to 12 oz)

A/D Specifications

Type: Successive approximation
Resolution: 16 bit
Conversion Time: 8 μs
Monotonicity: No missing codes
Linearity: ±1 bit
Zero Drift: ±10 ppm/°C max
Gain Drift: ±30 ppm/°C max

Sample & Hold Amplifier

Acquisition Time: 2 μs
Aperture Uncertainty: 100 ps

Analog Inputs

Channels: 16 single-ended, 8 differential, expandable up to 256 differential; single-ended/differential operation is software programmable per system
Connector: DB37 male, P1
Resolution: 16 bits
Accuracy: ±0.025% FS
Ranges

Unipolar/bipolar operation is software programmable on a per-channel basis

Unipolar: 0 to +10V, 0 to +5V,
0 to +2.5V, 0 to +1.25V

Bipolar: ±5V, ±2.5V, ±1.25V, ±0.625V

Maximum Overvoltage: 30 VDC

Input Current

Differential: 150 pA typ
0.2 μA max
Single-Ended: 250 pA typ
0.4 μA max

Input Impedance: 100M Ohm in parallel with 100 pF

Gain Temp. Coefficient: 3 ppm/°C typ
Offset Temp. Coefficient: 12 μV/°C max

Triggering

Analog Trigger

Programmable Level Range: 0 to ±5V
Trigger to A/D Latency: 10 μs max

Digital Trigger

Logic Level Range: 0.8V low/2.2V high
Trigger to A/D Latency: 10 μs max

Software Trigger

Trigger to A/D Latency: Dependent on PC
Pre-Trigger: Up to 65,536 scans

Sequencer

Randomly programmable for channel and gain; DaqBook/200 series is also randomly programmable for unipolar/bipolar ranges

Depth: 512 location

Channel to Channel Rate: 10 μs/channel, fixed

Maximum Repeat Rate: 100 kHz

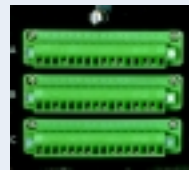
Minimum Repeat Rate: 10 hours

Expansion Channel Sample Rate: Same as on-board channels, 10 μs/channel

DaqBook/260 Termination Panels



BNC termination panel (DBK602) features 16 BNC connectors



Removable-block screw-terminal termination panel (DBK606) offers 48 convenient connections



Safety-jack termination panel offers 16 connectors (Red and black jack-pairs, DBK604 shown)



Slotted panel with adjustable clamp that holds wires in place (DBK607)



Thermocouple termination panel (DBK605) features 14 connectors for types B, J, K, R, S, and T thermocouples



DB37-style termination panel (DBK608) features three standard 37-pin female connectors

Note: DBK601 and DBK603 not shown.

Analog Outputs

Channels: 2
Connector: DB37 male, P1
Resolution: 12 bits
Voltage Ranges: 0 to 5 VDC with built-in reference; 0 up to ±10 VDC with external reference
Maximum Output Current: 10 mA

General Purpose Digital I/O

24 I/O channels, expandable up to 192
Connector: DB37 male, P2
Device: 82C55
Output Voltage Levels
Minimum "1" Voltage: 3.0 @ 2.5 mA sourcing
Maximum "0" Voltage: 0.4 @ 2.5 mA sinking
Output Current
Maximum Source Current: 2.5 mA
Maximum Sink Current: -2.5 mA
Input Voltage Levels
Minimum Required "1" Voltage Level: 2V
Maximum Allowed "0" Voltage Level: 0.8V
Output Float Leakage Current: 10 μA

High-Speed Digital Inputs

16 input lines
Connector: DB37 male, P3
Maximum Sampling Rate: 100 Kwords/s
Input Low Voltage: 0.8V max
Input High Voltage: 2V min
Input Low Current: 10 nA
Input High Current: -10 μA

Counter/Timer

5 counter/timer channels
Connector: DB37 male, P3
Frequency/Pulse Counting Mode: Up or down, binary or BCD
Maximum Pulse Count: 80-bit binary (5 channels cascaded)
Maximum Input Rate: 7 MHz
Minimum High Pulse Width: 70 ns
Minimum Low Pulse Width: 70 ns
On-board Time Base: 1 MHz

Ordering Information

Description	Part No.
Data acquisition system with space internally for three analog DBK option cards, including AC adapter; three DBK601 blank termination panels; drivers for Visual Basic [®] , Delphi [™] & C++ for Windows [®] ; DASyLab [®] & LabVIEW [®] ; DaqView [™] & eZ-PostView [™] software	DaqBook/260

Termination Panels

Blank termination panel	DBK601
16-connector BNC termination panel	DBK602
16-connector red safety-jack termination panel and wiring kit	DBK603
16-connector (8 pairs) red and black safety-jack termination panel and wiring kit	DBK604
14-connector type B thermocouple panel and wiring kit (male thermocouple connector sold separately)	DBK605-B
14-connector type J thermocouple panel and wiring kit (male thermocouple connector sold separately)	DBK605-J
14-connector type K thermocouple panel and wiring kit (male thermocouple connector sold separately)	DBK605-K
14-connector type R thermocouple panel and wiring kit (male thermocouple connector sold separately)	DBK605-R
14-connector type S thermocouple panel and wiring kit (male thermocouple connector sold separately)	DBK605-S
14-connector type T thermocouple panel and wiring kit (male thermocouple connector sold separately)	DBK605-T
48-connector removable-block screw-terminal panel and wiring kit	DBK606
Slotted termination panel with adjustable clamp	DBK607
Three DB37 female connector termination panel and wiring kit	DBK608