



Contact: Suzanne Toomey  
Public/Media Relations Coordinator  
Phone: (440) 703-2304  
Fax: (440) 439-4093

Release Type: New Product  
Release Date: Immediate  
Web: [www.iotech.com](http://www.iotech.com)  
E-mail: [sToomey@iotech.com](mailto:sToomey@iotech.com)

## **New High-Speed Portable Data Acquisition System** *Multichannel system can be expanded up to 72 analog input channels*

CLEVELAND, January 2002 — The newest addition to IOtech's family of portable data acquisition system is the WaveBook/512A™. This system uses a unique DSP-based A/D design to achieve up to 1-MHz sample speed while maintaining 12-bit resolution. The 8 built-in channels can be expanded up to 72 channels with a wide variety of programmable signal conditioning options. Every channel is digitally calibrated automatically by the DSP in real-time, resulting in excellent accuracy and linearity. You can visit [www.iotech.com/wavebook512A](http://www.iotech.com/wavebook512A) for detailed specifications.

The WaveBook/512A is suitable for portable applications that require high-speed sampling and advanced triggering, including multichannel, pulse, and digital-pattern triggering. In addition, the WaveBook/512A system supports external clocking, allowing users to synchronize transducer inputs with rotating parts.

Operable from either AC or DC power, the DSP-based WaveBook/512A is ideal for in-vehicle, field, or benchtop applications. The unit connects to a notebook PC via the enhanced parallel port (EPP) or an optional PC-Card interface. Connection to a desktop PC is via the EPP port or an optional ISA plug-in card interface.

### **Low Noise Architecture**

The WaveBook/512A's architecture includes a specially designed low-noise front end for clean high-resolution measurements. The architecture includes buffered inputs on all channels, individual instrumentation amps/ch, per-channel programmable gain, and a built-in anti-aliasing filter.

### **External Clock**

An additional feature of the WaveBook/512A is the external clock input that controls its scan rate. The user can correlate data with mechanical motion of the system under test by synchronizing the system with an external event such as the rotation of an engine crankshaft or the pulse from an encoder on a turbine. The period of the external clock can be measured with a 32-bit

counter and reported back in the scan sequence. This feature makes the WaveBook/512A system helpful to engineers who need data collection that is time-independent and dependent on their mechanical system.

### **Multiple WaveBook Synchronization**

You need only one cable to synchronize the WaveBook/512A to any other WaveBook/512A. This allows systems to be assembled with an aggregate sampling rate of 2 MHz or more across two or more synchronized WaveBooks. Channel count can be increased above 72 without reducing the per-channel sampling rate.

### **Channel & Range Scanning**

The WaveBook/512A provides a 128-location scan sequencer that enables the user to program, at random, the analog channel scan sequence, associated unipolar/bipolar A/D range, input amplifier gain. The unit permits 1M samples/s scanning and gain switching over both its built-in and expansions channels (up to 72). In addition, the WaveBook/512 can be switched from unipolar (0 to 10V) to bipolar (-5V to +5V) operation on a per-channel basis at the full sampling rate (1  $\mu$ s intervals). The unit has the following input ranges:  $\pm 10$ V,  $\pm 5$ V,  $\pm 2$ V,  $\pm 1$ V bipolar; 0 to +10V, 0 to +4V, 0 to +2V unipolar.

### **Digital Inputs**

The WaveBook/512A data acquisition system has the ability to scan 16 TTL-level digital inputs along with the analog inputs as part of the user-defined scan sequence. It can acquire all 16 digital lines at 1  $\mu$ s per channel allowing the user to acquire digital data that can be time-correlated to acquired analog data.

### **Pricing & Availability**

The price for WaveBook/512A system with WaveView™ *Out-of-the-Box*™ software is \$3495. Availability is six weeks ARO. Several signal conditioning and expansion options are available for the WaveBook/512A. Included are options for accelerometers, strain gages, thermocouples, high voltage inputs, simultaneous sampling, position encoders and more.

### **About IOtech**

IOtech produces data acquisition hardware and software for use in PC-based test & measurement and industrial automation systems. Its products are used in research and manufacturing facilities and are sold throughout the world. IOtech, Inc. is located at 25971 Cannon Road, Cleveland, Ohio, 44146; telephone: (440) 439-4091; fax: (440) 439-4093; E-mail: sales@iotech.com; www.iotech.com.

###

WaveBook/512A™, WaveBook/512™, WaveBook/516™, and WaveView™ are trademarks of IOtech, Inc. All other trademarks or registered trademarks are the property of their respective owners.