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Release Type: New Product
Release Date: Immediate
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New High-Performance CompactPCI Data Acquisition Boards from IOtech Unmatched Signal Conditioning and Channel Expansion Options Address the Special Needs of Industrial Monitoring and Test Applications

CLEVELAND, April 20, 2001 — IOtech announces the release of the new DaqBoard/2000c™ series, a family of CompactPCI™ boards and signal conditioning options. These multi-function I/O boards, with their isolated signal conditioning options, are designed to meet the needs of OEMs and end-users with industrial monitoring and test applications.

“Our new CompactPCI boards with their signal conditioning options provide robust solutions for industrial applications where isolation, rack-mounting, easy channel expansion, and high-performance are pre-requisites,” said Ron Chapek, product manager, IOtech. “Other CompactPCI suppliers have targeted high-end applications in telecommunications and military/aerospace, but we have focused on providing affordable, easy-to-use, and easy-to-maintain solutions for taking basic temperature, pressure and other common measurements.”



New DaqBoard/2000c series of CompactPCI boards, with signal conditioning options, are ideally suited for the needs of industrial monitoring and test applications.

The DaqBoard/2000c family is composed of six data acquisition boards, with different analog and digital I/O combinations, that can be configured individually or in any combination of up to 8 boards per CompactPCI chassis. Consequently, I/O can be precisely and economically matched with application requirements. If additional channel expansion is required, IOtech's unique, high-speed addressing scheme supports analog

input expansions of up to 256 channels with scan rates (per scan group) of up to 5 μ s/channel. Unlike other PC plug-in based solutions, there is no timing penalty for scanning expansion channels versus embedded channels.

DaqBoard/2000c™ Series Selection Chart						
Feature	Multifunction I/O				Digital I/O	Analog Output
	DaqBoard/2001c	DaqBoard/2000c	DaqBoard/2005c	DaqBoard/2004c	DaqBoard/2002c	DaqBoard/2003c
Analog Inputs (16 bit/200 kHz)	16	16	16	—	—	—
Analog Outputs (16 bit/100 kHz)	4	2	—	4	—	4
Digital I/O	40	40	40	40	40	—
Frequency/Pulse I/O	6	6	6	6	6	—
Signal Conditioning Options	27	27	27	5	5	—

On-board digital I/O is also expandable up to 208 lines. In total, up to 470 channels of analog and digital I/O can be accessed from a single (multifunction) DaqBoard/2000c board using a *single* high-density connector and cable. For higher channel count applications multi-board configurations support channel expansion to over 1000 I/O.

Termination, Expansion and Mounting Options

Unlike other multi-function I/O DAQ boards that either employ cumbersome multi-connector designs or consume multiple bus slots to access additional I/O, the DaqBoard/2000c family accommodates all I/O via a single high-density connector. Additionally, all DBK series expansion boards and modules connect to this single termination using a single, multi-connector cable. This cable also provides power to the DBK options that require it.

IOtech's family of DBK signal conditioning, expansion, and signal termination options expand the DaqBoard/2000c series' application range. When applications are allotted limited space, the new DBK206™ is ideal; it provides screw-terminal access to analog and digital I/O signals from the DaqBoard/2000 series boards.

For industrial applications, the DBK207™ & DBK207/CJC™ offer 16 channels of isolated analog inputs supported by 5B-style signal conditioning modules. Additionally the DBK207/CJC features added cold-junction compensation per channel for thermocouple-based measurements. Also connectors allow for the daisy chaining of any other DBK analog signal conditioning board.

When discrete inputs and outputs are needed for an industrial application, the DBK208™ offers sockets for 16 channels of digital I/O that can be configured as either inputs or outputs in 8-channel groups. Each socket indicates logic status via a LED and on-board logic insures that outputs are disabled during PC resets and power-up.

Rack and DIN-rail mounting options are available for the DBK206, DBK207, DBK207/CJC, DBK208 and DBK209 signal termination and expansion boards.

Common Board Features

Unique features available from IOtech's DaqBoard/2000c series provide unique benefits for industrial monitoring and test applications:

- **Sixteen, 16-bit** analog inputs (for highly accurate measurements (/2000, 2001, /2005))
- **Independent configuration of gain and polarity** on a per channel basis as well as channel sequence allowing one board to address a wider range of signal types
- **4 high-speed counter/pulse inputs** capable of reading frequencies up to 10MHz for interfacing to a wide variety of industrial devices
- **2 timer/pulse outputs** for generating pulses up to 1 MHz
- **Two or four, 16-bit analog** outputs that can be programmed to asynchronously output control signal voltages (/2001, /2003, /2004)
- **Synchronous scanning** of all analog, digital, and counter channels meets the needs for demanding applications where I/O must be updated concurrently at high rates
- **Bus-mastering (DMA)** for continuous, high-speed data streaming without CPU intervention, freeing the PC to perform background tasks including data analysis
- **Over 30 DBK signal conditioning options** for measuring temperature, pressure, strain, position and more with and without isolation; panel mountable with DIN-rail and 19" rack mount options
- **On-board power** for optional signal conditioning, eliminating the added cost and complexity of an external supply
- **100% digital calibration** reduces maintenance time, saves cost, and improves data integrity
- **Plug-and-play** software simplifies system configuration and reduces system start-up time
- **Free API library** (Windows® 95/98/2000/ME/NT) for Visual Basic®, C++ and Delphi™
- **Free substitution VIs** that make DaqBoard/2000c boards compatible with application programs based on NIDAQ-based VIs
- **Optional DaqView2000™** for immediate board setup, data acquisition, and data display without the need for programming
- **Optional DaqViewXL™** for dynamically acquiring data into an active Microsoft® Excel spreadsheet without programming
- **Drivers** for popular third-party software environments including DASyLab®, LabVIEW®, and TestPoint® as well as compatible file formats linking data with post-acquisition analysis and display packages including DIAdem® and MATLAB™.

Pricing and Availability

Product	Description	US List Price
DaqBoard/2000c™	16-bit, 200-kHz data acquisition board for cPCI-bus with 16 analog inputs, 2 analog outputs, 40 digital I/O channels, and 6 frequency/pulse I/O; includes free DaqX API library	\$1695
DaqBoard/2001c™	16-bit, 200-kHz data acquisition board for cPCI-bus with 16 analog inputs, 4 analog outputs, 40 digital I/O channels, and 6 frequency/pulse I/O; includes free DaqX API library	\$1795
DaqBoard/2002c™	16-bit, cPCI expansion board with 40 digital I/O channels, and 6 frequency/pulse I/O; includes free DaqX API library	\$895
DaqBoard/2003c™	16-bit, cPCI expansion board with 4 analog outputs; includes free DaqX API library	\$1295
DaqBoard/2004c™	16-bit, cPCI expansion board with 4 analog outputs, 40 digital I/O channels, and 6 frequency/pulse I/O; includes free DaqX API library	\$1395
DaqBoard/2005c™	16-bit, 200-kHz data acquisition board for cPCI-bus with 16 analog inputs, 40 digital I/O channels, and 6 frequency/pulse I/O; includes free DaqX API library	\$1495
DBK200™	Adapter board for the DaqBoard/2000c series (analog I/O only with right angle 37-pin D-shell connectors)	\$35
DBK201™	Adapter board for DaqBoard/2000c series (analog & digital I/O)	\$45
DBK202™	Screw-terminal adapter board for the DaqBoard/2000c series (analog & digital I/O with locations for user-supplied resistor/capacitor networks)	\$145
DBK203™	Screw-terminal adapter board for the DaqBoard/2000c series housed in a shielded metal enclosure (analog & digital I/O with locations for user-supplied resistor/capacitor networks)	\$245
DBK205™	Adapter board for the DaqBoard/2003c (analog output only; included with the DaqBoard/2003c)	\$35
DBK206™	Adapter board for DaqBoard/2000c series (analog & digital I/O, with analog and digital I/O expansion)	\$205
DBK207™	Carrier board for 5B compatible I/O modules (with analog and digital I/O expansion)	\$185
DBK208™	Carrier board for Opto-22® compatible solid-state-relay (SSR) modules (with analog and digital I/O expansion)	\$195
DBK209™	Mini adapter board for DaqBoard/2000c series (with analog and digital I/O expansion)	\$45
DaqView2000™	Optional <i>Out-of-the-Box™</i> data acquisition and analysis software package that includes DaqView, DaqViewXL, and DIAdem®	\$295
CA-195	100-conductor expansion cable for DaqBoard/2000c series, 3'	\$65
CA-195-6	100-conductor expansion cable for DaqBoard/2000c series, 6'	\$70
CA-209	100-conductor shielded expansion cable for DaqBoard/2000c series, 3'	\$195

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; World Wide Web: www.iotech.com.

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DaqBoard/2000c™, DaqBoard/2001c™, DaqBoard/2002c™, DaqBoard/2003c™, DaqBoard/2004c™, DaqBoard/2005c™, DaqX™, DBK200™, DBK201™, DBK202™, DBK203™, DBK205™, DBK206™, DBK207™, DBK208™, DBK209™, DaqView™, DaqViewXL™, DaqView2000™ and *Out-of-the-Box*™ are the property of IOtech; all other trademarks or registered trademarks are the property of their respective owners.