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TECHNOLOGY GROUP

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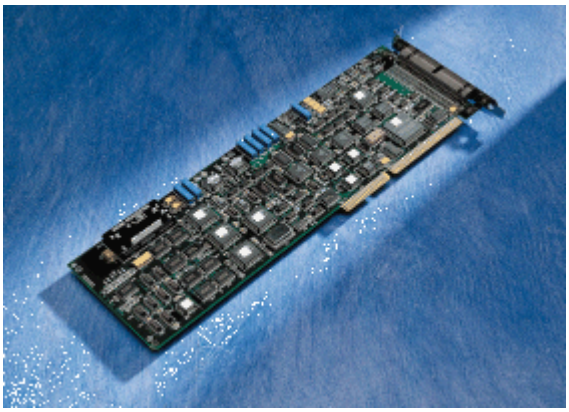
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Find the *Measurement Computing / Data Translation DT31-EZ* at our website: *Click HERE*

Section: Data Acquisition

IBM PC ISA BUS HARDWARE
Low Cost Boards
DataAcq-EZ (DT31-EZ, DT34-EZ)

DT31-EZ and DT34-EZ



Low Cost "Hands-Off" Multifunction Boards for the PC

The DT31-EZ and DT34-EZ are low cost, high accuracy data acquisition boards for IBM PC compatibles. High performance features include "Hands-Off" jumper-free operation, two 16-bit counter/timers, and high speed 250kHz (330kHz, single-channel) data sampling. Extensive Microsoft® compatible software support is available for programmers and nonprogrammers alike.

Summary

A/D: 12 bits; 250kHz thruput (330kHz, single chan); gains of 1, 2, 4, 8; 512-element channel-gain list

D/A (DT31-EZ only): 2 DACs; 12 bits; 130kHz thruput each (260kHz aggregate)

Digital I/O: One 8-line port

Clocks: Separate A/D and D/A (DT31-EZ) clocks

Interface: Programmed I/O with REP INSW, single-channel DMA, or dual-channel DMA (all three support gap-free transfers); one interrupt

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No Jumpers
"Hands-Off" design means that once you've set the base address and installed the board, you never have to touch it. You can software-select SE/DI, input gain, DMA channel, and interrupt level.

High Accuracy Analog Design Assures High Integrity Results
Your results can be no better than the data you start with. The DT31-EZ and DT34-EZ were meticulously designed to deliver your real-world data with accuracy. Analog design is as much an art as a science: The DT21-EZ Series reflects our more than twenty years of experience designing accurate, reliable data acquisition products.

FCC Class A Verified for Your Protection
The DT31-EZ and DT34-EZ are verified to FCC Class A EMI noise emission standards, even when used in a

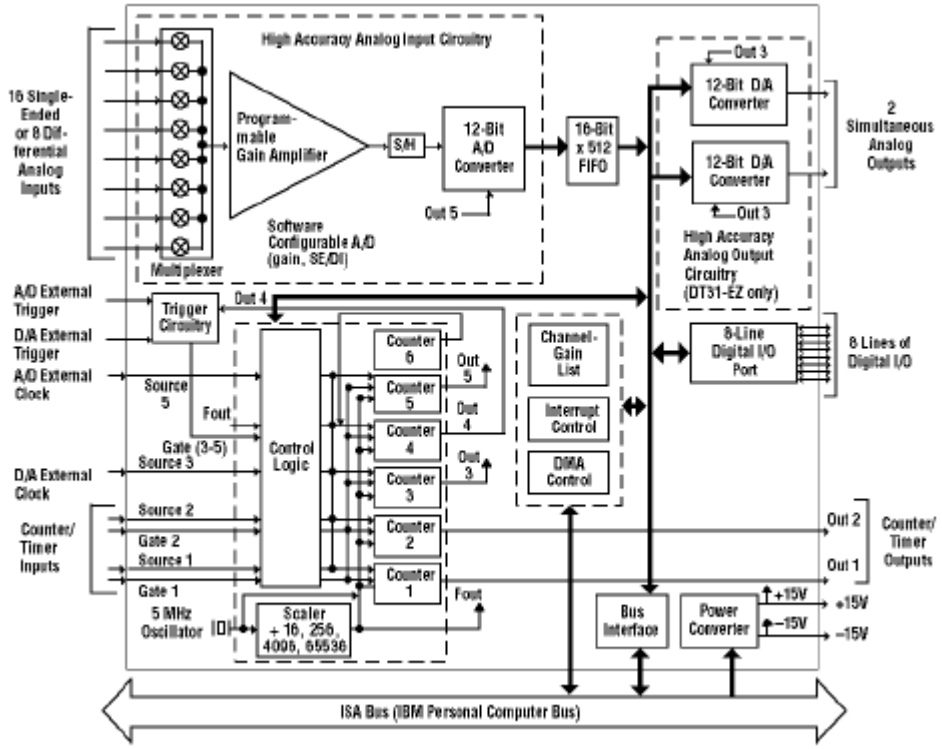
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typical installation that includes the STP-EZ screw terminal panel. This assures you that they will not degrade the noise performance of the system in which they are installed.

High Speed REP INSW Transfers
Repeat Instring Word support permits PIO data transfer rates to host memory up to the maximum board throughput (330kHz) on 486-class machines.

Windows Software for All Users
For nonprogrammers, comprehensive data acquisition, analysis, and display support is available using DT VEE for Windows. Programmers can choose VB-EZ for Visual Basic or DataAcq SDK™ for C. The DT-Open Layers®-compliant software driver shipped with each board simplifies software maintenance: using this driver, software you develop will work with any DT-Open Layers-compliant board, with little or no alteration.

DT31-EZ and DT34-EZ Series Block Diagram



Click on the thumbnail above to view the DT31-EZ and DT34-EZ Series block diagram.

Analog Inputs

		DT31-EZ	DT34-EZ
Resolution		12 bits	12 bits
Throughput	**Single Channel**	**330kHz**	**330kHz**
	Channel Scan	**250kHz**	**250kHz**
Input Channels		16SE/8DI	16SE/8DI

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Channel Selection	**Any Channel Singly**	✓	✓
	Random Channel Scan	✓	✓
Input Ranges	**Software-Programmable Gains**	1,2,4,8	1,2,4,8
	Ranges (including gain)	±1.25,2.5,5,10V	±1.25,2.5,5,10V
Overvoltage Protection		±35V on, ±20V off	±35V on, ±20V off
ESD Protection		to 1.5kV	to 1.5kV
Accuracy	**System Error (at gain of 1) Max**	±0.05% FSR	±0.05% FSR
	Effective Number of Bits	11	11

Analog Outputs (DT31-EZ only)

Resolution	12 bits
Output Channels	2 independent DACs
Throughput	130kHz/DAC, 260kHz aggregate (both DACs together)
Range	±10V
Accuracy	±.03%

Specifications

All specifications are typical at +25°C and rated voltage,
unless otherwise specified.

DIGITAL I/O

Number of Lines
8, can be set as a group for input or output

Fanout
15 LSTTL loads

Input Load
1 LSTTL load

COUNTER/TIMERS
Two 16-bit, both perform one-shot, event counting and data generation; counter/timer 1 can also generate a variable duty cycle square wave

OPERATION

Triggers and Clocks
Separate A/D & D/A pacer clocks; onboard or external oscillator, software or external hardware trigger for each

Data Transfer
Programmed I/O, single-channel DMA, and dual-channel DMA; both DMA modes support gap-free operation; simultaneous A/D and D/A operation on DT31-EZ; REP INSW operation supported

GENERAL

Interface
ISA Bus, for use with IBM PC compatibles; I/O mapped, 10-bit I/O address; 16-bit data path; one or two DMA channels; one interrupt

Power Requirements
Uses +5V; current draw TBD

Physical/ Environmental
Dimensions--
full-size ISA board mechanically EISA-compatible for any available system slot; 11.43 x 33.66 x 1.91 cm (4.5" x 13.25" x .0.75")

Temperature--
operating: 0 to 70&#176C; storage: -25 to 85&#

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