High Speed PCI Analog Input Board

Registered ISO 9001 Company

PCI 9810

VEE Pro

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Windows 95/8 & NT/2000 drivers

- **32-bit PCI Bus architecture**
- **20Msamples/s conversion speed at 12 or 10 bit resolution**
- **4 channels**
- **Input ranges of ±5V or ±1V**
- **3 TTL compatible digital inputs and outputs**
- **Continuous streaming of A/D samples to RAM or disk**
- **Flexible hardware and software triggering**
- **Fast enough for video/ultrasound imaging**
- **Simultaneous sampling**

The PCI-9812/10 are advanced performance data acquisition boards based on the 32-bit PCI bus architecture, with an emphasis on continuous high-speed streaming of A/D samples to host memory or disk. Traditionally this sort of sampling rate was reserved for transient capture boards or digital storage oscilloscopes, which could only grab a finite number of samples, and then export them at comparatively low speeds to PC RAM. This type of seamless continuous sampling shows how the PCI bus is revolutionizing data acquisition

Applications

With high performance designs and state-of-the-art technology this board is ideal for your DSP, FFT, digital filtering, and image processing applications. The sampling rate is high enough to capture the colour information in video signals, or ultrasound up to 10MHz.

The input impedance of 50 ohms may be changed by replacing resistors on the board.

A choice of 10 or 12bit resolution

The PCI-9812/10 consists of two models sample all channels simutaneously:

PCI-9812: 4 BNC input channels of 12 bit resolution, and a maximum total sampling rate of 20 million samples per second

PCI-9810: 4 BNC input channels of 10 bit resolution, and a maximum total sampling rate of 20 million samples per second

Flexible triggering

The triggering of the PCI-9812/9810 is highly flexible due the combination of five trigger sources, five trigger modes, and the ability to select whether to trigger on a positive or negative slope.

DESCRIPTION	PRODUCT CODE
PCI-9812 4-Channel, 12-bit Ultra-high Speed A/D	909 868 18
PCI-9810 4-Channel, 10-bit Ultra-high Speed A/D	909 868 20

Trigger sources: CH0, CH1, CH2, CH3, and external digital trigger.

The trigger level is set using an internal DAC to set the analog threshold.

Trigger modes: software, post trigger, pre trigger, middle trigger and delay trigger

Software

DLLs are provided for programming in any windows language that can call a DLL, such as Visual Basic, and Delphi. A software library for programming in C/C++ is also provided with each board

SPECIFICATION

ANALOG INPUTS	
A/D converter	Burr Brown ADS800 series
Channels	4 single-ended
Max. sampling rate	20MS/sec (for each channel)
Input range	Bipolar: ±5V, ±1V
Resolution	9812: 12 bit 9810: 10 bit
On-board memory	64KByte FIFO
Input impedance	50Ω (modifiable)
Trigger source	Software, analog threshold, external digital
Data transfer	Bus mastering direct to memory
Clock source	Internal, external digital clock, external sine wave
Trigger modes	Software, post trigger, Pre trigger, middle trigger and delay trigger
Accuracy	Gain error ±1.5% at 25°C
Differential linearity	±0.4 LSB
Error	±1.0 LSB max. at 25°C
Integral linearity error	±1.9 LSB at 25°C
DIGITAL INPUT/OUTPUT	
Channels	3 TTL compatible In/Out
Input voltage	Low: min. 0V; max. 0.8V High: min. +2.0V
Input load	Low: +0.5V @ -0.2mA max. High: +2.7V@ +20mA max.
PHYSICAL	
Connectors	5 BNC-type
Operating temp.	0 to 50°C
Storage temp.	-20 to 80°C
Humidity	5-85%, non-condensing
Power consumption	+5V @ 1.5A +12V @ 300 mA
Dimension	101mm (H) x 173mm(L)
Compliance	CE EMC