

Features

- Multi-function data acquisition modules attach to computer via Universal Serial Bus (USB)
- USB Specification 1.1 Compliant
- 8 differential analog input channels with 12-bit resolution
- Simultaneously sampling of 4 analog input channels
- On board 4K samples AD FIFO memory
- Up to 500kS/s AD sampling rate
- Up to 100kS/s Continuous AD sampling
- Programmable inputs range
- Two 12-bit monolithic multiplying analog output
- 16-bit pacer timer and two 16-bit general-purpose timer/counter
- 8 isolated digital input and 8 isolated digital output
- Auto calibration-no potentiometers or adjustments required
- LED Indicator
- Windows 98, 2000 support

Introduction

USBDAQ-9100MS 100kS/s multifunction I/O USB module delivers high performance and reliable data acquisition capabilities to meet wide range application requirements based on the USB interface.

The USBDAQ avoid many of the limitations of PC-cards data acquisition devices and offer advantages over most PC plug-in data acquisition as well. You get the benefit of USB plug-n-play and portable advantage. The USBDAQ module offers 8-CH differential analog input channels with 10 programmable ranges, and 4 of the 8 input channels support simultaneous sample, 2-CH 12-bit analog output, 16-CH isolated digital I/O and 2 timer/counter.

About USB

The Universal Serial Bus (USB) is a new standard for connecting PCs to peripheral devices such as printers, monitors, keyboards and mouse. USB offers several advantages over conventional serial and parallel connections, including higher bandwidth and the ability to provide power to the peripheral devices.

USB is ideal for data acquisition applications, only one cable is required to line the data acquisition device to the PC. In addition, the USB's high-speed data transfer allows for a real time display of acquired data, while eliminating the need for expensive memory in the acquisition device.

With the backing of Intel, Microsoft, and hundreds of other computer-related companies, USB is quickly becoming a new universal standard.

Specifications

USB Controller :

- USB Spec. 1.1 compliant
- USB Throughput: 800K/s

Analog Input :

- Converter : Successive approximation type
- Channels: 8 Differential
- Simultaneous sample channels :
CH1, CH3, CH5, CH7 and
CH2, CH4, CH6, CH8
- Resolution: 12 bit
- Max. Sampling Rate: 500kS/s
- Input Range: Programmable

Range	Gain	Input Range	
		Bipolar	Unipolar
20V	0.5	±10V	-
10V	1	±5V	0 to 10V
5V	2	±2.5V	0 to 5V
2.5V	4	±1.25V	0 to 2.5V
1.25V	8	-	0 to 1.25V

- Input Coupling: DC
- Over Voltage Protection: 70V p-p
- FIFO Buffer Size: 4096 samples
- Input Impedance: 10MΩ
- Trigger Mode: Software, Pacer, External

- Data Transfer: Program Control, Interrupt

Analog Output :

- Converter: Equivalent, monolithic multiplying
- Channels: 2
- Resolution: 12 bit
- Max. Update Rate(Polling): 250 S/s, system dependent
- FIFO Buffer Size: 511
- Settling Time: 2μS(Full range when load is 10K)
- Output Range: ±10V
- Output Coupling: DC
- Protection: Short-circuit to ground
- Output Impedance: 0.1Ω min.
- Output Driving: ±5mA max.
- Power On State: 0V
- Data Transfer: Program Control, Trigger, Pattern Generate

Isolation Digital I/O :

- Channels: 8DI/8DO
- Isolation Voltage: 1500VDC
- External Power or Self-powered
- DO: Darlington Output
- Power On State: Input; High impedance
- Logic Levels:

Level	Min.	Max.
Input Low Voltage	-2.5V	2.5V
Input High Voltage	+3.5V	+24V

- Data Transfer: Program control
- Timer/Counter I/O:
- AD Pacer: 16-bit timer with 32MHz time base
- Max. Frequency 500K
- Min. Input Pulse Width (10 us)
- Max DI Sampling Rate 4ms
- General-purpose Up/Down Counter/Timer
- Channels: 2
- Resolution: 16 bit
- Compatibility: 5V/TTL
- Base Clock: 8, 4, 2, 1MHz(Programmable)
- Data Transfer: Program Control,

USB-9100-MS 100KS/S Multifunction I/O USB Module

LED Indicator :

- Power
- Operation

Connector :

- RCA connector for analog I/O
- SCSI68 for digital I/O and timer/counter
- USB type B (Front and Rear)
- Power jack for external AC to DC Adaptor
- 4 pin PC power connector

Dimension :

- 148 (L) x 42 (W) x 198 (H) mm

Operating Temperature :

0 to 55°C

Storage Temperature :

-20 to 70 °C

Relative Humidity :

5 to 95% non-condensing

Software Support

- USBDAQ Utility for setup, acquisition, & real-time display
- DLL driver for Visual Basic[®] Delphi[™], & C++ for Windows[®] 98/2000
- MacOS (available soon)

Accessory

- USB Cable (Type A to Type B)
- AIO Signal Probe
- Stand Arm
- DIN-68S Terminal Board with SCSI-68 Cable
- AC to 12VDC Adaptor Unit

Optional Accessory

- 5400mAh Battery Pack

Order Information

- USBDAQ-9100MS
100kS/s Multifunction I/O USB Module
(Include the accessory and software)
- USBTAB-1M
USB Type A to Type B Cable 1m
- USBPRO-1M
RCA Probe Cable 1m
- DIN-68S
SCSI 68 Terminal Board with SCSI-68 Cable
- PWRAD-12
AC to 12VDC Adaptor Unit
- PWBAT-12
5400mAh Re-chargeable Battery Pack

