USB-26/30

USB 250/400KHz 14 Bit A/D Unit with 4x D/A & 24DIO

Ideal for Desktop/Laptop use

USB-30 Front   USB-30 Back

DESCRIPTION

The **MicroDAQ USB-26/30** is a multi function data acquisition device for the USB bus. The unit has a 14-bit resolution and is the perfect measurement device for portable, laboratory or classroom use.

The MicroDAQ USB-26/30 has two interface options and sample speeds. The A variant is a USB 1.1 device with a sampling rate of 250kHz. The B variant is one of our first data acquisition products featuring the high speed USB 2.0 interface. The 480Mbps bandwidth which USB 2.0 offers allows this unit to have an analog sampling rate of 400kHz across the analog input channels*. This speed is unprecedented in external USB data acquisition products.

Featuring 16 or 32** analog inputs, the unit can be used to measure voltage signals from sensors, transducers, accelerometers and much more. It also features four analog outputs (USB-30 model) which can be used as reference voltages and many other applications. The digital I/O is available in 3 sets of 8 channels which can be programmed as inputs or outputs.

FEATURES

- USB Interface
- 16 / 32 Single Ended or 8/16 Differential Analog Input Channels
- 250kHz / 400kHz (model dependent) Total Sampling speed across 16 channels**
- 4 x 14-bit Analog Outputs (USB-30 Model)
- Onboard 16K FIFO
- 4x Analog Outputs (14-bit)
- 24x DIO lines (3x 8-bit ports)
- I/O Connector: 2x DB25 Male (1 for A/D & 1 for DIO)
- LED indication for power & USB connection
- Ideal for Portable/Laptop Use
- Housing: Plastic ABS with rubber feet
- Operating Temp: 0 to 70°C
- O/S Support for Windows 98/ME/XP/2000 & Linux
- Includes EDRE SDK, EDRE-Labview, EDRE-Testpoint and WaveView for Windows
- Power: Supplied with a 1A 9VDC external PSU
- Power Consumption: 500mA typ @ 9VDC
- Dimensions: 45(H) x 80(W) x 148(L) mm

Specifications

Analog Inputs (A/D)

Input Characteristics

Input Channels:	16 / 32** Single Ended (Model Dependent)
Input Ranges:	± 2.5V ± 5V ± 10V 0-5V 0-10V
Gain Scale:	1 / 10 / 100
Resolution:	14-bit
Input Coupling:	DC
Max Sampling Rate:	250kHz / 400kHz* (Model Dependent)
Clock Source:	Internal 10MHz
	External – Convert (EXT_CLK)
Gate Source:	External – Convert (EXT_GATE)
Input Impedance:	1M Ohm
System Noise:	±1 LSB

Analog Outputs (D/A)

Output Characteristics

Output Channels:	None / 4 / 8 (Model Dependent)
Output Range:	± 10V
Resolution:	14-bit
Full Scale Error:	± 2 LSB
Settling Time:	1mS to 0.1% of full scale
Output Drive:	+/-10V @ 5mA
Power-On State:	0V

Digital I/O (DIO)

No. of TTL Lines:	24

Logic Levels:

Input Low Voltage:	-0.5V to 0.8V
Input High Voltage:	2.0V to 5.0V
Output High Voltage Min:	2.4V
Output Low Voltage Max:	0.45V
Maximum Output Current:	2mA

Ordering Information

Supplied with EDR Enhanced Software, 1.8 Mtr. USB Cable & Universal Switch Mode 9V PSU

USB-26A16	USB 16(SE) or 8(DIFF) Channel 250KHz 14-bit A/D, 24 DIO
USB-26B16	USB2.0 16(SE) or 8(DIFF) Channel 400KHz 14-bit A/D, 24 DIO
USB-26A32	USB 32(SE) or 16(DIFF) Channel 250KHz 14-bit A/D, 24 DIO
USB-26B32	USB2.0 16(SE) or 8(DIFF) Channel 400KHz 14-bit A/D, 24 DIO
USB-30A16	USB 16(SE) or 8(DIFF) Channel 250KHz 14-bit A/D, 4 x 14-bit DACS, 24 DIO
USB-30B16	USB2.0 16(SE) or 8(DIFF) Channel 400KHz 14-bit A/D, 4 x 14-bit DACS, 24 DIO
USB-30A32	USB 32(SE) or 16(DIFF) Channel 250KHz 14-bit A/D, 8 x 14-bit DACS, 24 DIO
USB-30B32	USB2.0 32(SE) or 16(DIFF) Channel 400KHz 14-bit A/D, 8 x 14-bit DACS, 24 DIO

Please Note:

* Please note that a PC with a USB 2.0 compliant interface is required to achieve these speeds.

** On models with 32 inputs, the channels can only be sampled in banks of 16. If you are sampling from the lower bank (0 -15), you will not be able to sample from the upper bank (16-31) at the same time.

DB-25M — Digital I/O

Left	Pin	Pin	Right
PA1	14	1	PA0
PA3	15	2	PA2
PA5	16	3	PA4
PA7	17	4	PA6
PB1	18	5	PB0
PB3	19	6	PB2
PB5	20	7	PB4
PB7	21	8	PB6
PC1	22	9	PC0
PC3	23	10	PC2
PC5	24	11	PC4
PC7	25	12	PC6
		13	DGND

DB-25 (M) — Analog

Left	Pin	Pin	Right
ACH1	14	1	ACH0
ACH3	15	2	ACH2
ACH5	16	3	ACH4
ACH7	17	4	ACH6
ACH9	18	5	ACH8
ACH11	19	6	ACH10
ACH13	20	7	ACH12
ACH15	21	8	ACH14
DAC0	22	9	AGND
DAC2	23	10	DAC1
NC	24	11	DAC3
EXT_TRIG	25	12	NC
		13	EXT_CLK

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