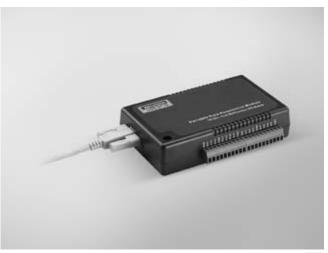
USB-4716

200 kS/s, 16-bit, 16-ch Multifunction USB Module



Features

- Supports USB 2.0
- Portable
- Bus-powered
- 16 analog input channels
- 16-bit resolution Al
- Sampling rate up to 200 kS/s
- 8-ch DI/8-ch DO, 2-ch AO and one 32-bit counter
- Detachable screw terminal on modules
- Suitable for DIN-rail mounting
- One lockable USB cable for secure connection included

CEFCC ROHS

Introduction

The USB-4700 series consists of true Plug & Play data acquisition devices. No more opening up your computer chassis to install boards-just plug in the module, then get the data. It's easy and efficient. USB-4716 offers 16 single-ended/8 differential inputs with 16-bit resolution, up to 200 kS/s throughput, 16 digital I/O lines and 1 user counter, add two 16-bit analog outputs. The high performance makes USB-4716 your best choice for test & measurement applications in the production line or in the lab.

Reliable and rugged enough for industrial applications, yet inexpensive enough for home projects, the USB-4716 is the perfect way to add measurement and control capability to any USB capable computer. The USB-4700 series is fully Plug & Play and easy to use. It obtains all required power from the USB port, so no external power connection is ever required.

Specifications

Analog Input

• **Channels** 16 single-ended/ 8 differential (software programmable)

Resolution 16 bits

Max. Sampling Rate* 200 kS/s (for USB 2.0)
 FIFO Size 1,024 samples
 Overvoltage Protection 30 Vp-p

Input Impedance 1 GΩ

Sampling Modes Software, onboard programmable pacer, or external

Input Range (V, software programmable)

Gain Code		4	0	1	2	3
Gain		0.5	1	2	4	8
Input	Bipolar	±10	±5	±2.5	±1.25	±0.625
Ranne	Uninolar	NI/A	0 ~ 10	05	025	0125

*Note: The sampling rate and throughput depends on the computer hardware architecture and software environment. The rates may vary due to programming language, code efficiency, CPU utilization and other factors.

Analog Output

Channels
Resolution
Output Rate

2
16 bits
5tatic update

Output Range (V, software programmable)

Internal Reference	Unipolar	0 ~ 5 , 0 ~ 10
IIILETIIAI NEIETEIILE	Bipolar	±5, ±10

Slew Rate 0.7 V/μs
 Driving Capability 5 mA
 Output Impedance 0.1 Ω max.
 Operation Mode Single output
 Accuracy Relative: ±1 LSB

Digital Input

- Channels 8

 Compatibility
 Input Voltage
 Logic 0: 1.0 V max. Logic 1: 2.0 V min.

Digital Output

Channels 8
 Compatibility 3.3 V/TTL
 Output Voltage Logic 0: 0.4 V max. Logic 1: 2.4 V min.
 Output Capability Sink: 6 mA (sink) Source: 6 mA (source)

Event Counter

Channels 1Compatibility 3.3V/TTLMax. Input Frequency 1 kHz

General

Bus Type USB 2.0

I/O Connector
 Dimensions (L x W x H) 132 x 80 x 32 mm
 Power Consumption
 Typical: 5 V @ 360 mA
 Max.: 5 V @ 450 mA

• Operating Temperature $0 \sim 60^{\circ}$ C (32 $\sim 158^{\circ}$ F) (refer to IEC 68-2-1, 2)

Storage Temperature $-20 \sim 70^{\circ} \text{ C} (-4 \sim 158^{\circ} \text{ F})$

Operating Humidity 5 ~ 85% RH non-condensing (refer to IEC 68-1, -2, -3) 5 torage Humidity 5 ~ 95% RH non-condensing (refer to IEC 68-1, -2, -3)

Ordering Information

• **USB-4716** 200 kS/s, 16-bit, 16-ch Multi. USB Module

1960004544 Wallmount Bracket
 1960005788 VESA Mount Bracket