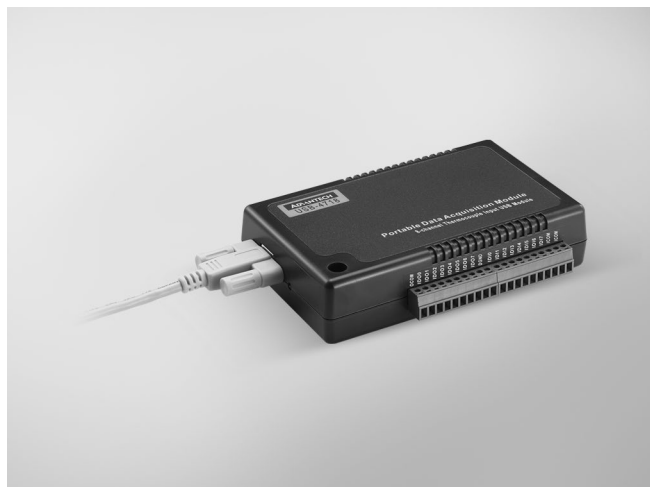


USB-4718

8-ch Thermocouple Input USB Module with 8-ch Isolated Digital Input



CE FCC RoHS

Features

- Supports USB 2.0
- Supports voltage, current, and thermocouple inputs
- Bus-powered
- 8 thermocouple input channels
- 2,500 V_{DC} isolation
- Supports 4 ~ 20 mA current input
- Detachable screw terminal on modules
- 8-ch isolated DI and 8-ch isolated DO
- Suitable for DIN-rail mounting
- One lockable USB cable for secure connection included

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 to use and efficient. USB-4718 offers 8 thermocouple inputs with 16-bit resolution, up to 0.1% input range accuracy. Portable design makes the USB-4718 suitable for field research. Also, the input channels can be set separately making handling multiple type of sensors with just one USB-4718 module possible.

Reliable and rugged enough for industrial applications, yet affordable for home projects, the USB-4718 is the perfect way to add measurement and control capability to any USB capable computer. The USB-4700 series is fully plug and 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

- **Accuracy** $\pm 0.1\%$ for voltage input
- **Bandwidth** 13.1 Hz @ 50 Hz,
15.72 Hz @ 60 Hz
- **Channels** 8 differential
- **Ch. Independent Conf.** Yes
- **CMR @ 50/60 Hz** 92 dB min.
- **Resolution** 16 bits
- **Input Impedance** 1.8 M Ω
- **Input Range** 0 ~ 15 mV, 0 ~ 50 mV, 0 ~ 100 mV, 0 ~ 500 mV,
0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 20 mA, 4 ~ 20 mA
- **Input Types** Thermocouple, mV, V, mA
- **Sampling Rate** 10 S/s (shared for all channels)

Note: The sampling rate for each channel is fixed due to the hardware design. It is 10/8 = 1.25 S/s per channel no matter how many channels you use.

- **Span Drift** ± 25 ppm/ $^{\circ}\text{C}$
- **T/C Type and Temperature Ranges**

J	0 ~ 760 $^{\circ}\text{C}$	R	500 ~ 1750 $^{\circ}\text{C}$
K	0 ~ 1370 $^{\circ}\text{C}$	S	500 ~ 1750 $^{\circ}\text{C}$
T	-100 ~ 400 $^{\circ}\text{C}$	B	500 ~ 1800 $^{\circ}\text{C}$
E	0 ~ 1000 $^{\circ}\text{C}$		

- **TVS/ESD Protection** Built-in
- **Zero Drift** ± 0.3 $\mu\text{V}/^{\circ}\text{C}$

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 3 V max.
Logic 1: 5 V min. (30 V max.)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-isolator Response** 25 μs

Isolated Digital Output

- **Channels** 8
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 30 V_{DC}, 1.1 A max./total
- **Sink Current** 200 mA max./channel
- **Opto-isolator Response** 25 μs

General

- **Bus Type** USB 2.0
- **I/O Connector** Onboard screw terminal
- **Dimensions (L x W x H)** 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- **Power Consumption** 100 mA @ 5 V
- **Watchdog Timer** 1.6 sec. (system)
- **Operating Temperature** 0 ~ 60 $^{\circ}\text{C}$ (32 ~ 140 $^{\circ}\text{F}$)
- **Storage Temperature** -20 ~ 70 $^{\circ}\text{C}$ (-4 ~ 158 $^{\circ}\text{F}$)
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **USB-4718-AE** 8-ch Thermocouple Input USB Module

Accessories

- **1960004544** Wallmount Bracket
- **1960005788** VESA Mount Bracket