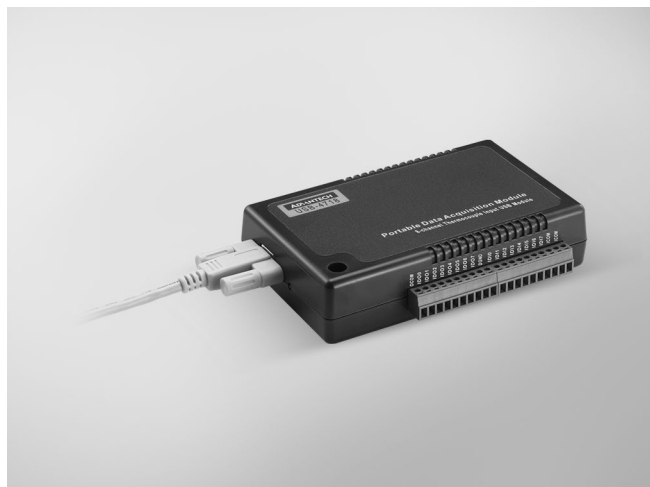


# USB-4718

## 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<sub>DC</sub> 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 $\Omega$
- **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**  $\pm 25$  ppm/ $^{\circ}$ C
- **T/C Type and Temperature Ranges**

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

- **TVS/ESD Protection** Built-in
- **Zero Drift**  $\pm 0.3$   $\mu$ V/ $^{\circ}$ 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<sub>DC</sub>
- **Opto-isolator Response** 25  $\mu$ s

#### Isolated Digital Output

- **Channels** 8
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V<sub>DC</sub>
- **Output Voltage** 5 ~ 30 V<sub>DC</sub>, 1.1 A max./total
- **Sink Current** 200 mA max./channel
- **Opto-isolator Response** 25  $\mu$ s

#### 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 $^{\circ}$ C (32 ~ 140 $^{\circ}$ F)
- **Storage Temperature** -20 ~ 70 $^{\circ}$ C (-4 ~ 158 $^{\circ}$ 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



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