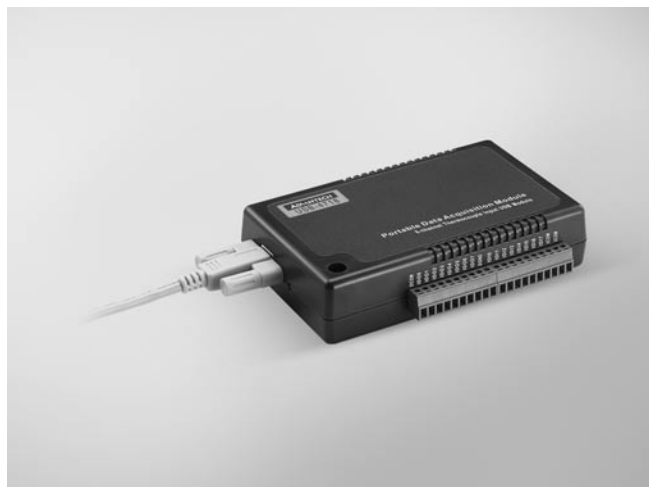


# USB-4718

## 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 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 the field research. Also the input channels can be set separately make it possible handling multiple types of sensor with only one USB-4718 module.

Reliable and rugged enough for industrial applications, yet inexpensive enough 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 (total)
- **Span Drift**  $\pm 25$  ppm/ $^{\circ}$  C
- **T/C Type and Temperature Ranges**

|   |                         |   |                         |
|---|-------------------------|---|-------------------------|
| J | 0 ~ 760 $^{\circ}$ C    | R | 500 ~ 1750 $^{\circ}$ C |
| K | 0 ~ 1370 $^{\circ}$ C   | S | 500 ~ 1750 $^{\circ}$ C |
| T | -100 ~ 400 $^{\circ}$ C | B | 500 ~ 1800 $^{\circ}$ C |
| E | 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: 2 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
- **Power Consumption** 100 mA @ 5 V
- **Watchdog Timer** 1.6 sec. (system)
- **Operating Temperature** 0 ~ 60 $^{\circ}$  C (32 ~ 140 $^{\circ}$  F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -20 ~ 70 $^{\circ}$  C (-4 ~ 158 $^{\circ}$  F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)

### Ordering Information

- **USB-4718** 8-ch Thermocouple Input USB Module
- **1960004544** Wallmount Bracket
- **1960005788** VESA Mount Bracket