

# USB-4718

## 8-ch Thermocouple Input USB Module



### Features

- Supports USB 2.0
- Support voltage, current, and thermocouple inputs
- Bus-powered
- 8 thermocouple input channels
- 2,500 V<sub>DC</sub> isolation
- Support 4 ~ 20 mA current output
- Wiring terminal on modules
- 8-ch isolated DI and 8-ch isolated DO
- Suitable for DIN-rail mounting
- Lockable USB cable for rigid connection

### 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, or 4 ~ 20 mA inputs.

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-4718 is fully USB 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** ±0.1% for voltage input
- **Bandwidth** 13.1 Hz @ 50 Hz,  
15.72 Hz @ 60 Hz
- **Channels** Eight differential
- **Ch. Independent Conf.** Yes
- **CMR @ 50/60 Hz** 92 dB min.
- **Resolution** 16 bits
- **Input Impedance** 20 MΩ
- **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 samples/sec. (total)
- **Span Drift** ±25 ppm/° C

#### T/C Type and Temperature Ranges

<b>J</b>	0 ~ 760° C	<b>R</b>	500 ~ 1750° C
<b>K</b>	0 ~ 1370° C	<b>S</b>	500 ~ 1750° C
<b>T</b>	-100 ~ 400° C	<b>B</b>	500 ~ 1800° C
<b>E</b>	0 ~ 1000° C		

- **TVS/ESD Protection** Built-in
- **Zero Drift** ±3 µV/° 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 µs

#### 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 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
- **Power Consumption** 100 mA @ 5 V
- **Power Input** 5 V from USB line
- **Watchdog Timer** 1.6 sec. (system)
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F) (refer to IEC 68-2-1, 2)
- **Storing Temperature** -20 ~ 70° C (-4 ~ 158° F)
- **Storing Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)

### Ordering Information

- **USB-4718** 8-ch Thermocouple Input USB Module, one 1.8 m USB 2.0 cable included